DEVELOPING A DELPHI MODEL OF THE RELATIONSHIP BETWEEN HIGHER EDUCATION SKILLS IN LIBYA AND LABOUR MARKET NEEDS; A CASE STUDY OF BENGHAZI, LIBYA

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قُلْ إِنَّ صَلَاتِي وَنُسُكِي وَمَحْيَايَ وَمَمَاتِي لِلَّهِ رَبِّ ٱلْعَالَمِينَ ﴿162﴾ لَا شَرِيكَ لَهُ وَبِذَٰلِكَ أُمِرْتُ وَأَنَا۠ أَوَّلُ ٱلْمُسْلِمِينَ ﴿163﴾

صدق الله العظيم

سورة الانعام

**In the Name of Allah the
Most Gracious, the Most Merciful**

Say (O Muhammad): "Verily, my prayer, my sacrifice, my living, and my dying are for Allah (God), the Lord of the Alamin (mankind, jinn, and all that exists)" **(162)** *He has no partner. And of this I have been commanded, and I am the first of the Muslims.* **(163)**

Truth of God Almighty

(Quran, Sura Al-Anam)

DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Gloucestershire and the thesis has been submitted as part of any other academic award. The thesis has not been presented to any other education institution in the United Kingdom or overseas.

Any views expressed in the thesis are those of the author and in no way represent those of the University.

Signed: …………………..………...............…............ **Date**: …………………...……….......………….....….………

ABSTRACT

Universities in Libya and in other North African and Middle Easter countries have experienced massive expansion in terms of quantitative growth and geographic distribution in recent years (Al-Badri, 2006; El-Hawat, 2007; Mogassbi, 1984). The labour markets in these countries, on the other hand, traditionally suffer from a shortage of skilled manpower (ILO, 2007).

Thus, the main questions of this research are formulated as: In what ways could higher education (HE) skills and changing labour market (LM) needs in Libya be better aligned? The research was conducted by collecting and analysing primary and secondary sources of documented material on the case study of Libya, in particular the second city of Benghazi. The secondary data collection largely focused on the generation of continuous datasets on students and graduate numbers in Libya, a country in which the state controls such sectors as HE, but does not make data on the sectors easily available in the public domain. The empirical data collection comprised semi-structured interviews and the application of the Delphi Technique (DT) to develop future scenarios using a panel of experts. The latter activity generated a final key research question: How can the DT be adapted and applied to the understanding of the relationship between HE skills and LM needs in the context of Libya?

This research focused specifically on the graduate skills and attributes of job commitment, competitiveness, desire for excellence and teamwork and problem-solving, due to factors relating to the internal and external environment. The DT has been applied effectively on this topic and has developed the analysis from primary data collection research resulting in four potential strategies for both HE and LM, as follows:

1. Survival strategy: to reduce negative effects of external threats.

2. Defensive strategy: to face threats and strengths as a support.

3. Reorientation strategy: to take advantage of opportunities to decrease weaknesses.

4. Radical strategy: to benefit from opportunities by exploiting strengths.

In the light of all that has been said about the strategies for Libyan HE and Libyan LM, three kinds of scenarios - optimistic, possible and pessimistic - have been built for HE and three others for LM.

ACKNOWLEDGEMENT

DEDICATION

This thesis is firstly dedicated to **Prophet Muhammad** peace be upon him, who has guided us to the straight-way.

I next dedicate this thesis to the souls of the martyrs of revolution of **17th February** 2011 in Libya, and to my beloved mother **Sadya**, the soul of my father **Abdulla**, who first taught me to read and write.

This thesis is also dedicated to my wife and children, **Ambirirka, Owab**, and **Muhannad**, who supported me and gave up many hours of family time to help me achieve my educational aims.

Finally, I dedicate this thesis to all my **brothers** and **sisters**.

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ACRONYMS

HE .... Higher Education

LM .... Labour Market

LHE .... Libyan Higher Education

LLM .... Libyan Labour Market

LGPC .... Libyan General Population Census

ARCHE ...... Arab regional conference on Higher Education 1998

UNESCO ... United Nations Educational, Scientific and Cultural Organization

ILO .... International Labour Organization

QAA .... The Quality Assurance Agency for Higher Education in the United Kingdom

DT .... Delphi Technique

DQ .... Delphi Questionnaire

ECDVT .... European Centre for the Development of Vocational Training

USA .... United States of America

LSC .... The UK's Learning and Skills Council

ADB .... Asian Development Bank

OECD .... Organisation for Economic Co-operation and Development

WAG .... Welsh Assembly Government

LCEQAIHE. Libyan Centre of Ensure Quality and Adoption of Institutions of Higher Education

GPCE .... General People's Committee for Education (The Ministry of Education in Libya)

GPC .... General People's Committee (Libyan Council of Ministers)

IN.1 .... The First Interview

IN.2 .... The Second Interview

IN.3 .... The Third Interview

IN.4 .... The Fourth Interview

IN.5 .... The Fifth Interview

IN.6 .... The Sixth Interview

IN.7 .... The Seventh Interview

IN.8 .... The Eighth Interview

IN.9	The Ninth Interview
IN.10	The Tenth Interview
IN.11	The Eleventh Interview
IN.12	The Twelfth Interview
HDR	Human Development Report
WB	World Bank
WDR	World Development Report
ECF	Economic Commission for Africa
SWOT	Matrix of Strengths, Weakness, Opportunities and Threats
EF	Economic factors
PF	Political Factors
CF	Competitive Factors
SCF	Social and cultural Factors
FRS	Factors Related to Students
FRC	Factors Related to Curriculum
FRFM	Factors Related to the Faculty Members
FRA	Factors Related to the Administration
FRW	Factors Related to Worker
C.C	Correlation Coefficient
F.N	Factor Number
S	Strengths
W	Weaknesses
O	Opportunities
T	Threats
SW	Strengths and Weaknesses
OT	Opportunities and Threats
GAI	General Authority for Information in Libya
NTC	National Transitional Council in Libya
BTI	Bertelsmann Transformation Index

Chapter 1

Introduction

This chapter presents the introduction to this thesis in eight sections. The first section provides the statement of the problem. The second section provides research questions. The third section provides the purpose of the study. The fourth section provides the significance of the study. The fifth section introduces the definition of terms. The sixth section covers the higher education (HE) and labour market (LM). The seventh section covers the Delphi Technique (DT) and the scenarios. The eighth section provides the structure of the thesis.

Section one: Statement of the problem

In Libya, since the 1960s and 1970s until now the major bottleneck of socio-economic development is the shortage of skilled and semi-skilled national labour force. As Mogassbi (1984, p. 6) has written:

> *"The discovery and exportation of oil has caused Libya to accumulate a super-abundance of money while experiencing a shortage of skilled and semi-skilled workforce. In fact, trained manpower is the most decisive resource limiting Libya's current rate of socio-economic development. The contention is unique, because in most developing countries, manpower is one of the most abundant factors of production while hard currency and potential capital are scarce. Such was the case for Libya slightly over two decades ago"*

Due to the lack of coordination between Libyan universities and Libyan labour market (LLM) institutions - as shown later -, the university system has failed to provide needed skills to develop the national workforce and the university system in Libya offers a traditional education such as reading, writing, arts, history, geography and science, which is not directly related to work requirements.

Moreover, according to Abd-Aldaym (1984) and Al-Badri (2007), the fundamental problems facing HE in the Arab world lie in the weak relationship between HE and society. There is lack of balance between the outputs of HE on the one hand and LM needs on the other. They also identify a low level of measurement and evaluation of the relationship between the HE outputs and the LM needs. In addition, Libya is undergoing economic and educational reform programmes encouraging increasing openness to the outside world. In this case three matters emerge that require urgent investigation:

1. The ability of HE to meet the skills needs of the LM in a rapidly changing context.

2. The ability of the LM to absorb HE skills.

3. The development of methods that will facilitate educational planning in the context of the Libyan situation.

Here, can be submitted four different scenarios that may explain the relationship between LHE outputs and the LLM:

1. The LLM is capable of absorbing all the outputs of the LHE.

2. The LLM is sound but the LHE outputs are unsuitable for the requirements of that market.

3. The LLM is incapable of absorbing the LHE outputs in spite their fitness to the economic and social development needs.

4. The LM is incapable of absorbing the HE outputs.

With regard to the second and third conceptions, these may exist in most countries, especially those in the developing countries. Also within these two conceptions there are a group of simulation and difference.

The extreme cases mentioned in the first and fourth conceptions are intended to reveal the full extent of the possibilities in the relationship between the LM and the HE outputs and to broaden the analysis. This means that the Libyan LM could not be capable of absorbing all the outputs of the LHE at the same time.

In contrast, there are mistakes in the privatization programmes pursued by the Libyan government, where Al-Gaddafi (2001, p: 12) confirmed that:

> *"There are many negative aspects of privatization programmes [Sale of public sector institutions to the private sectors]. Also, there are no clear scenarios of how to use of Libyan human resources".*

What is more, Al-Badry (2006, p. 150) in his study about HE problems in Libya says:

> *"Higher education has no clear policies and scenarios, which has made a lot of problems in the higher education programmes".*

Beyond this, Mogassbi (1984, p. 223) in his study about perception of the HE system and manpower development in Libya through analysis of a questionnaire survey found that:

> *"It is obvious that the majority of the respondents to the questionnaire showed their agreement that the present university functions and roles are not able to respond to the needs of national manpower, therefore they should be re-evaluated and reformed".*

In the same way, the International Labour Organization (ILO) (2007) emphasized:

> *There is a lack of effective coordination between government departments and educational agencies within Asia and the Pacific countries. A coherent institutional framework is a crucial factor in facilitating effective training policies towards the development of a skilled human resource base. However, many developing countries do not possess the institutional capacity or organization to systematically coordinate their national TVET policies.*

Section two: Research questions

The concept of inclusive education in Libya, along with inclusiveness, comprises the following key aims: the quality and specialisation of knowledge, the development of students ready for the knowledge society, their ability to generate the knowledge needed by their country and to practically apply it in their professional life impacting on their workplace or in their private life impacting on their home and family context. So, this research will investigate the following research questions:

1. In what ways could HE skills and changing LM needs in Libya be better aligned?

2. How can the DT be adapted and applied to the understanding of the relationship between HE skills and LM needs in the context of Libya?

Section three: Purpose of the study

The main objectives of this study are to:

1. Prepare a literature review covering the development and purpose of HE in Libya.

2. Build a historical and baseline context from available secondary sources to analyse of the contemporary relationship between HE skills and the LM in Libya.

3. Interview representatives of graduate employing organisations for their views on the relationship between HE skills and the LM needs in the case study of Benghazi, Libya.

4. Using the interview data and a further survey of graduate employees, develop a DT tool to build scenarios of the future relationship between the HE skills and the LM needs in Libya.

In brief, this study aims to assess the relationship between HE skills and LM needs in the case of Libya through study four skills, are: job commitment, competitiveness, desire for excellence and teamwork and problem-solving. And, this study will able to build more than one scenario for the HE and LM in Libya.

Fundamentally, these skills mentioned above have selected because there are many overlaps between these skills; also each of them can be broken down into a set of sub-skills. Furthermore, skill set have compiled from the work of a range of institutions and researchers such as University of Westminster (2003), Scottish Qualifications Authority (2003), The Quality Assurance Agency for Higher Education in the United Kingdom (QAA, 2007-2009), Drew and Bingham (2001), Yahiya (2009), Cameron (2008) and others.

Section four: Significance of the study

This study is significant for the following reasons:

1. This thesis will be one of the first studies on HE and LM in Libya, which use these techniques. In particular, the thesis will explore the potential of qualitative methods to explore a baseline level of understanding of the nature of the relationship between HE and the LM, in contrast to the current situation which provides limited quantitative data on examination results;

2. The exploration of the nature of the relationship between HE skills and the LM needs in transition economies with particular reference to Libya;

3. The development and application of scenarios through the use of the DT to examine the possible futures of the relationship between the HE skills and LM in Libya.

4. This research will reflect on these kinds of approaches for planning for HE skills and LM in transition economies.

Section five: Definition of terms

- Libya: An Arabic African country in the northern part of Africa with total population of approximately 6 million, and 100 percent Sunni Moslems. (Mogassbi, 1984; LGPC 1954, 1964, 1973, 1984,1995 and 2006; Libyan in Figures, 2009; and Statistics Book, 2006)

- Benghazi: The second city in Libya in the north-east of Libya with "total population of approximately one million" (LGPC, 2006), for more information see Table (15-3).

- Libyan Higher Education (LHE): A system of LHE consisting of 12 public universities - in 2005 - with 246000 students, and 32 private universities - in 2003 - with 5000 students. (Al-Tier, 2005 and Elzalitni, 2008)

- Libyan Labour Market (LLM): LLM is a system consisting of all companies, factories and other institutions of economic activity that depend on the interaction among workers and employers for understanding the patterns of wages, employment, and income, as well as the type of commodities and services produced, where most economic activity is concentrated in the public sector because of the small size of the private sector.

- Higher Education Skills: The HE skills in this study have been defined as: set of achievements and personal attributes that make graduates of HE more likely to gain employment to benefit of themselves, their employer and society. They include the following:

  1. Job commitment skill consisting of a set of attributes such as: Loyalty, personal involvement and flexible and able to adapt in accordance working.

  2. Competitiveness skill consisting of a set of attributes such as: Innovation, expertise, problem-solving and continuous learning.

  3. Desire for excellence skill consisting of a set of attributes such as: Collaboration and planning, link the information with existing knowledge, self-regulating and strategic thinking, problem solving and assume personal responsibility.

  4. Teamwork and problem-solving skill consisting of a set of attributes such as: Ability to define the task and decision making, using a range of media, leadership and influences, analyse and solving the problems, and flexible and cooperative working.

Section six: Higher education (HE) and labour market (LM)

This section will explore briefly HE and the LM because each of these points about the HE and LM is discussed in more detail in chapter 2 and remainder of this thesis.

The world has known universities since the era of Greek Culture, such as a medical school (the house of Hippocrates), philosophical schools and the library of Alexandria. Approximately one thousand years after Plato, establishments supporting a resemblance to the modern university existed in Persia and the Islamic world Examples are: The University of Al Azhar in Cairo and the Persian Academy of Gundishapur (India) (James, 2009; Pourahmad, 2008 and Butler, 1998).

Although, HE specifically refers to education provided by universities or equivalents, like high vocational schools, community colleges, art colleges, technical colleges, also includes teaching, research and social services activities of universities, it includes both the undergraduate level and postgraduate level. Nevertheless, there is no fixed definition of "the university" and its mission. Under those circumstances can use the Oxford dictionary to define the university:

> *"The university is an institution that provides the highest level of education, in which students study for degrees and in which academic research is done" (Oxford University, 2000, p. 713).*

So, one can say that the university is an educational institution where it is possible to study the highest level of education degrees. But it is not just a materialistic system for education, but also, group of regulations, policy, procedures and requirements, which build on different visions and philosophies because the university deals with beliefs and behaviour. As Thomas (2008) confirmed that:

> *The analysis of educational policy needs to consider underlying philosophies of education which in turn derives from broader societal philosophical underpinning. A philosophy is a comprehensive system of ideas about human nature and the nature of the reality we live in. It is a guide for living, because the issues it addresses are basic and pervasive, determining the course we take in life and how we treat other people.*

This suggests that changes in a society will have an impact ultimately on the philosophies underpinning the education in that society. For instance in Libya - until 17th February 2011 - all policies were derived from the ideology and views of Gaddafi, and therefore the educational policy and the socio-economic policy were derived from Gaddafi's book "Green Book".

In Libya the HE refers to a level of education that is provided at academies, comprehensive universities, specialised university and vocational universities. The inception of HE in Libya in the modern era was on 15th of December 1955, the date of the foundation of the Faculty of Arts which is considered the nucleus of the Libyan University in Benghazi. In 1957 the Faculty of Economy opened in Benghazi city and the Faculty of Science in Tripoli. In 1961 the University of Mohammed Bin Ali Al-Sanusi - Islamic University - in Elbieda opened. After that faculties and universities emerged which covered most of the Libyan regions. (For more information see chapter 3)

To understand the functioning of the LM, the dynamics for labour must be known, the nature of the interaction between workers and employers' and the LM flexibility It is also necessary to

develop an understanding of the patterns of wages, employment, and income. Accordingly, Maginn and Dench (2000, p. 5) that:

> *"The LM can be existing where there is willingness on the part of at least one person to sell his or her labour or where there is willingness on the part of another to hire labour. If this fails to happen we say the market is not operating or that it is malfunctioning".*

Maginn and Dench (2000) emphasizes that the information about demand can be covers skills and labour within the LM, the changing sectoral and occupational structure of employment, skills employees from new HE graduates and changing industries in the national economic institutions. With regard to information on supply we find it covers the supply of labour and skills to the LM, and addresses issues such as demographic trends and characteristics of the population, existing qualifications, and participation in education and training.

Given that work is the main source of income for the people and employment is a major source of national economic support, therefore the LM assessment is critical to help identify the economic development options, and especially the development of the national human resource.

Additionally, the main purpose of assessment can be to identify LM imbalances. That can be done by assessment and by identifying the major sources of imbalances such as geographical, skills, education or gender factors.

Hence, the development of a benchmark is useful, to be more precise, what is the benchmark which can use for LM assessment? In fact there is not a benchmark we can use to carry out LM assessment in all countries because of the fact that the nature of the LM is different from country to another. This will be discussed in more detail in chapter 2.

Section seven: The Delphi technique (DT) and the scenarios

In this section a brief discussion of the DT and the scenarios because each of these points about the DT and the scenarios are discussed in more detail in Chapter 4 and 6 and remainder of this thesis.

Specifically, the Delphi process is used to find consensus among experts who have differing views and perspectives.

The DT uses mail or email to gather information, provide feedback and conclusions. Too, it enables the experts to using an iterative process of problem definition and discussion, feedback and revisions without requiring them to work face to face.

What is more, Delbecq, Van de Ven, and Gustafson (1975, p. 11) specifically indicate that DT can be used for achieving the following objectives:

I. To determine or develop a range of possible programme alternatives;

II. To explore or expose underlying assumptions or information leading to different judgments;

III. To seek out information, which may generate a consensus on the part of the respondent group;

IV. To correlate informed judgments on a topic spanning a wide range of disciplines, and;

V. To educate the respondent group as to the diverse and interrelated aspects of the topic.

In this thesis, the DT will draw on a number of these objectives. Specifically, it will be applied to the particular topic of the relationship between HE outputs and LM in Libya in order to:

I. Develop a number of scenarios for HE and LM;

II. Assess the mutual impacts between HE and the LM;

III. Explore the information underlying and/or basic assumptions, this may lead to different judgments about HE and LM;

IV. Seek out information on what agreement about HE skills and LM needs, which may later be generated;

V. Identify the diverse and interrelated elements at the HE and LM.

Planning provides a unique context for optimization that has not been explored in great detail and involves a number of interesting challenges, but it must not be forgotten that capability planning problems are pervasive throughout many areas of human interest such as education, society, politics and economics. In contrast, there are solutions for planning problems on multiple scales which may lie in adopting a scenario method. As Odette et al (2005) stressed:

> *The scenarios alert policymakers to emerging problems and provide a reference point for long-term strategic planning. To be useful, scenarios have to be both scientifically credible and policy-relevant. A wide range of perceptions have to be taken into account in the scenario-building process, as policymaking is not or no longer characterized by 'the choice' of 'the policymaker' and policymaking processes have become more and more open. The question is how to deal with divergent perceptions and interests.*

More specifically, scenario planning is a method of strategic planning, so scenarios are intended to provide strategists with various possible futures and not forecast the future. This thesis sets out to use these methods to develop scenarios at different points of HE or LM planning cycles in the case of Libya. This can be used either to assist the set up of a new strategy or as a review mechanism, perhaps as part of a planning process.

In the light of all that has been discussed above, this study aims to use four strategies for HE and four strategies for LM in order to build scenarios for each of them, as shown in the following points:

I. Survival strategy: its aim is to reduce negative effects of external threats to HE or LM on weaknesses in HE or LM.

II. Defensive strategy: this is also called reactive strategy and is oriented to face threats and strengths as a support HE or LM.

III. Reorientation strategy: sometimes it is called adaptive strategies and try to take advantage of opportunities to decrease weaknesses into HE or LM.

IV. Radical strategy: this intends to benefit from opportunities exploiting strengths into HE or LM.

Section Eight: Structure of the thesis

This introduction has outlined the statement of the problem, purpose of the study, research questions and significance of the study, HE and LM, and DT and scenarios. The following chapters address the issues raised in this discussion.

Chapter 2 provides a general background about HE skills and LM needs by focusing on HE systems in comparison countries, and discusses the aims and barriers or challenges of the HE in these different regions and countries. This chapter also reviews the literature on sets of core skills that are linked to HE and analyses discussion of these with a view to informing the selection that will form a focus for the study. Furthermore, this chapter focuses on the nature of LM more generally and factors of change in skills demand and supply as economies and societies have experienced change.

Chapter 3 describes and analyses the HE and LM in Libya. This chapter begins with the population growth rate in Libyan, and explains the development of HE in Libya by examining available evidence on the numbers of students at universities and on the numbers of graduates, also by Libyan population educational status. This chapter also explores the

development of LM in Libya examining available secondary data on the economically active population by sectors of economic activity. In addition, the thesis aims to apply the analysis to a particular case study location in order to make the research manageable and the analysis more focused. Consequently, the chapter reviews therefore the development of HE and LM in Benghazi, Libya's second largest city, by examining the population's educational status and evidence of the economically active population by sectors of economic activity.

Chapter 4 describes and discusses the methodology and the procedures used to conduct this research. This discussion will explain and justify the research methodology and the research procedures and research design, such as: data collection methods, DT, scenario building. Finally, this chapter discusses the approaches to data analysis methods and relevant issues relating to research ethics.

Chapter 5 reports the findings of the study in relation specifically to the interview data, through presentation of the results and discussion of the semi-structured interviews findings. This chapter presents the findings of semi-structured interviews designed with the intention of addressing research question 1.

Chapter 6 reports on the approach focused on scenarios building using the DT method. This chapter will explain how the Delphi questionnaire (DQ) was built and how the DQ was applied. A final stage in the research process was the construction of two SWOT matrixes for HE and two for LM with the intention of building four strategies for each of them. In the same way, three scenarios for HE and three for LM were constructed in order to address research question 2.

Chapter 7 comprises the concluding discussion of the research results with recommendations and suggestions for future research.

Chapter 2

Skills and Relationship between Higher Education (HE) and Labour Market (LM)

By the end of this chapter, we will be able to understand:

1. Main aims and barriers or challenges of the HE in some different countries.

2. Skills/ Graduate attributes.

3. Nature of the LM.

4. The factors of change in skills demand and supply.

Introduction

If the task of HE is to prepare a workforce with high skills, so the task of the LM lies in the absorption of this workforce. A discussion of this relationship also requires discussion of the benefit which students get from HE, such as increase their average earnings and lower unemployment.

On the whole the presence of HE graduates in the LM - as shown later - appears to have a positive effect on the LM. Because of that, the HE graduates have more positive perceptions of personal health, and healthier lifestyles than other individuals who did not graduate from HE. But, it must be noted that the absorptive capacity of the local LM depends upon the nature of the skills and degrees, which are being acquired in HE. The increases in the quality of the skills can lead to greater contributions to individual and societal prosperity, and opportunities for employment will grow.

Furthermore, the HE systems in different countries may vary and this presents a challenge to developing an understanding of how those countries develop their HE system - in educational technologies and education infrastructure such as good libraries, advanced laboratories and educational university campuses - or develop an assessment of whether there are deficiencies in those systems. Maybe the challenge confronting the HE system is to steadily upgrade quality and adjust to globalization in this age of intensified knowledge.

In addition, it is important to have an understanding of the nature of the LM and nature of skills supply and demand, in order to study the HE skills and LM needs in Libya appropriately.

This chapter provides a detailed discussion of the literature in five sections. The first section provides explanation of the main aims and the barriers or challenges of the HE in different countries. The second section discusses skills and 'graduate attributes'. The third section evaluates the nature of the LM. The fourth section discusses integration/ relationship between HE and LM. The fifth provides a conclusion.

Section one: The HE systems in different countries

According to Theeb (2009, p. 29) "during the 1990s, many universities and higher education organisations around the world had begun to change their traditional forms of educational governance, and to adopt new forms and practices. As most educational scholars suggest, the major incentive for such innovative directions in higher education is globalisation, this is seen to be changing the nature of higher education".

Indeed, the HE systems worldwide and their future directions are neither simple nor straightforward topics. So this discussion aims to reveal some aspects about HE systems, in a range of countries. Such discussion results in the observation that we do not have any very clear ideas about the trends in HE and future developments in many countries around the world. However, the development of an understanding of these ideas can help us to develop a better understanding of which skills students can acquire while studying at university.

In the context of the rapid changes in the world, HE has a significantly important role in the progress and growth of societies. As Abd-El Nasser (2004) agreed:

> *There is a common agreement in the literature that the university has three main functions which are: teaching, scientific research, and service to society. Although the function of service to society represents the third one in this category, there is a general trend that it ought to be the first or the leading one of university education.*

Also, societies are faced with rapid change and are becoming more integrated and knowledge-intensive; a premium is therefore placed on their citizens' capacity to solve problems, to change, to adapt and to think critically. Increasingly, it is a country's level of education and skills that drives its development (United Nations Educational, Scientific and Cultural Organization 'UNESCO', 2008, p. 4). Because of this, this section discusses some of the HE systems in some countries, such as: Arab region countries, developing countries, the UK and the USA. Table 1-2 shows main aims and barriers or challenges to the HE in these different region and countries:

Table 1-2
Main aims and barriers or challenges of the HE in different region and countries

Countries	Main aims of HE	Barriers or Challenges
Arab Region	- To educate responsible citizens committed to national and universal principles. - To provide highly trained professionals to meet the needs of LM. - To provide expertise to assist in economic and social development. - To help conserve and disseminate national and regional cultures. - To undertake research and scholarship.	- Inability to meet students' needs due to inadequate financial resources and inflexible and centralized management. - Weakness of the links between the HE institutions, general and secondary education, local communities and human development needs. - Persistent mismatch between what HE institutions offer and the knowledge/skills that are needed. - Lack of systematic guidance and career counselling services. - Lack of general coordination between agencies controlling national development and HE institutions, resulting in unemployment or underemployment of graduates.
Developing Countries	- To address the development needs of society and provide the LM needs. - To contribute to the socialization of enlightened. - To contribute to the creation, sharing and evaluation of knowledge. - To meet the learning needs and aspirations of individuals through the development of their intellectual abilities and aptitudes throughout their lives.	- The inequitable distribution of HE institutions between regions in a country. Also, gender and urban/rural inequity. - The mismatch between the outputs of HE institutions and LM needs due to the domination of liberal arts rather than scientific and technological subjects. - Shortages of and/or inadequate academic staff and physical infrastructure.
UK	- To contribute to the economic and social well-being of the nation. - To give graduates both personal and intellectual fulfilment. - To equip the labour force with appropriate and relevant skills, in stimulating innovation and supporting productivity and in enriching the quality of life. - To support and encourage improvements in participation rates in HE from low income and other under-represented groups.	- The whole system is undoubtedly under severe pressure and at serious risk of decline. - Decline in the sale of HE abroad, compared with other countries. - There are challenges internal to HE: ► To recruit, retain and reward the calibre of academic staff needed to sustain and improve both teaching and research. ► To maintain the infrastructure for research and teaching. ► To make sure the investment in HE - whether paid for by the taxpayer, the student, their employer or someone else – is used to best effect.
USA	- To make a contribution to the solution of problems faced by the communities and by society at large. - To participate directly in the process of social change through providing education that is adapted to a great diversity of individual qualifications, motivations, expectations, and career aspirations.	- State funding cuts have put at risk the ability of public colleges and universities to serve the people of their state. - Declining access to HE has diminished the ability the United States (USA) to harness the creative energies of its entire people. - The growing gap in resources between public and private institutions has put at risk the ability of public colleges and universities to recruit students and faculty. - Declining access to HE as well as new barriers to international exchange has put at risk America's international competitiveness. - Rising costs coupled with declining federal investment in research and development have put at risk the ability of universities to generate the scientific breakthroughs needed to advance knowledge and address most profound needs.

Sources: *Adapted from Devjak and Tratnik (2008), Country info (2008), Huang (2006), Goodman, et al (2009), Tshikwatamba (2008), Department of Education (1997), Department of Education Skills (2003), CHEPS (2007), UNESCO (2003), Abdrabou and El Araby (2006), Elzalitni (2009) and ARCHE (1998).*

Based on the data contained in Table 1-2, when comparing the HE in Libya with HE in other Arabic and developing countries, it is not possible to find clear differences between these countries in the system due to the fact that Libya has much in common with these countries.

According to many Libyan researchers and writers [such as: Al-Badri 2007, 2006, 2003; Ali, 2006; Al-Maqury, 2006; and others] the main aims of LHE are: to provide expertise to assist in economic and social development. To help conserve and disseminate national and regional cultures, contribute to the creation, sharing and evaluation of knowledge and address the development needs of society and provide the LM needs. On the other hand, the LHE has some troubles and challenges such as: the inability to meet students' needs due to inadequate financial resources and inflexible and centralized management and weakness of the links between the HE institutions, general and secondary education, local communities and human development needs.

Actually, the HE institutions in Arab and developing countries face some deficiencies and challenges. In regard to this, most of these countries have proved to be unable to meet the needs of all students desiring to pursue their goals because of dramatic increases in demand for student enrolment unaccompanied by sufficient resources. In contrast, HE is under intense pressure in those countries, because of high rates of population growth in the countries concerned and increasing social demand for HE. Under those circumstances, Dill (2003, p. 3) argues that the structure of HE systems is expected to:

> *"Play an important role in the general social objective of achieving greater equality of opportunity. Also, provide education adapted to a great diversity of individual qualifications, motivations, expectations, and career aspirations and facilitate the process of lifelong learning. On the other hand, make a contribution to the solution of major problems faced by the communities surrounding the HE institutions and by society at large and to participate directly in the process of social change".*

Countries could seek to develop or change the HE system to overcome the social problems. For example, the basic of transformation to reconstruction and development in South Africa is the transformation to a new HE system. This is now intended to help in social and economic transition, which includes political democratization, economic reconstruction and development, and which puts social policies aimed at positive discrimination towards a system of equity as the country leaves behind the apartheid system. As the Council on Higher Education (2000) in South Africa said:

During apartheid, universities and technological institutes were established based on geopolitical and racial lines. The National Department of Education had to find ways of integrating these fragmented systems into one after the transition to a democracy. Further, the new higher education system would also have to address the immense human resources needs that South Africa was faced with, while also contributing to the economic and social development needs of the nation.

Some countries have a large and diverse sector of HE institutions and students, free from government controls, and reliance on market forces, but need to develop their HE system to address the problems of development. For example: in the USA the university is typically made up of a group of schools or faculties, and usually includes several undergraduate colleges, graduate schools and professional schools. Also in the USA national laws govern the titles of degrees, although each state typically regulates the level of degree at institutions located within its borders. Nevertheless, many writers and researchers have the view that USA HE is in a predicament with the issue of skills. This may be due to the inability of HE to address the most profound needs.

In the same context, the HE in the UK is under severe pressure and at serious risk of decline. As Department of Education Skills (2003, p. 13) has emphasized:

"The challenges are clear. Many of our economic competitors invest more in higher education institutions than we do. France, Germany, the Netherlands and the USA all contribute 1 per cent of GDP in public funding to higher education institutions, and Japan is planning to increase public investment from 0.4 per cent to 1 per cent. This compares to 0.8 per cent in the UK, rising to approximately 0.9 per cent by 2005 because of our generous spending review settlement. Our competitors see – as we should – that the developing knowledge economy means the need for more, better trained people in the workforce. And higher education is becoming a global business. Our competitors are looking to sell higher education overseas, into the markets we have traditionally seen as ours".

In the same way, but under a different government, the Secretary of State for Business, Innovation and Skills (UK), Vince Cable, Informed the audience at the launch of a consultation paper on higher education:

"Our university sector has a strong history with some world-class institutions attracting students from across the globe. Higher education is a successful public-private partnership; combining government funding with institutional autonomy. We want to

see more investment, greater diversity, including innovative forms of delivery from further education colleges and others, and less centralised control over student numbers. But, in return, we want to the sector to be more accountable to students, as well as to the taxpayer" (Department for Business Innovation and Skills, 2011, p. 2).

And Minister for Universities and Science, David Willetts has seen that the Government will reform the financing of higher education in the UK, promote a better student experience and foster social mobility. And the main aim of the UK government is a sector that is freed to respond in new ways to the needs of students.

"For example the Civil Service and wider public sector employers are very aware of the value that apprenticeships can bring to their business. Civil service employers are committed to offering apprenticeships to staff as a key means of delivering business objectives and are actively investigating the possibility of establishing centralised recruitment processes to support departments. In the private sector, the Institute of Chartered Accountants in England and Wales admits members with the Association of Accounting Technicians Diploma and the Royal Institution of Chartered Surveyors admits members with an advanced apprenticeship" (Department for Business Innovation and Skills, 2011, p. 63).

Fundamentally, comparison of HE in the Arab and developing countries with the HE in the USA and UK, shows a following:

1. There are not clear differences between Arab and developing countries in the aims of HE. These countries are also facing similar troubles or challenges. For example: the HE in both types of countries - Arab and developing - aimed to meet the needs of LM, weak of the links between the HE institutions, local communities and LM needs..

2. The nature of the aims and problems of HE in Arab and developing countries is different from the USA and UK. This is probably due to the nature of the states, as well as the degree of development, which link to it. While the HE in Arab and developing countries still aims to meet the needs of LM, the HE in the UK aims to meet the needs of the LM and support and encourage improvements in participation rates in HE from low income and other under-represented groups. In fact, the HE in Arab and developing countries is facing troubles or challenges such as: shortages of and/or inadequate academic staff and physical infrastructure, HE in the USA faces declining federal investment in research and development.

Section two: Skills and 'Graduate attributes'

Today as never before, the development of HE is very important to every country in the world. But what are the possible ways to do that? In fact, rising costs coupled with declining investment in research and development have put at risk the ability of universities to promo benefits to society as well as to individuals, and also generate the scientific breakthroughs needed to advance knowledge and address most profound needs.

For example Baum and Ma (2007, p. 2) - in their study about the benefits of higher education for individuals and society - argue that the presence of HE in a society can:

> *"Correspond to lower unemployment and poverty rates. And contributing in more to tax revenues than others, adults with higher levels of education are less likely to depend on social safety-net programmes, generating decreased demand on public budgets. Furthermore, it correlated with higher levels of civic participation, including volunteer work, voting, and blood donation, as well as with greater levels of openness to the opinions of others"*

Here, there is a positive correlation between higher levels of education and higher earnings for all segments of society, as well as increasing public awareness of the people. In the sense that, HE graduates are more likely than others to earn higher wages, health insurance and pension benefits, etc. The skills are a key determinant of fairness and people's economic security, and should be one of the purposes of HE to develop people to adapt to change in educational, economic and social systems. In fact, there is a need to consider the definition of skill. The UK's learning and Skills Council (LSC, p. 3) has developed a definition for skill:

> *"At the core of the term skill is the idea of competence or proficiency... Skill is the ability to perform a task to a pre-defined standard of competence... but also connotes a dimension of increasing ability. Skills therefore go hand in hand with knowledge".*

The Department of Education, Science and Training (DEST) (2004, p. 5) - *in Final Report: Development of a Strategy to Support the Universal Recognition and Recording of Employability Skills in Australia* - has noted:

> *"What is new is the rapidly increasing value to business of intangible assets. This subtle and yet profound transformation is placing greater weight on employee characteristics such as the capacity for innovation and creativity, team work and customer service"*

Moreover, we note that skills are hard to define and measure. Also, there are difficulties in finding people with the right skills to fill job vacancies. For this reason must be improving overall qualification workforce through improvements in the qualifications of young people flowing into the LM. As Sandberg (2002, p. 23) has suggested:

> *"For developing competence, such a shift makes it possible to actively promote the development of a particular conception of work and its specific attributes. It is my hope that the findings and the approach adopted here will prove useful as an interpretative understanding of, and method for identifying and describing what constitutes human competence at work"*

In contrast, three major factors are seen to have an influence on the value placed on graduate attributes; the popular perspective that education is a life-long process; a greater focus on the relationship between education and employment outcomes of graduates; and the development of outcomes measures as part of the quality movement (Cummings, 1998).

Factually, the HE graduates should have - theoretically - high skills, and will have the attributes needed for employment to exercise of some responsibility. A number of sources in the literature have specified a set of core skills, which all graduates should have, and be able to apply at local and international levels. As Gardner and Martin (2003, p. 2) - in their report about graduate attributes at the University of Queensland - have said:

> *"In 2002 a more concise statement of graduate attributes was adopted. The attributes are intended to embody the research qualities that are a central part of the culture and strategic vision of The University of Queensland. Faculties were advised to translate these graduate attributes so that they reflected the context of their fields of study or disciplines and to add any discipline-specific graduate attributes applicable to their professional requirements".*

The literature review helped the researcher to explore more skills and to specify the research questions more coherently. The research aims to explore the main skills, which underline and describe the relationship between HE and LM in order to build scenarios for both. It is not possible to examine in detail the full extent of the skills and in any case some are poorly defined and difficult to grasp. So, some main skills will be considered in this research, as Table 2-2 shows.

Table 2-2
Skills and attributes

Skills	Graduate attributes	Examples
Cognitive skills	Critical thinking, analysis and synthesis.	To be able to identify assumptions, evaluate statements in terms of evidence, check the logic of argument, define terms and make appropriate generalisations.
Problem-solving and decision-making skills	The ability to define the task, difficulties or challenges, and reach a decision on action to be taken [quantitative and qualitative].	To be able to identify, formulate and solve business problems, and generate and evaluate options, applying ideas and knowledge to a range of situations.
Research and investigative skills	Resolve business and management issues, both individually then as part of a team.	To be able to identify relevant business data and research sources and research methodologies.
Information and communication technology skills	Oral and written, using a range of media.	To be able to use a range of business applications in any job.
Numeracy and quantitative skills	Data analysis, interpretation and extrapolation.	To be able to use models of business problems and to draw conclusions from the information you obtain and write business reports.
Interpersonal skills	Talking and listening, presentation, persuasion and negotiation.	To be able to interact effectively with a range of people, including colleagues and customers.
Team-working skills	Leadership, team building, influences.	To be able to manage or contribute to team projects.
Personal management skills	Time planning, motivation, initiative-the need for these skills is obvious.	Self-awareness, sensitivity and openness to others.
Time management	Involves an ability to organise one's time to maximise personal reliability and effectiveness.	Identify and focus on the activities that provide the greatest returns, and set goals to achieve desired outcome.
Project management	An ability to distinguish between and practice constructive' and corrective.	The ability to define, work to and deliver a project brief within the changing requirements and constraints of quality, time and cost.

Sources: *Adapted from Higher Education Council, 1992, p 20, University of Westminster, 2003, p. 11, Drew and Bingham, 2001 and Scottish Qualifications Authority, 2003, p. 2, Cameron, 2008. QAA, 2007-2009.*

These skills mentioned above do not represent all the skills that could be acquired by the graduates, but they constitute part of them. They complement each other. As Cameron (2008, p. 19) says:

"These skills are interpersonal as well as intellectual, and include the skill to learn from experience as well as reading, the ability to manage yourself, basic skills in numeracy, literacy and IT, interpersonal, group-working and communication skills, and skills in analysing and solving problems".

What is more, according to the Report of the National Ireland Skills Taskforce 2001 the sector faces two challenges in order to make the most of workforce [for more information see skills matches and mismatches later in this chapter]:

The first is to upgrade the skills of those individuals who missed out on the opportunity to acquire a sound foundation education and qualifications. The second is to develop and enhance the skills of everybody in the existing workforce so they keep pace with changing skill requirements brought about by technological and industrial change. (Department for Employment and Learning, 2001)

Actually, there is a national economic imperative to develop skills to ensure a flexible and able workforce, and also give the students themselves the opportunities they need to obtain the skills they need and want.

In the same context, adjustments will be needed to curricula and pedagogy, as well as university governance in response to the changing needs demanded by the wider societal changes, and outline the policy implications of such reform efforts and the challenges that face both university managers as well as policy makers (Juma, 2007, p. 1).

Furthermore, the HE curriculum might have ability to extend the knowledge, skills and dispositions inherent in humans, which can be representative of the needs of the current society, but each of the institutions of society has a different view on quality of HE, and the many HE curricula may be unable to provide students with the technological skills that are needed to build a knowledge based society. As Gardner and Martin (2003, p. 2) have emphasized:

"The graduate attributes are not only created to reflect the link between research and teaching, central to the university's mission, but also occupy a significant role in the strategic teaching and learning objectives of the university and the operational priorities of the strategic plan. The current strategic plan states that the university will provide

rewarding educational experiences that develop in graduates capacities for independence and creativity, critical judgement, effective communication and ethical and social understanding as well as in-depth knowledge of a field of study"

Today more than ever, in the LM, specialized tasks within the workplace are not possible without the enhanced skills of employees. So, the aim of HE is the acquisition of knowledge and skills that will prepare the graduates to fulfil their roles in the organization or society.

Beyond this, "the many different domains for the comparison may lead to pedagogical changes, which will improve the efficiency of the educational systems, so It is best to focus on a small skill set at one time (Wang, 2008, p. 102)."

Furthermore, educational attainment is a fundamental determinant of human vulnerability and marginalization. Basic literacy and numeric skills enable individuals to become more engaged in their society (Judith and Julius, 2008, p. 158)".

Such statements of generic graduate attributes seek to articulate the nature of the education the university offers to its students and through this an aspect of the institution's contribution to society. As the Australian Higher Education Council (HEC) report [Achieving Quality] has stressed:

"These are the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study. In other words, they should represent the central achievements of higher education as a process". (Barrie, 2004, p 262)

Honestly, the HE institutions are not always successful in preparing learners for LM, so when trying to appreciate HE's potential for contributing to LM, it is helpful to distinguish between HE skills and the promotion and formation of other valued skills in the LM.

What is more, possession of a range of personal skills and attributes are at least as important as the possession of qualifications, so cannot see skills changing significantly, but some of them will be more important than others in each stage of development. But also skills like job commitment, competitiveness, desire for excellence, and teamwork and problem-solving ... etc, may be important.

Moreover, Allen Consulting Group report (2006, p.11), (Assessment and reporting of employability skills in training packages) refers to the naming of employability skills in the following way:

"They are also known by several other names, including key skills, core skills, life skills, essential skills, key competencies, necessary skills, and transferable skills. However industry's preferred term is employability skills".

Apart from this, the Australian Chamber of Commerce and Industry, and Department of Education, Science and Training (DEST) (2002) in their report about employability skills for the future, have noted:

"That the confusion that exists in regard to the terminology used across sectors, industries and countries in referring to the sets of skills and attributes that have come to be known in Australia as employability skills. Many terms are used in different environments to describe general skills that all employees may have, similarly, education and training providers use a range of terms to represent concepts relating to learning and learning outcomes" (DEST, 2002, p. 1).

Furthermore, "this confusion is further exacerbated within higher education and policy sectors where, the terms used in this policy area have been varied, overlapping and at times confusing" (DEST, 2002, p. 21).

In the same context, Hager, Holland, and Beckett (2002, p. 18) - in their study about enhancing the learning and employability of graduates - confirmed that:

"In the higher education sector the terms 'generic skills' or 'generic capabilities' are widely used to refer to a range of qualities and capacities that are increasingly viewed as important in higher education. These include: thinking skills such as logical and analytical reasoning, problem solving and intellectual curiosity; effective communication skills, teamwork skills, and capacities to identify, access and manage knowledge and information; personal attributes such as imagination, creativity and intellectual rigour; and values such as ethical practice, persistence, integrity and tolerance".

But under the circumstances and aims of this research, it is not possible to talk about the attributes in more detail, because the psychologists speak of attributes - personality - as a collection of emotional, thought and behavioural patterns unique to a person that is consistent over time. Apart from this, the skill consists of a set of attributes that can be observed through human functioning in workplace.

Based on a growing awareness of the importance of the skills, the researcher has met academic staff at a number of Libyan universities, this process of meeting academics and gathering their views through an open-ended questionnaire - Appendix No 5 - resulted in a list

of graduate skills. For the most part of academic staff regarded the graduates skills include desired the job commitment, competitiveness, desire for excellence, and teamwork and problem-solving. The academic staff - who responded - believe these are the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study.

There are an enormous number of individual skills that might be included within any definition of graduate skills, but it must be noted that there are many overlaps between these skills; also each of them can be broken down into a set of sub-attributes, so four main skills will be considered in this research, as Table 3-2 shows:

Table 3-2
Main skills and graduate attributes in this research

Skills	Graduate attributes	Examples
Job commitment	A. Loyalty-staying. B. Personal involvement and flexible. C. Willingness. D. Able to adapt in accordance working.	To do the jobs that needs to be done.
Competitiveness	A. Innovation. B. Expertise. C. Problem-solving. D. Continuous learning.	The process of solving the technical and production-related problems.
Desire for excellence	A. Collaboration and planning. B. Link the information with existing knowledge. C. Self-regulating and strategic thinking. D. Problem solving. E. Assume personal responsibility	To be able to identify and solve business problems through link the information with existing knowledge.
Teamwork and problem-solving	A. The ability to define the task and decision making B. Using a range of media [oral and written]. C. Leadership and influences. D. Analyse and solving the problems. E. Flexible and cooperative working.	A. To be able to identify, formulate and solve business problems, and generate and evaluate options, applying ideas and knowledge to a range of situations. B. To be able to use a range of business applications in any job. C. To be able to manage or contribute to team projects.

Source: Analysis of the author's survey.

Based on Table 3-2, it is important to give some explanation about these skills linking to the definitions that have been discussed in Chapter 1. But, it should be borne in mind that there is variation in academics' conceptions about the generic attributes of the Libyan universities' graduates. Also, the work delimits certain attributes as essential and organizes them into a distinctive structure of competence at work for understanding how to manage human resources development effectively in Libya. Therefore, the next section discusses these skills in order to clarify their dimensions and components.

(1) <u>Job commitment skill:</u> An employee's commitment to the organization is the sine qua non of any effective organization. That means they must be willing to do the jobs that need to be done, to stay with the organization in good and bad times. As Maeh (1989, p. 5) saying:

> *"In discussing employee commitment, the term personal investment comes to mind since it seems to suggest the kind of personal involvement needed in an effective organization. And essentially two things are meant by that term. First, the term implies a certain personal identification which involves loyalty-staying with the organization through thick and thin. Second, the term implies a willingness to put forth one's best efforts in making the organization work".*

Here it is possible to say that job commitment is the ability of an employee to work as required by the need of the organization and in accordance with its laws, aims, policies and values. But also it must not be forget that the commitment to career does not mean in any case that workers' aims must be identical to their organization's policies and aims, because they have aims, values and beliefs of their own. In this case, it is important to equip workers with the skills to be more flexible and able to adapt in accordance working conditions and aims of organization, as the UK Government's Department for Work and Pensions (2007, p. 12) states:

> *"Meeting the challenges of increasing skills across the whole population and making further progress on getting people into sustainable work and helping them to progress demands that we create a truly integrated employment and skills system. A system that builds on the success of Welfare to Work and ensures that all have the skills they need not just to survive".*

It is clear; the HE sustainability relies on the development of both knowledge and skills among university graduates. This is because the mere possession of knowledge of the academic subject matter is no longer sufficient to sustain the students in the future. As Raddon and Sung (2006, p. 3) said:

"Skills are fundamental to achieving our ambitions, as individuals, for our families and for our communities. They help businesses create wealth, and they help people realise their potential. So they serve the twin goals of social justice and economic success".

It is essential that universities develop programmes to support the essential skills to play a key role in supporting further essential skills developments. What is more, the LM institutions - all work sites such as factories, companies - should develop programmes in-service training.

(2) Competitiveness skill: Many writers believe that the development of competitiveness in students can help to enhance their abilities in relation to innovation between each other. For example, according to the U.S.A Council of Graduate Schools (CGS) (2007, p. 8):

"A highly skilled workforce operating at the frontiers of knowledge creation and professional practice is key to America's competitiveness and national security. Universities, governments, and private industry each play an essential role in providing the expertise and resources necessary to achieve this objective".

In addition, Lorenz (no date, p. 2) in his article about the Developing Indicators for Skills and Innovation, states:

"Innovation depends on the skills and expertise of scientists and engineers with third-level education, but formal science and engineering training are not the only kinds of skills that firms require. Successful innovation also depends on skills developed by employees on-the-job in the process of solving the technical and production-related problems they encountered in testing, producing and marketing new products and processes".

What is more, the qualification and developed competitiveness of the students are a pre-requisite and indispensable for innovation. As WAG (2007, p. 1) confirmed:

"In the modern economy people's financial security will increasingly depend on improving and updating individuals' skills so that they can remain and compete in the LM. It is therefore essential that we build a society and workforce that are adaptable, motivated and highly skilled".

In contrast, also, need to be aware of the need for continuous learning and re-training throughout careers, for response to rapidly changing social and environmental conditions and technological change.

Apart from this, increase local economic development principally by increasing the quality of the local workforce, and secondarily by increasing local innovative ideas. These economic development benefits of HE can be increased by (Bartik, 2004):

I.   Competent management of conventional economic development programmes that focus on business attraction and retention;

II.   Policies that focus on increasing local job skills by educating the state's residents, as opposed to attracting foreign labour;

III. Policies that address specific "market failures" in how HE leads to increased workforce quality or business innovation.

Naturally, the universities must learn to adapt to a dynamic external environment and to adopt structures according to these. And here, the university can choose the way in which it fits as entrepreneurship or other ways that differ from one country to another because of differing circumstances and possibilities.

(3) *Desire for excellence skill:* Excellence in study or work does not happen by accident. It requires notable thought, planning, and collaboration. So it is worthwhile to examine what factors will help excellence to emerge. The following are discussions about some of those factors:

I.   Role of teachers and university: Teachers at university are the ideal students as well as in the best situation to promote active learning amongst students at university.

Here, the role of teachers and university is not just imparting knowledge content but also to developing good relationship, developing learning, enhancing motivation and accepting individual differences. Beyond this, they are able to help students in making decisions and develop high order thinking skills. And therefore this enables students to update their skills and knowledge, providing exposure to cutting edge working practices and technologies. As Kallioinen (2009, p. 2) recommended:

> *"The current operating culture of each field must be integrated as a crucial element in the students' professional growth. This will enable professional knowledge to be constructed in accordance with the requirements of expert roles".*

Moreover, Kallioinen (2009, p. 2) also adds:

> *"The basic function of teaching is facing individuals in the learning environment, communicating with them and creating an atmosphere that promotes learning.*

Above all, teaching is an interpersonal profession characterised by networking. It is also marked by a research-oriented and developmental approach, high-level professional knowledge and pedagogical expertise. Self-awareness lies at the heart of teaching, enabling constructive tutoring and an active role in the teaching community and in the networks".

II.   Role of peers: In fact, students tend to select friends with similar interests and aims. According to Yahiya (2009, p. 7):

"So students who wish to excel in their studies should be selective when it comes to choosing friends to hangout with. There is no doubt that peers play an important role in academic achievement of students. Peers can either give academic leverage or synergy or academic doom to students".

III.   Role of family: The family plays a strong role in how students perform and adjust at university. Parents' involvement is highly related to their offspring's success in education. As Yahiya (2009, p. 7) indicates:

"Students whose parents are more involved with their schooling are more likely to be motivated to achieve excellence in school, have higher educational expectations and do better academically and go on to higher levels of educational than their peers whose parents are not involved. Therefore, the attitude and commitment of parents towards getting involved in their children educational well-being is critical to their achievement of academic excellence."

As well as, the parenting approach also may affect students' university experiences, and the low level of parents' education may have pushed them to motivate their sons to be successful in their endeavours including in education. According to White (1998):

Human capital is often assessed as a measure of parents' skills and knowledge, i.e., education. Better educated parents may instil higher demands for education in their offspring and may be better able to provide a home environment more conducive to doing well in school. Because of the economic advantages associated with higher levels of education, the offspring of higher educated parents might have greater economic resources available to them for furthering their education. Also, the quality of the high school they attend might encourage them to go to college rather than drop out. They may also feel more inclined to persevere with schooling, despite their academic performance or their disdain for the educational process. (White, 1998 cited in Carter, 2002)

In addition, it is important not to forget that family size may affect educational achievement, where Carter (2002, p. 18) confirmed that:

"There is a substantial amount of evidence to suggest that a large number of siblings will have a negative effect on educational achievement. Previous research has shown that the inverse relationship between family size and achievement is due to the dilution of available family resources in larger families compared to the resulting concentration of resources in smaller families".

IV. Role of student: The students themselves play critical role in making themselves into high achievers, so that successful students can link new information with existing knowledge in meaningful ways, and they can use strategic thinking in their approach to learning, reasoning, problem solving, and concept learning, but none of these things can be attained to the fullest possible degree without the active involvement and participation of students, as the Munich Business School stated:

"Students, professors and lecturers, enterprises, international partner universities, as well as alumni and administrators act as partners in this process of learning, of research, and of personal development." (Sperlich and Spraul, 2007, p. 5)

Fundamentally, this maybe helps students to learn self-regulation and assume personal responsibility and build their own thoughts, beliefs and cognitive skills.

To conclude, that the role of university is not just imparting knowledge content but also to developing good relationship in the learning environment and creating an atmosphere that promotes learning through enhancing motivation and accepting individual differences. Additionally, must not neglect the role of the family in education because the parenting approach also may affect students' university experiences.

(4) <u>Teamwork and problem-solving skill:</u> Honestly, working in a team is challenging. It is difficult to work effectively with other people, especially in view of the different personalities, perspectives and aims. Too, the team decisions should be made as common sense agreements that all the members can live with.

As well that the exponential growth in information and knowledge makes it necessary to improve problem solving skills through focusing on developing the students ability to analyse the problems that they encounter with higher levels of cognitive skills, and

emphasise understanding of the relationships of the elements of a problem rather than simply focussing on data and facts. As Constructing Excellence (2010, p. 5) has informed that:

"Teams are groups of people with complementary skills who are committed to a common purpose and hold themselves mutually accountable for its achievement. Ideally, they develop a distinct identity and work together in a co-ordinated and mutually supportive way to fulfil their goal or purpose. Task effectiveness is the extent to which the team is successful in achieving its task-related objectives. Shared goals are most likely to be achieved through working together and pooling experience and expertise".

Moreover, teamwork help to promote deep learning that occurs through interaction, problem solving, dialogue, cooperation and collaboration as Tarricone and Luca (2002, p. 641) have confirmed:

"Successful teamwork relies upon synergism existing between all team members creating an environment where they are all willing to contribute and participate in order to promote and nurture a positive, effective team environment. Team members must be flexible enough to adapt to cooperative working environments where goals are achieved through collaboration and social interdependence rather than individualised, competitive goals".

Equally importantly, teamwork gives students opportunities to work interactively with their peers and ability to contribute in problem-solving through insights and understandings without denying the role of other, while also giving them the chance to take responsibility for their own work.

For example, with the shift from a predominately instructive to constructivist pedagogy the need for tertiary educators to use a variety of teaching strategies and methods is becoming increasingly important. Learning designs need to incorporate student-centred team based learning pedagogy such as project-based, case-based, inquiry-based and problem-based scenarios (Oliver, 2001).

In the same context, Tarricone and Luca (2002, p. 644) have emphasized that the main attributes for successful teamwork are: commitment to team success and shared goals, interdependence, interpersonal skills, open communication and positive feedback, appropriate team composition and commitment to team processes, leadership and accountability.

Under these circumstances, everyone must be well aware of the importance of their role within the group and quality of required tasks, and carefully consider the skills needed for each member of a group.

Section Three: Nature of the LM

Now this section moves to a discussion of the nature of the LM particularly in relation to idea of higher skills in the LM and linking to HE. In other words we need to know the LM information that helps us understand the nature of supply and demand for labour and skills. But we must note that the LM is far more complicated than a simple supply and demand.

For example, can evaluate the Labour Market through several points: The size of the private and public sector and the role of women in the labour force; the institutional framework; the structure of the LM; sectoral distribution; evolution of real wages, working conditions and core Labour Standard. (Donovan Group and Younger Associates, 2006 and Donovan Group, 2005). The following section briefly discusses the points mentioned in turn:

1. *The size of the private and public sector and the role of women in the labour force:*

    The first element of the LM that this discussion will consider is the volume of private sector employees or public sector employees as a percentage of all workers, this give us an indication of the size of sector and hence. This can give an indication of how much total output is produced in sector. That is to say, it may be possible to estimate the public and private sector needs from the known human resource. In other words we can build our vision about the human resource and planning for HE.

    Seems to the position of women in the LM now is better than early in the 20th century because the woman today is 'engaged in paid employment' for longer amounts of time than ever before. In general, "few women participated in the labour force in the early part of the 20th century. Just after Second World War the civilian labour force share for women was a paltry 32%. Today, this rate has climbed to in excess of 70% (Davis, 2008)". The next step is for women to immerse themselves in all fields of the labour force, rather than just concentrating on a selective few. This brings responsibility to males, too, to allow for women to reach the upper echelons of the labour force.

2. *The institutional framework:*

    The second element in the LM to be considered in this discussion is the institutional framework. This means the LM legislation, administrative structure and social stakeholders.

Indeed, all countries alike all over the world are confronted with problems in their LM, such as high unemployment and/or underemployment and are in need of effective LM intervention, through amending their labour legislation, strengthening national LM institutions and drawing up employment and LM policies, which must conform to the key international labour standards. As Monastiriotis and Zartaloudis (2010, p. 19) said:

> *"Since the inception of European Monetary Union (EMU), the EU has developed a rather complex institutional framework for employment policy and policy coordination. This framework is organised along three pillars. The first pillar concerns the EU Directives on employment ..."*

According to this framework, it is necessary to take measures to ensure that laws, collective agreements and internal rules of organisations are not contrary to the principle of equal treatment. This means to implement the principle of equal treatment between persons irrespective of religious or ethnic origin or political opinion. Also, Monastiriotis and Zartaloudis (2010) have said:

> *The second and third pillars, Euro-corporatism and the European Employment Strategy, respectively, were developed in the 1990s, marking a new era in the governance of employment policies in Europe. The development of these two pillars is undoubtedly attributable, at least in part, to the need for transnational regulation of labour markets and harmonisation of national employment policies under the pressures arising from the adoption of the single currency.*

Clearly this framework was conceived in the particular context of the European Union, but the general principles hold for a healthy institutional approach to employment. In fact, this example suggests an examination of the institutional framework for employment policies is needed in order to actively explore of policy options aimed at strengthening the resilience, adaptability and competitiveness in any LM.

3. *The structure of the LM (supply and demand):*

The third element in this discussion is the structure of the LM. Discussion of the structure must focus on issues such as: supply from the youth LM, and how employers demand for skills and knowledge is conveyed to HE students, educators, and career plan. Furthermore, a discussion of this element raises some key questions, such as those posed by Brisbois, Orton and Saunders (2008):

    I.   What information is available about demand for labour in various occupations?

    II.   How is such information used?

    III.   How well are young people's skills being utilized in their jobs?

    IV.   How can employers facilitate transition from the university to work?

    V.   What government policies and employer practices, which could help more youth make an informed choice about learning pathways leading to a career and improve the level of utilization of skills in the LM?

Indeed, when try to answer the questions above or consider other issues that could help us understand the nature of the LM, it is important to take into account the above-mentioned issues vary from one country to another and from one era to another, and the LM is subject to a variety of factors that govern its growth.

According Hogarth et al (2007, p. 36) the employers in the best position to answer these questions were those who employed graduates and non-graduates in similar roles. Where graduates were employed alongside technicians / skilled trade's workers, employers often described a situation in which the two complement each others' strengths and weaknesses. Where graduates were seen as more innovative, problem oriented, 'ideas people' and technicians were seen as more likely to interpret the ideas of graduates and realise theoretical proposals. They commonly mentioned that graduate recruits were more likely to:

- challenge how things are done / 'questioning';

- assimilate things quicker;

- be flexible;

- come at things from a different perspective (often theoretical);

- are problem solvers;

- bring new ideas and energy;

- use their initiative and act without waiting for instruction.

It is important to note that in many respects graduates represented the future of any organization, and that a graduate development programme is a powerful symbol of investment in the future.

4. *Regional and sectoral distribution:*

Regional and sectoral distribution, refers to the distribution of human resources between sectors as agriculture, industry, health and services, and between all regions in any country

Of course, there is a need to know the distribution of human resources between sectors and between all regions, in order to more precisely plan for human resources or HE, because of the imperative in the economy for more growth and jobs in all regions and cities. It is also important to take into account regional and sectoral distributions of human resources in any the method of spatial development when planning for HE or the LM or national economy as a whole.

For instance: "The prime variable in Hong Kong's labour market changes undoubtedly is the dazzling pace of industrial restructuring and structural change. The magnitude of change can perhaps be gauged by the sectoral distribution in employment." (Chiu, 2004, p. 288)

But, it is also important to note that highly skilled persons are not equally distributed across regions is clearly apparent. There are differences both in and between regions that may be because differences in the LM needs or concentration in capital or investing.

For example, countries in due dip France, Germany, Greece, Italy and Spain, appear to have lower employment rates, while the employment rates are more flexible in countries such as Denmark, Finland and the Netherlands, this may stem from many factors, including women's employment rates and the sectoral distribution of employment and flexibility also plays a role (ILO, 2005).

There is no doubt that most economies - during phases of growth - face significant challenges in responding to the regional differentials in the growth of human resources and the changes in the sectoral distribution of the workforce. In the same context, these economies were already facing massive structural economic changes rooted in long term processes of human resources development, which has seen large scale transfers of employment from traditional industrial and agricultural sectors to service and technological sectors.

5. *Evolution of real wages, working conditions and core labour standards:*

The changes in real wages are intended as an indicator describing changes in the material standard of living of wage earners. To be more precise, the term real wages refers to wages that have been adjusted for inflation.

For example: Over the past 30 years. I show that from 1980 to 2000, college graduates have experienced relatively larger increases in cost of living, because they have increasingly concentrated in metropolitan areas that are characterized by a high cost of housing. In this case, the higher cost of housing reflects consumption of desirable local amenities, and there may still be a significant increase in well-being inequality even if the increase in real wage inequality is limited (Moretti, 2011).

However, actually measuring real wages is not an easy task (Bortz, 2006). The purchasing power of money affects the level of real wages through the individual's ability to buy the largest possible number of units of commodity with same amount of money. As Stewart (2003, p. 2) agreed that:

> *"One would expect the group of workers whose wages had to be raised to comply with the new minimum to be more affected than a group from higher up the wage distribution. A direct comparison of the two groups would not be appropriate to identify any causal effect since, even in the absence of a minimum wage; those at the bottom of the wage distribution have lower subsequent employment probabilities. This makes the difference-in-differences approach a natural one to take. The difference between the two groups in a period affected by the minimum wage can be compared with the equivalent difference in an earlier period when no minimum wage was in place".*

In contrast, working conditions revolve around the rules of procedure, the contract of employment, hours of work, maternity leave and other issues about the working relationship, where Harzing and Ruysseveldt (2007, p. 245) - in their book about international human resource management - have reported:

> *"Respondents were asked to grade how important work goals were for choosing an ideal job. In some countries, preferred work goals stress employees' independence from the organization (like 'freedom' in the job, 'work from which you can get a personal sense of accomplishment') while in other countries, preferred work goals stress dependence on the organization (e.g. 'good physical working conditions: good ventilation and lighting, adequate work space, etc.)".*

In principle, "working conditions have greatly evolved in recent decades in developed countries. This evolution has been accompanied with the appearance of new forms of work organisation that may be sources of stress and health risk for older workers. As populations are ageing, these issues are particularly worrying in terms of the health, labour force participation and Social Security expenditure." (Debrand and Lengagne, 2008: p. 1)

In this discussion of working conditions it is important to take account of these conditions, because the working conditions can change according to the LM needs from labour skills. As the Asian Development Bank ADB (2006, p. 10) has stressed:

> *"That labour standards are simply the rules that govern how people are treated in a working environment. They come in a variety of forms and originate at the local, national, and international levels. Taking account of the spirit of labour standards does not necessarily mean applying complex legal formulae to every situation; it can be as simple as ensuring that basic rules of good sense and good governance have been taken into account"*

This discussion of labour standards must lead to a debate over the nature of any link between labour standards and labour skills in any LM. In other words, planning for a LM needs to consider the extent to which labour skills should retain the central role in promoting and enforcing labour standards and should be strengthened to do that job effectively.

Section Four: Integration/ relationship between HE and LM

In general, HE skills are representing the supply side of the HE-LM relationship, whereas the LM needs represents demand side. It is possible therefore to talk about HE skills and LM needs through discussing the supply and demand skills. Therefore, the factors of change in skills demand are a key factor that merit consideration. These factors of change can be grouped, which can be seen in the next points:

1. *Technological Change:* In principle, current evidence and argument suggests that it is unlikely that technological innovations will affect all workers in the same manner. As Autor, et al (2003, p. 1279); say:

   > *"We find that within industries, occupations, and education groups, computerization is associated with reduced labour input of routine manual and routine cognitive tasks and increased labour input of non-routine cognitive tasks. Translating task shifts into education demand, the model can explain 60 percent of the estimated relative demand*

shift favouring college labour during 1970 to 1998, task changes within nominally identical occupations account for almost half of this impact".

In general, technological change - at least in part - makes higher educated workers much more attractive for employers; on the other hand, the less educated workers become relatively less attractive for them, and there is a growing concern in advanced countries that the position of less skilled workers has deteriorated, either through their ability to secure jobs or their ability to earn a decent wage. There is considerable evidence of a positive correlation of various measures of technology with the skill structure suggesting that technology is, on average, biased towards skilled labour.

Actually, that the technological changes affecting production technology thus favours skilled labour over unskilled labour by increasing its productivity. As the Economic Report of the US President (1996, p. 232) confirmed [in the case of the US]:

"In almost all industries, employment of skilled workers has increased relative to that of unskilled workers, despite the higher cost of skilled workers. This suggests that factors affecting the demand for different kinds of workers, such as technological changes that have increased the demand for skilled workers, have been the more powerful force in influencing relative wages".

Moreover, the endogenous growth theories acknowledge the importance of human capital accumulation for economic growth, apart from this, the investment is essential in order to reap benefits from technological progress that is embodied in human capital "of higher quality" than older vintages. As Sarna (2005, p. 13) has said in relation to developing countries:

"In the long run, these countries might find themselves trapped in a comparative advantage of only low-tech, labour-intensive industries and never be able to move up the ladder without investing in technological changes and human capital. Worse would be to experience a situation where labour costs and standards are deliberately kept low"

It is also important to bear in mind the complementary relationship between technological progress and human capital which can reinforce accelerated economic growth.

2. *Organizational change*: In principle, the Health Services Research and Development Service in the UK (HSRD) (2000, p. 1) has defined organizational change, is:

"Organizational change is any action or set of actions resulting in a shift in direction or process that affects the way an organization works. Change can be deliberate and planned by leaders within the organization, or change can originate outside the organization and be beyond its control".

What is more, the HSRD (2000, p. 2) has said:

"The change process must be managed in order to keep the organization moving toward its new vision and its stated objectives. But at worst, an unmanaged change initiative can produce unintended, detrimental effects such as poor morale, loss of trust in management, workplace jealousy, and lower productivity. Thus, orchestrating the process of change is as important as selecting the content of change".

Overall, one has to distinguish two different questions: Are the organizational changes only a consequence of technological changes and do they only contribute to the changes in relative labour demand or are organizational changes in job design a phenomenon that is not necessarily linked to technological changes and has per se altered relative labour demand towards skilled workers.

In general, the main features of these new workplaces are characterized by a wide range of changes like a decision making process that is much more decentralized, just-in-time job rotation, and teamwork or multitasking. The Organisation for Economic Co-operation and Development (OECD) employment outlook of 1999 dedicated a whole chapter to these issues and paraphrased this new job design by "high performance work practices", assuming that these new requirements coincide with higher skill needs for the workers (OECD: 1999).

In contrast, the increase in the demand for skilled workers can be attributed more to the requirements of new work organization than to the introduction of a new technology, which the work needs.

3. *Globalization and trade*: First of all, authors and researchers disagree about the concept of globalization. But the United Nation (UN) (2008, p. 91) - in conference of trade and development - has acknowledged that:

"Globalization is increasing the integration of national markets and the interdependence of countries worldwide for a wide range of goods, services, and commodities. Several factors have engendered such a transition including the liberalization of tariffs and other barriers to trade; foreign direct investment through

trade and investment agreements; autonomous unilateral structural reforms; technological innovations in transport and communications; international development cooperation; and the strategic use of policies, experimentation and innovation".

But also, Schlotter (2008, p. 11) has argued:

"Trade liberalization entails that the real remuneration of the scarce factor declines and that of the abundant factor rises. As a consequence, the developed world experiences a relative decline in the labour demand of unskilled workers in its countries because those will import the cheaper low-skill intensive goods from the developing and emerging countries".

Globalisation can therefore often be viewed in the context of economics only, but in its broadest sense globalisation, affects people and their work. However, the evolution of international trade and the ongoing process of globalisation reveal other plausible arguments for a rising relative demand for skilled workers.

4. *Endogenous skill*: The role of endogenous skill upgrading has long been recognised in the theoretical literature as an adjustment mechanism to labour flows, as Schlotter, (2008, p: 13) suggested:

"It would also be possible that the educational upgrading of the workforce during the last decades was, to some extent, the source of technological changes and not the other way round. By this explanation, firms or industries have an incentive to adopt a technology that coincides with the capacities of the LMs. A large supply of skilled workers with relatively low wages could lead firms to introduce a technology their workforce can cope with. So technology is a flexible parameter firms can choose to maximise their profits".

People are not born with the skills they use in their daily job; so most of them need to obtain training to gain those skills; this does not necessarily evolve in favour exclusively of high-skilled workers, and therefore cannot use it only as an indicator for interpretation of the shifts in relative labour demand.

5. *LM institutions:* The LM institutions include the firms, labour unions, government regulations, employer associations, human resource departments, labour agencies and occupational associations. Furthermore, the system of LM institutions can explain differences in wage inequality, it is widely considered as a key determinant of

unemployment: "broad movements in unemployment across the OECD can be explained by shifts in LM institutions" (Klar, 2008: p. 2).

But this explanation of unemployment has come under considerable criticism in academic research. It has become accepted that poor employment performance can only be effectively addressed with fundamental reforms to LM institutions. However, Schlotter (2008, p: 14) has said that the one possible explanation is that:

> *"The countries with flexible labour markets do not have institutional settings that establish substantial forms of work autonomy. So, in a sense, the design of labour market institutions could enhance skills".*

The LM institutions could enhance the skills through contribution on development high-skills level and develop the labour demand patterns through reform the labour policies and development of the methods for selecting workers.

The points above provide some insights into different approaches to understanding the sources of shifts in relative labour demand. The next section turns to a consideration of the possible consequences of changes in the relative demand for labour.

1. *A Risk of job polarization and wage inequality:* In most cases, there is a concentration on showing higher wage bill share of the skilled workers in combination with firms and industries that apply new technologies. Here it is possible to shed some light on two points:

I. ***Job polarization***: Job polarisation appears to be not only a phenomenon that predicts LM success for groups with specific educational attainment, but also for those who have the crucial skills, independently of their educational attainment. As Autor (2010, p. 42) said:

> *"An important factor behind the rising earnings gap between college-educated and high school-educated workers is that the structure of job opportunities in the United States has sharply polarized over the past two decades. Job opportunities are increasingly found in both high-skill, high-wage professional, technical, and managerial occupations and in low-skill, low-wage food service, personal care, and protective service occupations".*

In contrast, Autor (2010, p. 42) has stressed:

> *"Conversely, job opportunities are declining in both middle skill, white-collar clerical, administrative, and sales occupations and in middle-skill, blue-collar production, craft,*

and operative occupations. The decline in middle-skill jobs has been detrimental to the earnings and labour force participation rates of workers without a four-year college education, and differentially so for males, who are increasingly concentrated in low paying service occupations".

These differences provide important clues to the likely causes of increased job polarization in different countries as well as to likely effects of various policy responses to this polarization. For example, an element of job polarization is reflected in the polarization of wages:

"France and Germany have experienced very little wage polarization, though long-term unemployment among the less-skilled has increased in importance there. The U.S. experienced considerably more wage polarization than Canada, and Canada's polarization had a larger age-related component, with growing gaps between old and young workers. The U.K. also experienced significant wage polarization, but in the context of rising, rather than falling real wages of the less-skilled" (Kuhn, 1995, p: 1).

II. ***Wage inequality as a consequence of labour demand shifts****:* Wage inequality has widely been discussed among economists and they have considered to it as a phenomenon arising due to labour demand shifts induced by skill-biased technical change. Also, find that a change in employment relations may have contributed to the rise in wage inequality is prominent in writing and research on LM. As Schlotter (2008, p. 18) argues:

"Both job mobility and wage inequality have increased in recent years, creating a "good news/bad news" character to the U.S. labour market: those persons with marketable skills do well, while workers whose skills are in less demand suffer adverse consequences when they lose their jobs"

Ultimately, to explain wage inequality all factors inducing wage inequality must be known. In fact, there are considerable differences in wage inequality within skill groups hourly wage dispersion is typically higher among the group of high skilled workers than the group of the low skilled. Why workers with higher education differ more in their earnings can be due to many factors. Intrinsic ability or even effort could matter more within this group than among the lower skilled (Lemieux, 2006).

But, it is important not to forget this situation can not apply to all economies, because the conditions and facilities vary from one country to another. Also, that wage gaps between

higher and lower paid workers were rapidly widening in more countries for many reasons could not be mention here.

2. *Skills matches and mismatches:* "In times of economic prosperity, mismatches arise due to skill shortages, namely, where there are not enough people with a specific type of skill to satisfy demand". (ECDVT, 2010, p. 1). "Qualitative mismatches arise when the qualifications of workers, individually or in the aggregate, are different from the qualifications required or specified for their jobs" (Sattinger, 2011, p. 1).

Traditionally, "skill mismatch refers to (in early classical research on skills) that the skill definitions are closely linked to manual and motor skills - this is called manual dexterity like playing the piano, playing video games and carrying out car repairs -. Also the term skill is used to refer to a level of performance, in the sense of accuracy and speed in performing particular tasks, consistent with more contemporary and comprehensive understandings of the term 'skill' that go beyond merely instrumental interpretations" (ECDVT, 2009, p. 9).

In the same context, several international and regional organizations have undertaken major efforts to analyze qualitative mismatches - such as: the OECD (2011), the European Expert Network on Economics of Education (2008) and European Centre for the Development of Vocational Training (2010) -. These organisations collectively pointed to the following mismatches:

> *In addition to direct consequences, qualitative mismatches are related to significant ongoing empirical labour market phenomena, including increasing inequality, technological change that favours more skilled workers, organizational change, computerization, job polarization, and globalization. Furthermore, the explanation of qualitative mismatches involves central elements of modern labour market theory, including search theory, assignment theory, human capital, and unemployment.*

Major social science researchers around the world have conducted analysis of issues related to qualitative mismatches, future skill needs, and educational and training policies, generating an extensive relevant literature.

Overall, there are different types of skill mismatch that can result in different imbalances between skill supply and demand, as Table (4-2) shows:

Table (4-2)

Types of skill mismatch

Types	Descriptions
Over-education	To have completed more years of education than the current job requires.
Under-education	To have completed fewer years of education than the current job requires.
Over-qualification	To hold a higher qualification than the current job requires.
Under-qualification	To hold a lower qualification than the current job requires.
Over-skilling	To be unable to fully use one's skills and abilities in the current job.
Under-skilling	To lack the skills and abilities necessary to perform the current job to acceptable standards.
Skill shortage	Demand for a particular type of skill exceeds the supply of available people with that skill.
Skill surplus	The supply of people with a particular skill exceeds the demand for it.
Skill gap	The level of skills of the person employed is less than that required to perform the job adequately or the type of skill does not match the requirements of the job.
Economic skills obsolescence	Skills previously used in a job are no longer required or are less important.
Physical (technical) obsolescence	Physical or mental skills and abilities deteriorate due to atrophy or wear and tear.
Vertical mismatch	The level of education or skills is less or more than the required level of education or skills.
Horizontal mismatch	The level of education or skills matches job requirements, but the type of education or skills is inappropriate for the current job.
Crowding out/ bumping down	➤ Better qualified workers are hired to do jobs that less qualified workers could also do, thus replacing (crowding out) less qualified workers from traditional employment possibilities for their level of skill. ➤ Bumping down refers to this process working from top to bottom, pushing less qualified workers to even lower level jobs. At the extreme some lower level workers may become unemployed.

Sources: *Adapted from ECDVT (2010, p. 2), OECD (2011), the European Expert Network on Economics of Education (2008) and the National Research Council (2008).*

Through education-based and skill-based measures, there are methods including a set of recently aimed empirical approaches to assessing skill matching and mismatch in the LM. For example, Chevalier (2003) suggests discriminating between 'genuine' and 'apparent' over-education by crossing a measure of over-education based on objective criteria with the satisfaction level expressed by workers. The underlying hypothesis is that, when coupled with high satisfaction, over-education is not genuine and rather reflects a convenient arrangement for employees who may be endowed with lower skills compared to properly matched individuals with the same educational title or may prefer to focus their effort outside work.

These arguments may be because productive efficiency is rather determined by other factors like family milieu or working conditions or innate abilities. But it must be noted that empirical studies have limited the significance of those factors by showing that education actually increases individual productivity. As Schlotter (2008, p. 20), says:

> *"However as these characteristics often cannot be observed by employers, individuals invest in education to signal their productivity. More talented individuals who perform best in active life will also perform best in studying so that they invest more in education than the less educated. Different educational attainment then reflects different unobserved ability of individuals".*

The previous discussion has illustrated the importance of the relationship between skills supply and demand, and it has demonstrated that there is a global trend towards more higher-skilled labour supply as a result of a number of factors including technology, globalisation and the need for higher levels of productivity. With regard to the factors that influence skills supply, explanations mostly focus on the following broad areas:

1. <u>Education</u>: The skills supply can be affected, if there is a clear vision of sound educational practices, cost and funding, backlogs in developing infrastructure, adequate institutions and management systems, the Welsh Assembly Government (WAG) (2007, p. 1) has emphasized that:

> *"Skills are critical to the success of individuals, businesses and communities. Moreover, research has shown that education is linked to other aspects of an individual's life, including health related outcomes and social outcomes. In addition, that the economy will increasingly depend on improving and updating individuals' skills so that they can remain and compete in the LM. It is therefore essential that we build a society and workforce that are adaptable, motivated and highly skilled".*

This means, if a labour force has got a high educational level, so they will become more able to adapt to the requirements of the LM and therefore there is potential for development of companies and therefore development of economy. It also indicates wider societal benefits, such as in wellbeing and social related outcomes.

2. <u>Social and psychological environment</u>: The socio-economic status and income factors impact on learning and career choice in the short term, and in the long term they impact on career commitment, maintained discipline, professional and work ethic. As Foley (2007, p. 7) has stressed:

   "The research has found that students from higher socio-economic backgrounds have greater participation and achievement in these education sectors than students from lower socio-economic backgrounds".

   The parenting, home life and community infrastructure that underpin the sustained learning can impact on choices and attitudes of people towards the profession, as well as wider social attitudes. As Drake (2000, p. 34) pointed that:

   "That parent and family involvement significantly contributes, in a variety of ways, to improved student outcomes related to learning and school success. Also, the challenges, which face students in America's public schools, cannot be solved by educators alone; nor can these problems be solved by parents or families alone".

3. <u>Macro governance issues</u>: Long-term planning and chosen plans over time in pursuit of human resources development can help to develop a clear vision and specific aims in all levels in the LM.

   Furthermore, the co-ordination and integration of governance input and functions to deliver results can give the capacity to raise the efficiency in the management of enterprises and institutions through the identification of the skills that must be built by the educational system, which must be compatible with the needs of the LM as much as possible.

4. <u>Role of employers</u>: Broadly speaking, there are four different models of employer engagement that can be identified through next four points (Raddon and Sung, 2006):

   - Voluntary engagement of employers in sectoral skills debates primarily via consultation, also statutory engagement of employers in financing sectoral skills delivery and voluntary consultation.

- Put best practice models of skills development used to shape training practice within the sector.

- Through the relations into sectoral skills strategies and needs, as identified by employers' associations.

- Impact on the system of education and vocational training by skills demand.

Fundamentally, most university students do not have accurate information about occupational opportunities to help them make appropriate career choices, and they maybe do not understand - theoretically - factors influencing career choice can include personality, interests, self concept, cultural identity and available financial resources etc. This may be due to the fact that there is no system of career guidance available - especially in developing countries - which may help students and others at the appropriate choice of profession.

The discussion above considers factors in the structure of skills supply and the possible factors that may influence changes in the supply. A number of key influencing factors are identified and summarised. However, in any change there are also consequences and the following discussion briefly touches on the possible consequences of changes in the relative skills supply, as follows:

1. <u>Low supply of skills</u>: The decline in the supply of skills will lead to a decrease in the whole range of abilities and attitudes that can be combined in different proportions in different jobs. Furthermore, that the changes in the supply of skills will impact on the qualifications held by individuals.

   Because of this, it is important to explore ways that employability skills can be made explicit and useful to individuals and employers, without creating an undue burden on HE, and also commitment of everyone for continuously improving output of HE to satisfy the requirements and expectations of the LM. For example according to the Australian Department of Education (2004, p. 6):

   "Within the higher education sector generic skill development underpins approaches to teaching and learning. The importance of generic skill development in the university sector could be seen as consistent with the development of a universal recognition and recording employability skills model. However, the autonomous nature of university operations presents a potential challenge to the development of prescriptive employability skills portfolios".

Accordingly, the successful development of employability skills must be within objectives of the specific HE sector and LM needs, it is important to ensure there is a link between skills and other areas, such as productivity, and not deal with skills in isolation. Furthermore, the skills are required not only to gain a job, but also to contribute to the development of the LM institutions.

2. <u>Increasing the supply of skills</u>: The LM can absorb increasing supply through equilibrium between supply and demand, which arises from LM flexibility, - there is not full employment -, "and the LM flexibility is the relative absence of LM frictions, so that a market-clearing equilibrium can be achieved in the LM through the unrestricted interaction between the demand and supply of labour" (Monastiriotis, 2006, p. 7).

This means, that there are a virtually infinite number of factors that can be related to LM rigidities, as Monastiriotis (2006, p. 7) state:

"Thus, a case of 'perfect' LM flexibility would imply the complete absence of any economic, financial, institutional, linguistic, political, cultural, or other impediments to LM adjustment"

During recent years examining the LM does give a clear picture of trends in labour shortages over time, so one of the biggest issues facing any economy has been shortages of labour. Indeed, the decline in the supply of skills will lead to decrease the number of labour force. Conversely, the increase in the supply of skills will lead to unemployment.

Section Five: Conclusion

In the end of this discussion about HE and LM a brief summing up of the main findings of this literature review are:

1. That creating and retaining a highly skilled workforce with relevant skills for the local business community can be drive key of economic growth. The evidence in the literature suggests that this is because highly skilled workers are quicker to adapt to new tasks and technologies, they are also a direct source of innovation particularly if they comprise HE graduates.

2. For the most part according to writers and researchers there is growing recognition that universities can player greater roles in society by serving as vehicles of community improvement. HE is an important asset for a community in raising the labour force skills.

3. The biggest challenge facing the both university managers and policy makers is adjustment of curricula and pedagogy, as well as university governance.

4. The meddle factors of change in skills demand the evidence suggests that:

    I. The technological change makes workers with HE qualifications much more attractive for employers, and that the increase in the demand for skilled workers can be attributed to the requirements of new work organization.

    II. That the evolution of international trade and the globalisation reveal plausible arguments for a rising relative demand for higher skilled workers.

    III. It is not possible to understand the shifts in general LM demand through the study of graduate labour skills only. But, the LM institutions system can explain unemployment and differences in wage inequality.

5. The meddle factors of change in skills demand the evidence suggests that:

    - That education can be an influential factor for the skills supply if there is a clear vision to informing sound educational practices.

    - That the socioeconomic status, income, parenting, home life and community infrastructure are all factors that impact on learning, as well as choices and attitudes that people may have towards the profession.

    - That the long-term planning and chosen plans can help to develop a clear vision and specific aims in all levels of education. Furthermore, that availability of infrastructure, resources and funding will create the appropriate climate to coordination between the different skills.

    - The role of employers is important because they impact on the system of education and vocational training by skills demand.

6. Wage inequality cannot be explained without considering all factors that induce it according to the evidence in the literature. It also appears from the evidence, that relative mismatches between the skills and the LM needs might have an impact on the level of productivity.

Those main findings above can helped to make some important points in this study, are:

I.   That these skills mentioned above complement each other, and they do not represent all the skills that could be acquired by the graduates. Because the researcher cannot address all the skills, so the most common skills between writers and researchers are: job commitment, competitiveness, desire for excellence and teamwork and problem-solving.

II.   Through knowledge the type of skills, which graduates acquire, can helped to choice the best methods for studying those skills. Furthermore it helps us to plan and building scenarios for HE and LM consistent with the size of demand and supply skills through know factors of change in skills demand (technological change, evolution of international trade and the globalisation and the LM institutions system) and factors that influence skills supply (the socioeconomic status, income, parenting, role of employers etc).

Chapter 3

Libyan Higher Education (LHE) and Its Labour Market (LM)

This chapter discusses the following key issues in the context of the research literature available:

1. The development of HE in Libya based on the secondary data available on the sector. This comprises mainly the statistics for the number of students in universities and graduates, and educational status of the wider Libyan population.

2. The development of LM in Libya on the basis of the available research on the economically active population by sectors of economic activity.

3. The development of HE and LM in Benghazi on the basis of the research and available secondary data on the educational status of the population. Also through the evidence available of the economically active population by sectors of economic activity.

Introduction

Any discussion about the evolution of both the HE and the LM in Libya is hampered by the fact that any researcher will find it difficult to gather accurate and reliable statistics about the LM and HE from both official and non-official sources.

But there is another way to solve this problem, through reliance on the Libyan General Population Census (LGPC) from 1954 to 2006, for the following reasons:

1. The LGPC is the official statistics of the state since Libyan independence to date.

2. The LGPC is the most obvious source on the population in Libya.

3. Through the census it is possible to gather information on the population distribution by:

    - Economically active population and economically inactive.

    - Educational and employment status

    - Sex and age classes.

4. The LGPC can provide evidence of the rates of growth of the population by the categories contained in the third item.

This chapter presents an analysis of the secondary data available on the HE and LM in Libya in five sections. The first section discusses the evidence about the general Libyan population. The second section discusses the development HE and LM in Libya. The third section discusses the general characteristics of LHE and LLM. The fourth section covers the development of the HE and LM in Benghazi. The fifth section provides some conclusions and links the concluding discussion to the aims for the primary data collection that will be dealt with elsewhere in this thesis.

Section one: Libyan population

The population census is one of the most important sources of the study population characteristics in any country. To date six official censuses have been conducted in Libya. The first was in 1954 and the latest was in 2006. But it is also important not to forget that in addition to these censuses, the Italian government has two calculations of the population in Libya in 1933 and 1936 assessing the total population at 655,000 and 733,000 respectively. Table 1-3 shows population growth in Libya from 1954 to 2006.

Table (1-3)

Population growth in Libya - Libyan and non-Libyan - from 1954 to 2006

Year Census	Libyan				Non-Libyan			
	Gender		Total	Growth rate %	Gender		Total	Growth rate %
	Males	Females			Males	Females		
1954	564,450	524,439	1,088,889	-	24,911	22,363	47,274	-
1964	813,386	750,983	1,564,369	3.8	24,729	24,139	48,868	0.3
1973	1,057,919	994,453	2,052,372	3.4	133,934	62,931	196,865	16.7
1984	1,651,562	1,579,497	3,231,059	4.21	302,195	109,322	411,517	6.93
1995	2,501,766	2,297,309	4,799,075	2.80	270,677	138,649	409,326	-0.05
2006	2,687,513	2,610,639	5,298,152	1.83	246 939	112 601	359,540	-0,01

Sources: *Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.*

Through an examination of the figures in Table 1-3 it is evident that between 1954 and 1984, population growth greatly increased with annual growth rate of approximately 4%, this may be due to several reasons including:

1. The increasing birth rate.

2. The return of numerous Libyans who fled to neighbouring countries during the period of Italian control and during the Second World War.

3. The discovery and exploitation of oil and the improvement of the social services and the per capita income.

In the same way, Zohry (2002) adds other reasons that have been found across the North Africa region:

> *The high fertility sustained over the 1960s and 1970s in North Africa has produced a young age structure and has strengthened the future momentum of population growth. The strong population growth momentum will have a great effect on the future demographic situation in the countries of North Africa. Therefore, the recent decline in fertility in North Africa will not have its full demographic impact for several years. With sustained high fertility the age composition of the population will be dominated by the young, those who are age 15 or younger*

This high rate of Libyan population increase may reflect an official policy of fostering rapid growth to meet labour needs and to fuel economic development. But it can be noted that the growth rate has increase in 1984 to 4.21 percent, and the growth rate has declined in 2006 to 1.83 percent. In addition, it can be noted that the rate of growth amongst the non-Libyan population has reached the highest level in 1973 at 16.7 percent; it also reached its lowest level in 2006 at 0.01 percent. This shows the size and contribution of non-Libyan population in the labour force.

Apart from this, "Geographic factors, particularly, precipitation, temperature, surface and underground water, to a large extent determine the pattern of population distribution in Libya; moreover, other factors such as economy structure cannot be ignored" (Misrati, 1983, p. 184).

On the whole, factors which determine the pattern of population distribution can help to explain the presence of most universities in northern Libya, and Figure 1-3 shows the distribution of Libyan population in 1995.
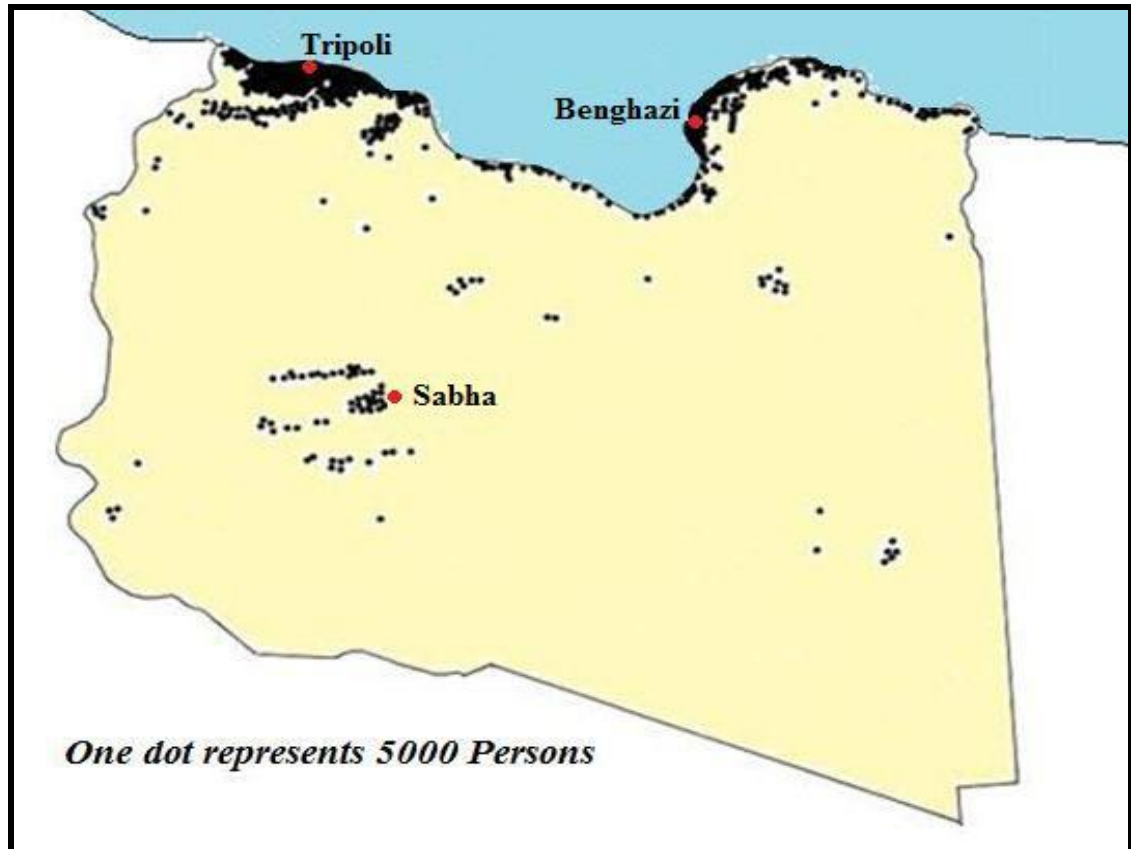
Figure 1-3: Distribution of Libyan population, 1995
<u>*Source:*</u> *Elzalitni, 2008, p.36*

It is clear from Figure 1-3, that there is a striking difference in the geographic distribution of the population among the country's regions. This pattern of distribution can be attributed to the great aridity that dominates the country which led to more than 90% of the population to be concentrated along the coastal area in general and particularly the north-eastern and north-western coasts. According to the Libyan Statistics Book (2003, p. 22):

> *"The average population density is very low, about 3.20 people per km². However, the population density varies from one part of the country to another; it is high along the coast, estimated at more than 2207 people per km² in Tripoli and more than 796 in Benghazi, whereas it falls to less than one person per km² in the interior like El Kufra and Murzuq".*

This discussion of the geographic distribution of the population gives a clear idea of the magnitude of population in each region and therefore the size of available human resources, which gives us greater ability when studying or planning of HE and human resources. Furthermore, an understanding of the size and population distribution and also rate of

population growth will enable a comparison with the size and growth of age groups that support the human resources as well as those within the scope of HE and LM. To be more precise, its important to focus on the age class from 15 to 64 because the participants in HE and LM are drawn from this age group, and Table 2-3 shows the population in this age group (15-64) during the period from 1954 to 2006.

Table (2-3)

Population growth in age class (15-64) from 1954 to 2006

Year Census	Gender	Age Classes						Total
		15-24	25-34	35-44	45-54	55-64	Total	
1954	Males	93,779	80,050	51,105	43,959	31,865	300,758	576,351
	Females	82,600	75,634	51,569	39,790	26,000	275,593	
1964	Males	122,828	111,514	78,961	50,487	37,357	401,147	769,440
	Females	115,098	107,716	70,760	44,950	29,769	368,293	
1973	Males	182,086	153,174	126,565	81,594	41,860	585,279	1,064,667
	Females	164,325	122,832	95,113	61,709	35,409	479,388	
1984	Males	331,320	165,472	114,150	92,358	69,332	772,632	1,503,707
	Females	316,493	156,554	108,411	85,011	64,606	731,075	
1995	Males	552,477	341,379	166,585	119,363	93,635	1,273,439	2,504,043
	Females	537,522	335,226	162,691	112,288	82,877	1,230,604	
2006	Males	580,231	535,976	336,200	165,330	112,734	1,730,471	3,427,413
	Females	566,082	523,310	336,449	166,431	104,670	1,696,942	

Sources: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

Table 2-3 presents the census data for the 15-64 age range as these are the economically active years. These cohorts of the population accounts for 52.9% of the total population in the 1954 census, and in the 1964 census the ratio was 49.2%. In the 1973 census the ratio is 51.9%, while in 1984 decreased to 46.5%, in 1995 was 52.2% and finally in 2006 became 64.7%. This shows that since 1954 around half of the populations have ability to be economically active, ranging from 3.5% below and 16.5% above this level. In addition, because of the age and stage in their life cycle, a proportion of them are within HE. This led to increase the number of students in HE, because of increase number of population in age range 15-64. This could give a clear indication of the size of the human resource that were available during the period in question. According to the United Nations (UN) (2000, p. 309) their demographic projections for Libya indicate:

> *"The population will continue to grow between 1.2% and 2.2% over the next few decades".*

This may mean that the contribution of this category in the total population could rise to more than 50% in the coming decades. In fact, this information about population (15-64) is very important for this research because it includes HE graduates and the labour force.

Section two: Development the LHE and LLM

Education in Libya is the tool of change and reform, thus increasing the importance of HE in our lives day by day especially in the age of scientific and knowledge revolutions in various areas, it is one of the sectors that proves reliable in achieving the development goals of the social sector. So Tavakol (2007, p. 2) argues:

> *"Today more than any other time in human history, nations' wealth or poverty is dependent on the quality of HE, because of, generation, transfer and dissemination of knowledge has been the university's main objective from the very beginning, and knowledge constitutes the core in processes of the contemporary society".*

On the whole the evolution of HE in Libya can be examined through the study of the growth of universities, numbers of students enrolled and graduates. Table 3-3 shows growth in the number of public universities in Libya from 1955 to 2005.

Table (3-3)

Growth in the number of public universities in Libya from 1955 to 2005

Type of Institution***	Years					
	1955	1965	1975	1985	1995	2005**
Comprehensive University *	1	1	2	5	5	10
Specialised University *	00	00	00	5	5	1
Open University *	00	00	00	1	1	1
Total	1	1	2	11	11	12

Sources: *Elzalitni, 2008, p. 46. **GAI, 2006, p. 133.

Notes: *** Comprehensive University: Teach all subjects (engineering, medicine, arts and law etc) ***Specialised University: Teach one subject (engineering or medicine or arts or law etc).

In Table 3-3 it can be noted that the universities' growth has been slow until 1975 this can be attributed to a small population, where the population of Libya in 1973 was 2,052,372 in accordance with the general census population in that year (see Table 1-3) and also the lack of financial resources because of low oil prices in the sixties and early seventies of the twentieth century. In contrast, "the Libyan government began building a new headquarters for the University of Libya in Benghazi and Tripoli since 1968" (Libyan University, 1972, p. 24)

By 1985 the number of universities increased to 11 universities, 5 of which are comprehensive, 5 Specialised University and one Open University. And in 2005 there were 12 Universities, 10 of which are comprehensive, 1 University Specialised and one Open University. This can be attributed to the increase in oil revenues which gave Libya the opportunity to accelerate the process of educational development at the end of seventies and the beginning of eighties, as well as the re-structuring and reform of the educational system in 1980. However, some researchers argue:

> "That this number of universities was excessive for a population as small as Libya's (about 5.5 million according to the census in 2006). And educational planners had suggested a ratio of 1 university to 1,000,000 people" (Elzalitni, 2008, p. 45).

In the same way, some analysts have argued that the establishment of universities has not been appropriately planned to meet the actual needs of the different regions of the country. This unplanned expansion has been well summed up by Al-Badri (2006), who argues that:

> Haphazard and sudden expansion of universities has been conducted without taking into account the actual distribution and density of the population. These ideas have

probably been born of the moment because they did not take into account the simplest requirements of the HE institutions such as appropriate buildings, administrative staff and most importantly, sufficient number of faculty members to carry out the various teaching responsibilities at these newly established universities.

As for private universities (Private Sector) these universities did not start their activity until 1997 and Table 4-3 shows the growth in the number of private universities and the number of students enrolled from 1997 to 2003

Table (4-3)

Growth in the number of private universities and the number of students enrolled from 1997 to 2003

Years	1997	1998	1999	2000	2001	2002	2003
Number of universities	1	3	5	7	15	25	32
Number of students	*	*	257	255	1145	3600	5000

Source: Al-Tier, 2005, p. 44.
*Note: * Data not available*

In Table 4-3 it can be noted that in 1997 there was one private university without students, also in 1998 there were not students at three private universities, and in 1999 there were 5 universities, and 257 students. The number of private universities rose from 7 in 2000 to 32 in 2003. This means that the growth rate was about 10 universities per a year, and this rate is very high if compared to the number of students, which did not exceed 5000 students nationally in 2003, and maybe this is what prompted some researchers and writers to criticize those universities:

"What happened in Libya is something quite different from what is happening elsewhere in the world. Between day and night some people decided to found a university, and they have not experience and knowledge about working at university. And those universities do not have infrastructure such as headquarters, libraries, laboratory and equipment. And do not have full-time faculty members and administrative staff, also that the number of students enrolled in some of them are very small. It seems that the establishment of private universities has become like a joke." *(Al-Tier. 2005, p. 44)*

Furthermore, *Alfaidy and Ibrahim (1997, p. 199)* have specifically commented on the various shortcomings that were affecting the productivity these universities:

> *"It was noted that some of the new HE institutions have no economic value due to the lack of sufficient equipment and professional human resources, and not to mention the low level of educational attainment of this new faculty. It has also been observed that a large proportion of higher institutions tend to enrol in the social science and humanities, this is despite the fact that the society is badly in need of graduates of science disciplines… as it continues to rely on expatriates both at secondary and postsecondary levels in the areas of education as well as training".*

Fundamentally, this focus on the university raises the issue of what is meant by a "university" in Libya? How is it defined and how can it be set up? Does it has degree awarding powers?

The Libyan Centre of Ensure Quality and Adoption of Institutions of Higher Education "LCEQAIHE" (2007, p. 7) has defined the university in the guide of quality assurance and accreditation as:

> *"A scientific institution dealing with HE, and scientific research and community service. And with legal personality and independent financial, and provide scientific programmes and research courses are approved and granted bachelor's degree, doctoral and master's through the colleges and various sections".*

Having discussed the development of the university sector through an analysis of the establishment of the institutions, the next section will move on to discuss the growth of the number of students enrolled in the Libyan universities. But we note that all statistics on Libyan students and there is no clear information on the numbers of students in general and the numbers of non-Libyan students in particular. This has meant that the gathering and collating the best available data has required considerable work as these data were not available from a single source. The data collected does not include compiled statistics for the number of students enrolled in Libyan universities in some years because; despite considerable effort and extensive enquiries it was not obtainable when conducting this research. Table 5-3 shows the collated data on the number of students enrolled in Libyan universities from 1955 to 2006 which has been gathered from 11 separate sources. It should be noted the range of sources the researcher has reservations about the comparability of the data across years, but this is the first time that a continuous year-on-year data set has been compiled for the university sector in Libya.

Table (5-3)

Enrolment of students in Libyan universities (from 1955 to 2006)

Academic Year	No of Students	Academic Year	No of Students	Academic Year	No of Students
1955-1956(1)	31	1972-1973(2)	7100	1989-1990(11)	47404
1956-1957(1)	79	1973-1974(2)	8200	1990-1991(2)	64248
1957-1958(1)	189	1974-1975(2)	10100	1991-1992(2)	67248
1958-1959(1)	331	1975-1976(2)	11100	1992-1993(2)	72197
1959-1960(1)	526	1976-1977(2)	11100	1993-1994(2)	116473
1960-1961(1)	705	1977-1978(2)	12100	1994-1995(2)	144412
1961-1962(1)	853	1978-1979(2)	12000	1995-1996(7)	126348
1962-1963(1)	1047	1979-1980(2)	12700	1996-1997(10)	136274
1963-1964(1)	1196	1980-1981(2)	17900	1997-1998(11)	*
1964-1965(1)	1436	1981-1982(2)	26200	1998-1999(4)	165447
1965-1966(1)	1722	1982-1983(2)	29900	1999-2000(10)	173214
1966-1967(1)	2041	1983-1984(8)	35387	2000-2001(10)	198521
1967-1968(1)	2242	1984-1985(8)	34469	2001-2002(8)	171385
1968-1969(1)	2671	1985-1986(4)	36600	2002-2003(3)	171394
1969-1970(1)	3215	1986-1987(8)	38840	2003-2004	*
1970-1971(1)	4661	1987-1988	*	2004-2005(5)	150171
1971-1972(2)	5600	1988-1989(6)	269302	2005-2006(9)	246000

Sources: *Adapted from (1): Libyan university, 1972. (2): Al-Falah and Salem, 2006, p. 106 and Al-Shakshwky, 2006a, p. 143. (3): GAI, 2003, p. 44. (4): Al-Tier, 2006, p. 42. (5): GAI, 2004, pp. 50-70. (6): Al-Gaddafi, 2001, p. 4. (8): Al-Maqury, 2006, p. 105. (7): GAI, 1998, p. 26. (8) Al-Badri, 1993, p. 127. (9) General People's Committee for HE, 2005, p. 10. (10) GPC "General People's Committee" (2004). (11): Mansour, 2003, p. 76.*

Note: * *Data not available*

Elfenish et al; (1998) have doubted the accuracy of available official statistics about students at the Libyan universities. However, the numbers of university students that are shown in the Table 5-3, suggest that:

1. That students enrolled at universities were growing steadily, and in the academic year 1988-1989 there were about 269,302 students. Later changes to these numbers show unbalanced change;

2. That increase in the number of students in some years and a sharp drop in other years;

3. That the sharp fall in the number of students at Libyan universities from 269302 students in the academic year 1988-1989 to 26200 students in the academic year 1989-1990 is due to restrictions on the admission of students to study at universities (can go to the university if their rate of graduation is high 2 from 4, and above/ 75% from total rate of graduation).

It is possible to ascribe these growth trends in the number of students enrolled in institutions of HE to several reasons, including:

1. High population growth rate, where the contribution of the high rate of population growth in increasing the number of students at the university.

2. Closure of teacher training colleges prompting the students to demand university education instead.

3. The university system is obligated to provide college education to every secondary school graduate, through free access and open door admission to all colleges of the university.

4. Higher social status for university graduates.

5. The absence of a clear admissions policy at universities relating to the selection procedure for applicants to university learning programmes.

6. Employment policy, which gives access to jobs for university graduates more than others.

These and other reasons are also mentioned by some other writers and researchers; for instance Al-Badri (2006, p. 147) approved that:

> *"Those policies were not able to identify the number of students, who can be absorbed by universities, where the admission of students at universities is not based on data and information or statistics, which indicate the need to have those students in each discipline".*

As well Abd-Aldaym (1984) explained the higher social status for university graduates in these words:

> *The university is the best place for the granting of a higher social status for people, so most parents prefer to send their children to secondary school; so they have the opportunity to go to university.*

With regard to growth of the graduates of Libyan universities Table 6-3 shows the number of graduates of Libyan universities from 1956 to 2006.

Table (6-3)

The number of graduates of Libyan universities from 1956 to 2006

Years	Number of graduates	Annual growth rate
1956-1960(1)	136	-
1961-1965(1)	819	98.8%
1966-1970(1)	1953	27.6%
1971-1975(2)	3648	17.4%
1976-1980(2)	9317	31.1%
1981-1985(2)	12863	7.6%
1986-1990(2)	12998	0.21%
1991-1995(2)	50295	57.4%
1996-2000	*	*
2001-2005(3)	148212	*
2006	*	*

Sources: *Adapted from (1): Libyan university, 1972, p.329. (2): Al-Shakshwky, 2006a, p. 145. (3): Al-Maqury, 2006, p.99.*

*Note: * Data not available.*

Fundamentally, there is a contradiction in the numbers of graduates and lack of statistics about university graduates in some years. Nevertheless, the trends observable in the data presented in Table 6-3 could be summarised as follows:

- The number of university graduates had increased steadily until 1980; and

- The rate of growth in the number of university graduates from 1981 to 1990, decreasing dramatically; and

- Between 1991 and 1995 the number of graduates increased dramatically, up to 50,295 graduate.

- Between 2001 and 2005 the number of university graduates increased, up to 148,212 graduates.

- In 1996-2000 and 2006 there are no statistics on university graduates.

Actually, this discussion of growth of graduate numbers and its evident erratic change over the period concerned suggests the reason for the rise and decline in the number of university graduates may be the result of absence of a clear policy at universities. As Al-Badri (2007, p. 2) has confirmed:

"Returning to higher education in our country and despite the proliferation of universities throughout the country, it is still weak in its policies, programmes, output and weak in its input, and this means that the higher education system in Libya lacks diversity"

Beyond this, Mniena (2001), in her study about the effect of structural and administrative changes on higher education policies in Libya, has confirmed that:

The frequent and incoherent structural and administrative changes have affected adversely the stability of the sector and its ability to design and implement educational policies in general, and a central admissions policy in particular.

Additionally, she has argued: The individual admission polices practiced by the different colleges at Garyounis University, and the transfer of many students from one college to another, reflected clearly the inability of the Secretariat of Education (Ministry of Education) to implement and enforce its policies on one hand, and divided the central admission policy of its content and importance, on the other hand. (Mniena: 2001)

Apart from this, the Symposium on Higher Education and Development in Libya "SHEDL" (2006, p. 422) has recommended:

"Reform and rationalization of the student admission policies at the universities and higher institutes, and linked to the requirements of development and the labour market needs, and admission of students according to their abilities and inclinations".

Under these circumstances the HE system in Libya lacks diversity although the development of the university sector has to some extent at least spread its institutions throughout the country. Equally importantly, the administrative changes have affected adversely the stability of the HE and its ability to design and implement educational policies.

Based on the foregoing discussion it is possible to review the contribution the LHE graduates in the LLM through a review of the educational situation of the Libyan population in the age group 15-64, which represents the economically active proportion of the population, as shown in the Table 7-3.

This Table represents a rare representation of this data in one single Table. The researcher has had to gather and collate these data from a range of publications in order to develop an overview of the evolution of the educational status of the population because this information is not widely available in the form presented below.

Table (7-3)

Total of Libyan population (15- 64) by educational status from 1954 to 2006

Educational Status	Gender	Census Years					
		1954	1964	1973	1984	1995	2006
Illiterate	Male	222,992	235,679	161,559	143,072	82,114	132,912
	Female	255,237	351,033	366,500	407,726	313,838	349,531
Read only	Male	418	3,612	6,287	6,697	*	11,671
	Female	33	427	1,418	3,443	*	12,137
Read and Write	Male	71,191	110,395	159,066	131,186	119,672	89,845
	Female	3841	11,535	38,742	78,711	126,673	93,144
Primary	Male	*	31,031	78,225	118,744	266,493	234,923
	Female	*	3,413	17,380	62,097	200,500	197,599
Preparatory	Male	*	14,486	33,726	71,905	377,436	536,870
	Female	*	1,429	6,932	31,368	303,377	415,795
Secondary	Male	*	4,431	26,234	87,182	302,524	500,805
	Female	*	294	5148	47,605	218,770	427,022
Above Secondary	Male	*	*	1,284	3	7,751	*
	Female	*	*	76	1	1,898	*
University Degree and Above	Male	*	1,408	6,126	25,109	75,800	172,748
	Female	*	91	433	3,729	28,673	141,341
Not Stated	Male	6,178	106	563	*	169	3,339
	Female	15,527	81	333	*	55	17,665
Total		575,417	769,451	910,032	1,218,578	2,425,743	3,337,347

Source: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

*Note: * Data not available.*

In 1954, there is no university graduate in age group 15-64; this due to the absence of universities in Libya until 1955. Also, prior to independence there was no evidence of sending

even senior civil servants overseas for university training. Whereas, in 2006 the proportion of the HE graduates in this category has increased to 9.4%, and male HE graduates 5.2% of the total population in the same age group, also the percentage of female HE graduates 42.04%. Based on the concept of applied research Figure 2-3 below shows the proportion of Libyan HE graduates in the age group (15-64), it is important to note that the change at their proportion in the human resources needed by the LLM.
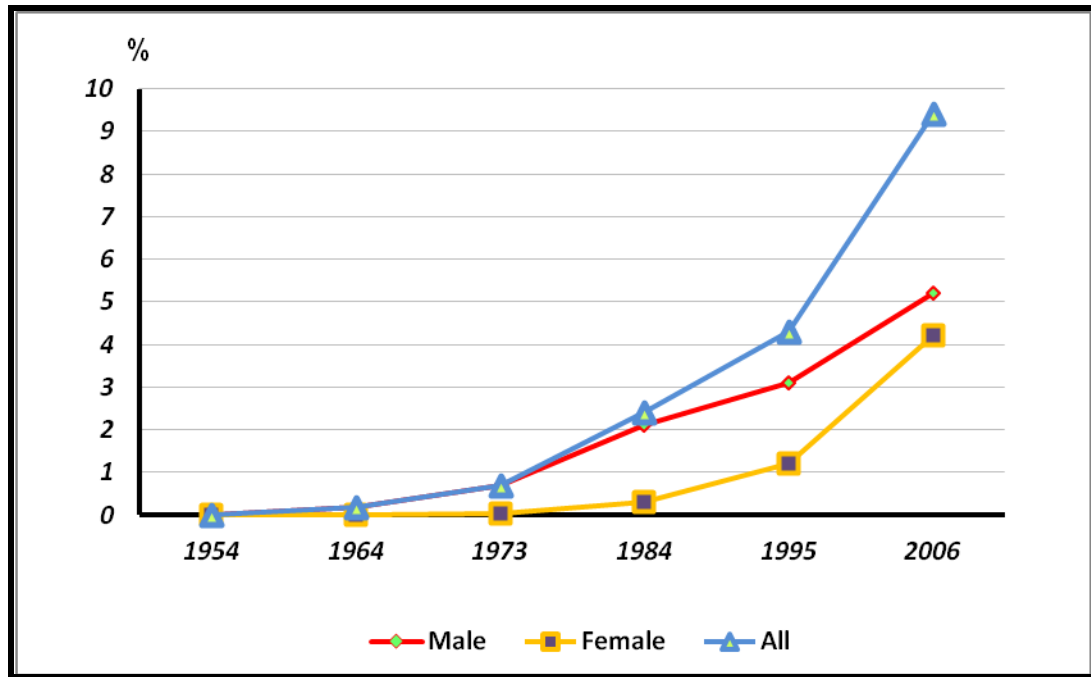
Figure 2-3: The proportion of Libyan HE graduates in the age group (15-64)

Source: After the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

Through an examination of the above figures in the Table 7-3 and Figure 2-3, was noted that the contribution made by graduates of the HE to the human resources needed by the LM in Libya was very low despite the increase in numbers of HE graduates, which are shown in the Table 6-3, this may because of:

1. A high rate of failure and leakage among university students; and

2. A reduction in the portion of females in the LM despite the high numbers of female students enrolled at the Libyan universities; and

3. Sought overseas employment through migration to other countries, which makes the shortage even more acute; and

4. Weakness of the economic structure, which relies on the public sector for the employment of most university graduates.

In the same way, Al-Maqury (2006) - in his study about the relationship between HE outputs and LM - has noted that the number of university graduates seeking work was very low despite the increase in numbers of university graduates, as Table 8-3 shown

Table (8-3)

Distribution of Libyan seeking work by educational status in 1999

Educational Status	All seeking work			
	Male	Female	Total	%
University Degree	7551	7599	15150	15.9
Higher Diploma	3296	2777	6073	6.4
Other seeking work	42327	31603	73930	77.7
Total	53174	41979	95153	100

Source: *Al-Maqury, 2006, p: 99.*

To provide a clearer idea the data listed in Table 8-3 is converted into a chart, as Figure 3-3 shown
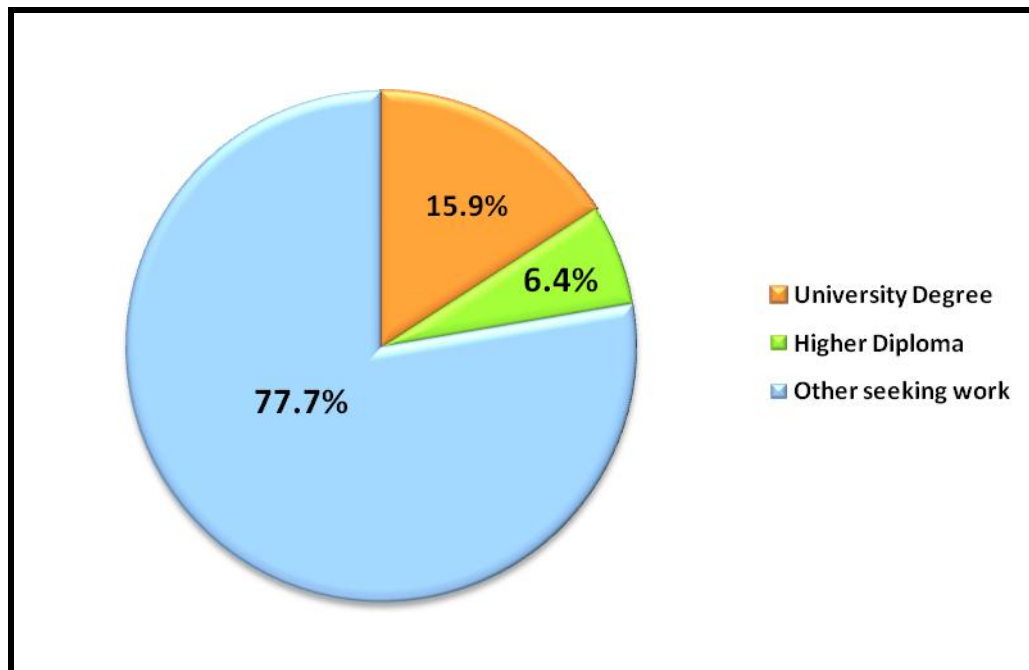
Figure 3-3: Distribution of Libyans seeking work by education status in 1999

Source: *After Al-Maqury, 2006.*

Through an examination of the above figures in the Table 8-3 and Figure 3-3 one can note that the proportion of work seekers who are university graduates was very low, 15.9%, compared to the proportion of graduates from high technical institutes 6.4%, and others accounting for 77.7% of those seeking work. To be more precise, Al-Maqury (2006) believes that there is an imbalance in the relationship between HE and LM because of the following:

1. The contribution of output of HE to the LM is low: The limited participation of HE graduates in the LM during the past four decades, is clearly illustrated by the fact that their proportion did not exceed 14.8% of the total workforce in the LLM. The same situation is to be found in some other Arab countries, Jerio (2010) - in his study about HE quality standards and indicators in Iraq - has confirmed that: High rates of unemployment among higher education graduates, and that the weak link between higher education and the requirements of the labour market, since education does not produce the required skills needed by the labour market.

2. There is a concentration in the graduate output of HE in the services sector: 85% of the total HE graduates work in the services sector.

3. There is a concentration in the output of HE in the public sector: 74.64% of total HE graduates are working at the public sector.

4. The geographic concentration of the output of HE: most of the workforce of graduates of HE are concentrated in major cities such as Tripoli and Benghazi, because of the high level of services. And about 69.3% of HE graduates are living in Tripoli and Benghazi.

5. There is a failure in the employment of females amongst the HE graduates: Although the females represent about 50.5% of the total number of HE graduates in 2001, they represent only 6.0% of the total workforce.

6. Continued weakness of the LM to absorb the output of HE.

With regard to the educational status of the non-Libyan population, and because of the fact that they are living and working in Libya, and therefore they have influenced all aspects of the Libyan community including HE and the LM, a brief discussion of the distribution the non-Libyan population by educational status is merited. This can be facilitated through consideration of the data presented in Table 9-3 according to the general population census from 1954 to 2006.

Table (9-3)
Total of non-Libyan population (15-64) by educational status from 1954 to 2006

Educational Status	Gender	Census Years					
		1954 *	1964	1973	1984	1995	2006
Illiterate	Male	-	2,633	44,534	52,363	64,969	48806
	Female	-	2,893	14,039	21,729	30,484	18426
Read only	Male	-	123	1,264	3,192	*	*
	Female	-	99	326	632	*	*
Read and Write	Male	-	9,273	37,467	107,443	55,787	38002
	Female	-	9,982	11,724	15,548	20,259	12400
Primary	Male	-	2,139	8,164	5,098	24,277	31612
	Female	-	2,111	5,572	29,642	13,970	15192
Preparatory and Secondary	Male	-	3,653	12,289	31,042	60,456	78538
	Female	-	4,162	11,184	32,257	31,359	28250
Above Secondary	Male	-	-	890	19	1,798	-
	Female	-	-	797	1	404	-
University Degree and Above	Male	-	2,789	12,367	25,341	18,155	10854
	Female	-	965	3,199	6,458	6,178	5597
Not Stated	Male	-	275	403	-	1,634	764
	Female	-	291	253	-	92	2275
Total		-	41,388	164,472	330,765	329,822	290,716

Sources: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

*Note: * Data not available*

Through an examination of the above figures in Table 9-3, it can be noted that in 1964 the non-Libyan HE graduates have been a relatively high proportion if compared with proportion of the LHE graduates in the same age group. And the proportion of non-Libyan female graduates from HE was 25.7%, this means that the proportion of female graduates of HE is low if we compare it with the size of Libyan females' in same age group, which it was 49.5%. More importantly, in 2006 the HE graduates representing approximately 5.6% of the total of non-Libyan population in the same age group. Moreover, the proportion of non-Libyan females' graduates from HE was 34.02%, it is a high percentage if we compare it with the size of females in same age group, which was 28.3%.

Based on the above figures in the Table 9-3 the Figure 4-3 below shows the proportion of non-Libyan HE graduates in the age group (15-64), it is important to note that the change in their contribution in the human resources needed by the LLM. As noted that the contribution university graduates of non-Libyans are higher than the contribution of Libyans. Therefore if

one takes into consideration the size of each class of the total population, despite the recent improvements in the availability of HE in the country, the Libyan education system is incapable of providing for the country's needs for trained labour force.
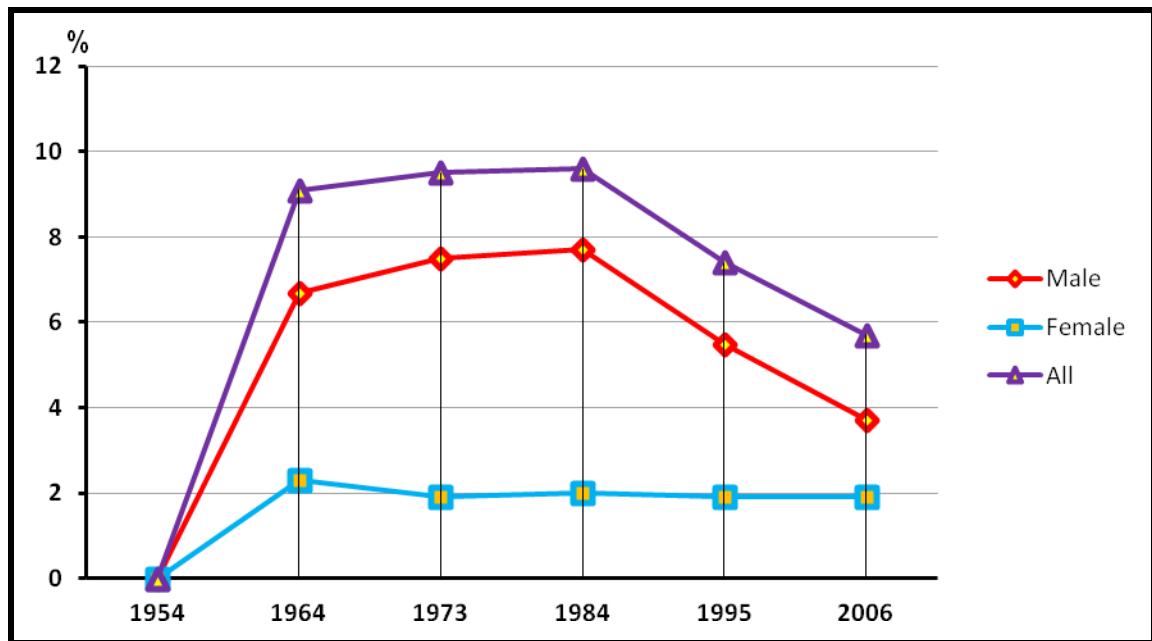
Figure 4-3: The proportion of non-Libyan HE graduates in the age group (15-64)

Sources: After the LGPC 1954, 1964, 1973, 1984, 1995 and 2006

Equally importantly, Table 9-3 and Figure 4-3, clearly indicates that, the country still relies extensively on foreign experts as Zubi (1992); explicitly comments:

> *Despite the increasing and rapid expansion in the educational system, the rising figures for enrolment and well equipped buildings, the country still suffers from an acute shortage of the well qualified and skilled human resources that should meet the country's socio-economic development and transformation plan and run the increasing number of large industrial establishments in the oil industry, where a large number of foreign personnel still occupy core functions*

If the mission of HE is the preparation of the labour force with the skills and capabilities in a variety of disciplines and its ability to occupy advanced positions in economic activity, the task of the LM lies in its ability to absorb the labour force and provide adequate conditions to maximize the benefit from it in the form of an increase in production and income. In addition, the absorption of labour and efficient development patterns are an important element of strategies to improve human capital development.

Libya has experienced a substantial economic growth rate over the past few decades, which has resulted in a drastic change in the labour force profile. The transformation of the economy has brought about a rapid evolution in the numbers of the national labour force, and that the structure and size of the labour force has changed between economic sectors.

These changes can be discussed in relation to the data presented through Table 10-3, which shows distribution of the economically active Libyan population between sectors of economic activity from 1954 to 2006.

Table (10-3)
Economically active Libyan population (15-64) by sectors
of economic activity from 1954 to 2006

Sectors Economic Activity	Gender	Census Years					
		1954	1964	1973	1984	1995	2006
Agriculture, Forestry, Hunting and Fishing	Male	171676	118814	80832	60619	80381	100,307
	Female	9030	1915	11729	2459	3190	18,980
Mining and Quarrying	Male	393	11468	8008	10320	18447	31,952
	Female	7	52	85	263	678	2157
Manufacturing	Male	13231	17683	11190	28917	63642	43302
	Female	19705	6784	1372	3861	10083	3888
Electricity, Gas, Water and sanitation	Male	780	5314	8100	10051	28530	37,507
	Female	1	83	60	323	1380	2,096
Construction	Male	6859	29032	30223	12703	16075	30,737
	Female	31	157	37	407	612	1,499
Wholesale and retail trade	Male	15720	22891	30910	37330	76102	101,534
	Female	158	188	184	4562	2928	4,261
Transport, Communication and Storage	Male	7380	21120	40897	39481	58842	61,162
	Female	5	98	201	1716	2275	3,373
Financing, Insurance, Real Estate and Business Services	Male	*	*	4797	6879	15655	23,935
	Female	*	*	188	1469	3681	5,636
Public Services	Male	40742	70200	132718	339937	346634	505,900
	Female	225621	4309	12068	68552	147135	343,556
Activities not adequately described	Male	43978	37087	13351	27	4253	9,857
	Female	21025	2464	146	1	233	3,455
Total	Male	300759	333609	361026	546264	708561	946,193
	Female	275583	16050	26070	83613	172195	388,901
	All	576342	349659	387096	629877	880756	1,335,094

Sources: *Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.*

Note: * *Data not available.*

Through Table 10-3 it is possible to see that the public services sector was the largest sector. Where the proportion of workers in this category ranged between 21.31% in 1964 and 64.85% in 1984, including in 1954 this proportion was 46.2% and in 1973 it was 37.4%, in 1995 it was 56.06%. Afterwards in 2006 this proportion increased to 63.63%.

And the mining and quarrying sector was the smaller sector - where the proportion of workers in this sector 1954 did not exceed 0.07% of the total. At its highest in 1964 this sector accounted for 3.29%, and in 1973 this proportion was 2.09%. In 1984 this proportion becomes 1.68%, while this proportion was in 1995 about 2.17%. In 2006 this proportion was 2.55% -, in terms of size of force labour, which absorbed.

In the same context, the low participation of women in the labour force should be noted. For instance, in 1954 the proportion of women was 47.8% of the total economically active population, while it had fallen to back 4.6% in 1964. Afterwards in 1973 this proportion increased to 6.7%, and then again increased in 1985 to reach 13.3%. In 1995 women accounted for 19.6%, while in 2006 it rose to reach 29.1%.

While forecasts cannot predict the future precisely, they can signal trends and complement other LM information. In the same context, with no clear long term trend the extent of this variation in ratios from year to year can be ascribed to several factors, including:

- Low rate of illiteracy among males due to continuous improvement in education;

- Increased reliance on the oil industry since 1959, which has led to emerge of new jobs and new skills;

- Volatility in the rates of dependence on foreign labour due to instability in Libyan development plans.

Data contained in Table 10-3 can point to sectors that may need more attention and highlight sectors where need to know more about change education and training or career paths etc. Apart from this, Figure 5-3 shows the economically active Libyan population between the ages of (15 and 64) by sectors of economic activity (1954-2006). The Figure also illustrates the largest and smaller sector, in terms of size of general labour force.
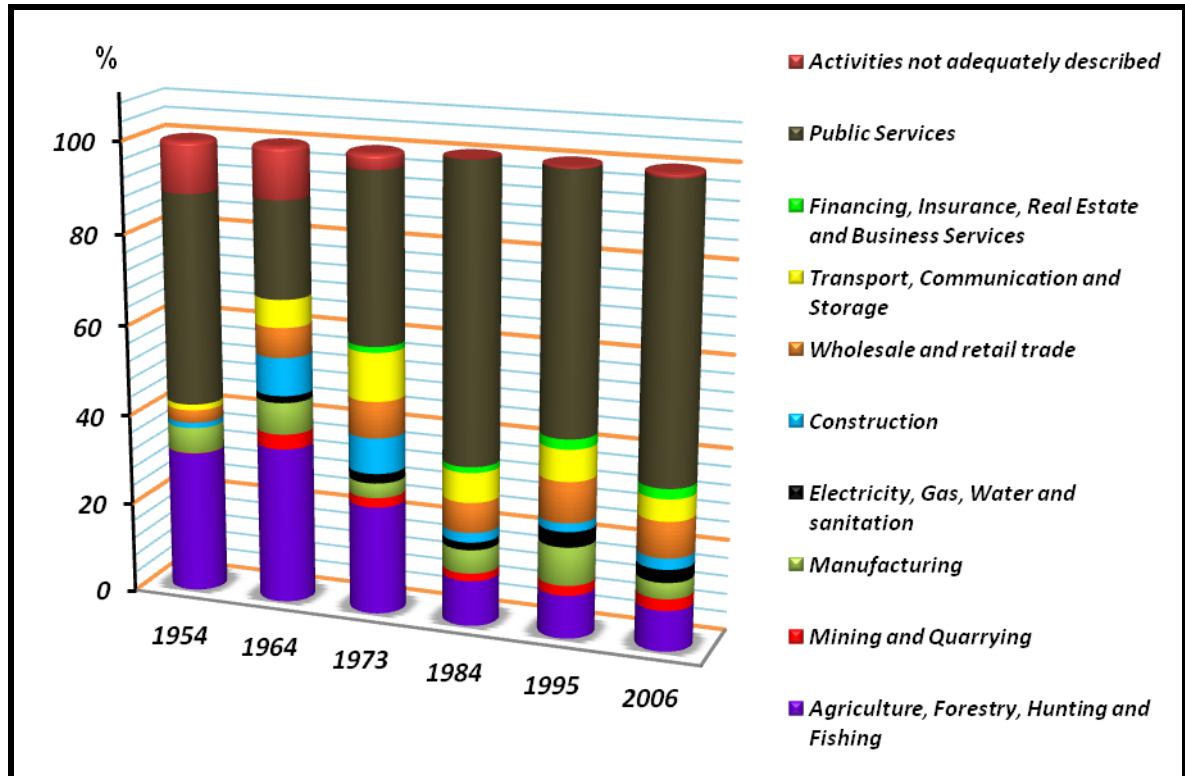
**Figure 5-3: Economically active Libyan population (15-64) by sectors
of economic activity from 1954-2006**

Sources: After the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

However, the data contained in Table 10-3 and Figure 5-3 demonstrates a very important point: it is the size of each sector in economic activity as measured by the size of the labour force in those sectors; this provides a particular view of the LM needs. Furthermore this baseline data and understanding of the structure of the labour force can be fed into the later stages of the project presented in this thesis, in particular the planning and building of scenarios for the Libyan LM that are consistent with the size of each sector and its aims.

Evidently, the population of Libya shares a number of similar characteristics with other Arab oil exporting countries in regards to labour force. These characteristics were summarised as follows by the ILO (1979, p. 17) more than 30 years ago, but still hold true to a large extent:

1. The supply of indigenous labour is unusually small not only because of the smallness of the population, but also, because of the absence of women from the labour force.

2. The youthfulness of the population.

3. The increased number of students in secondary and HE.

In addition, Table 11-3 shows the economically active non-Libyan population in the LLM by sectors economic activity from 1954 to 2006, providing a direct comparison with Table 10-3.

Table (11-3)

Economically active of non-Libyan population (15-64) by sectors economic activity from 1954 to 2006

Sectors Economic Activity	Gender	Census Years					
		1954	1964	1973	1984	1995	2006
Agriculture, forestry, hunting and fishing	Male	4707	1264	11820	30320	34175	45695
	Female	85	36	151	365	124	968
Mining and quarrying	Male	18	2306	3093	8966	5867	2433
	Female	1	326	232	324	99	103
Manufacturing	Male	615	2701	8934	20287	23150	20229
	Female	462	129	140	507	553	200
Electricity, gas, water and sanitation	Male	312	391	1498	3949	1767	680
	Female	5	25	29	46	43	11
Construction	Male	944	1361	57615	143504	67369	64263
	Female	4	27	175	1375	219	229
Wholesale and retail trade	Male	1609	1481	3345	9388	22965	31088
	Female	250	440	331	706	673	717
Transport, communication and storage	Male	1321	1085	1699	3967	4212	2554
	Female	18	96	141	246	65	102
Financing, insurance, real estate and business services	Male	-	-	901	570	777	848
	Female	-	-	326	209	129	198
Public Services	Male	7392	3284	17387	31536	35753	14870
	Female	17155	1600	5727	11507	8144	6613
Activities not adequately described	Male	2348	660	2146	6	930	779
	Female	1876	347	148	-	25	65
Total	Male	19266	14533	108438	252493	196965	183439
	Female	19856	3026	7400	15285	10074	9206
	All	39122	17559	115838	267778	207039	192645

Sources: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

Through an examination of the figures in Table 11-3, it is clear that the construction sector was the largest sector, accounting for 2.42% of the total economically active population in 1954. In 1964 this proportion increased to 7.90%, and it rose to higher in 1973, amounting to about 49.89%. It also continued to increase up to 54.1% by 1984, but this proportion had fallen in 1995 to 32.65%. In 2006 this proportion increased again to 33.48, in terms of size of non-Libyan labour force.

In contrast, the sector of financing, insurance, real estate and business was a smaller sector - there was not any data about the sector of financing, insurance, real estate and business services in 1954 or 1964, because of this sector was considered within the public service sector from 1954 to 1964 -. However, this sector had accounted 1.06% of the total economically active population in 1973 and this proportion became 0.29% in 1984, while in 1995 was 0.44%. Either in 2006 was 0.54%-, terms of size of non-Libyan labour force.

Furthermore, the data contained in Table 11-3, explain the size of each sector in economic activity as measured by the size of the non-Libyan labour force in those sectors, and show that the structure of the non-Libyan labour force was unstable this may due to unstable the development plans, that resulting in a shift in direction or process that affects the way of the non-Libyan labour force growth, this can be deliberate and planned by previous Libyan governments - in the Qaddafi's regime - in order to influence the neighbouring countries such as: Egypt, Sudan, Chad, Niger and Tunisia.

For example, it provides evidence, that the participation of females amongst the non-Libyans in the Libyan labour force has been low, where was accounted for 50.8% of the proportion of the total economically active population in 1954, and in 1964 this proportion was 17.2%. On the other hand, this proportion in 1973 was about 6.4%, and in 1984 has declined to about 5.7%. Either in 1995 was 4.9%. Also, this proportion has declined to about 4.7% in 2006.

The Table 12-3 and Figure 6-3 below provide a direct comparison between Libyan and non - Libyan labour force from 1954 to 2006

Table 12-3

Comparison between Libyan and non-Libyan labour force from 1954 to 2006

Years		1954	1964	1973	1984	1995	2006
Libyan labour force	No	576342	349659	387096	629877	880756	1,335,094
	%	93.6	95.2	77	70.2	81	87.4
Non-Libyan labour force	NO	39122	17559	115838	267778	207039	192645
	%	6.4	4.8	23	29.8	19	12.6
Total		615464	367218	502934	897655	1087795	1,527,739

Sources: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.
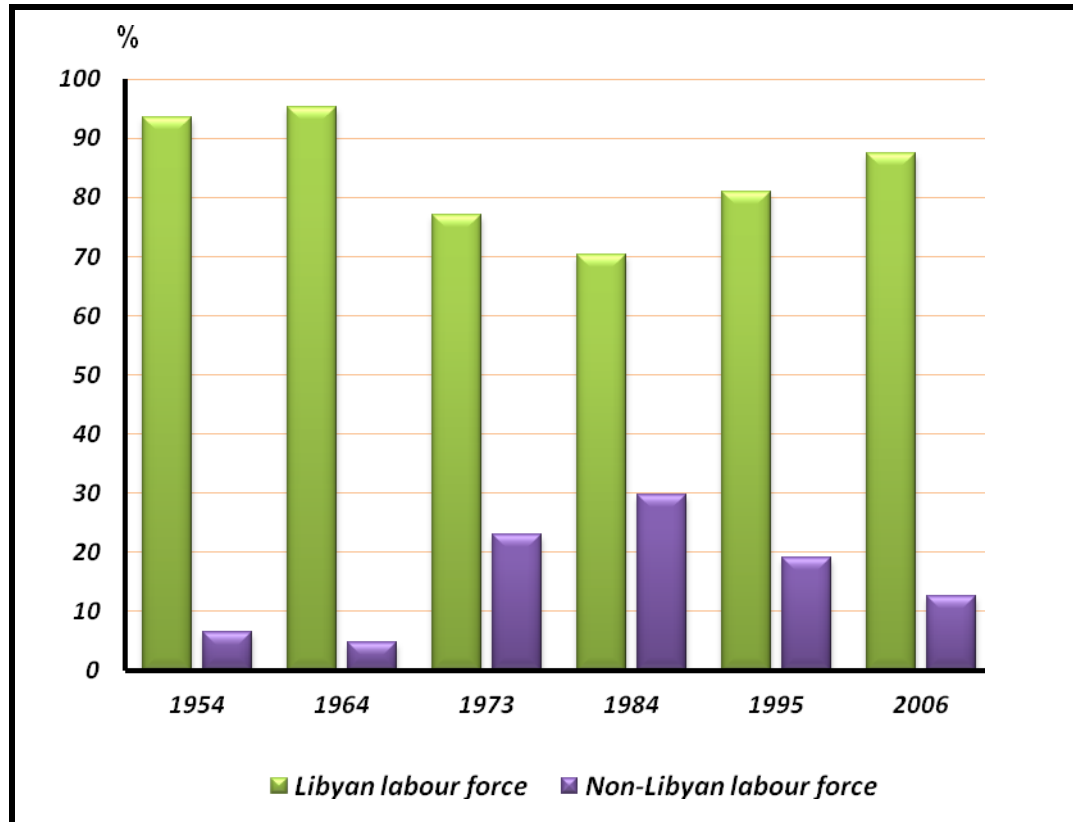
**Figure 6-3: Comparison between Libyan and non-Libyan
labour force from 1954 to 2006**

Sources: After the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

It is possible to say that the data in Table 12-3 and Figure 6-3 can provide further clarification on the size of the labour force in each sector, and it is indicates the extent of the shortage of labour, which has been covered by the non-Libyan labour force.

Finally, through the analysis of some of the laws and decisions on Libyan education system and LLM, the relationship between the stages of the educational system and the LM in Libya can be identified. This results in a conceptualisation of the Libyan education system consisting of three stages [The basic education, secondary and HE], each stage leading to the next stage or to the LM. With the observation that basic education does not lead to the LM, but leads only to the secondary school, as the Figure 7-3 shows:
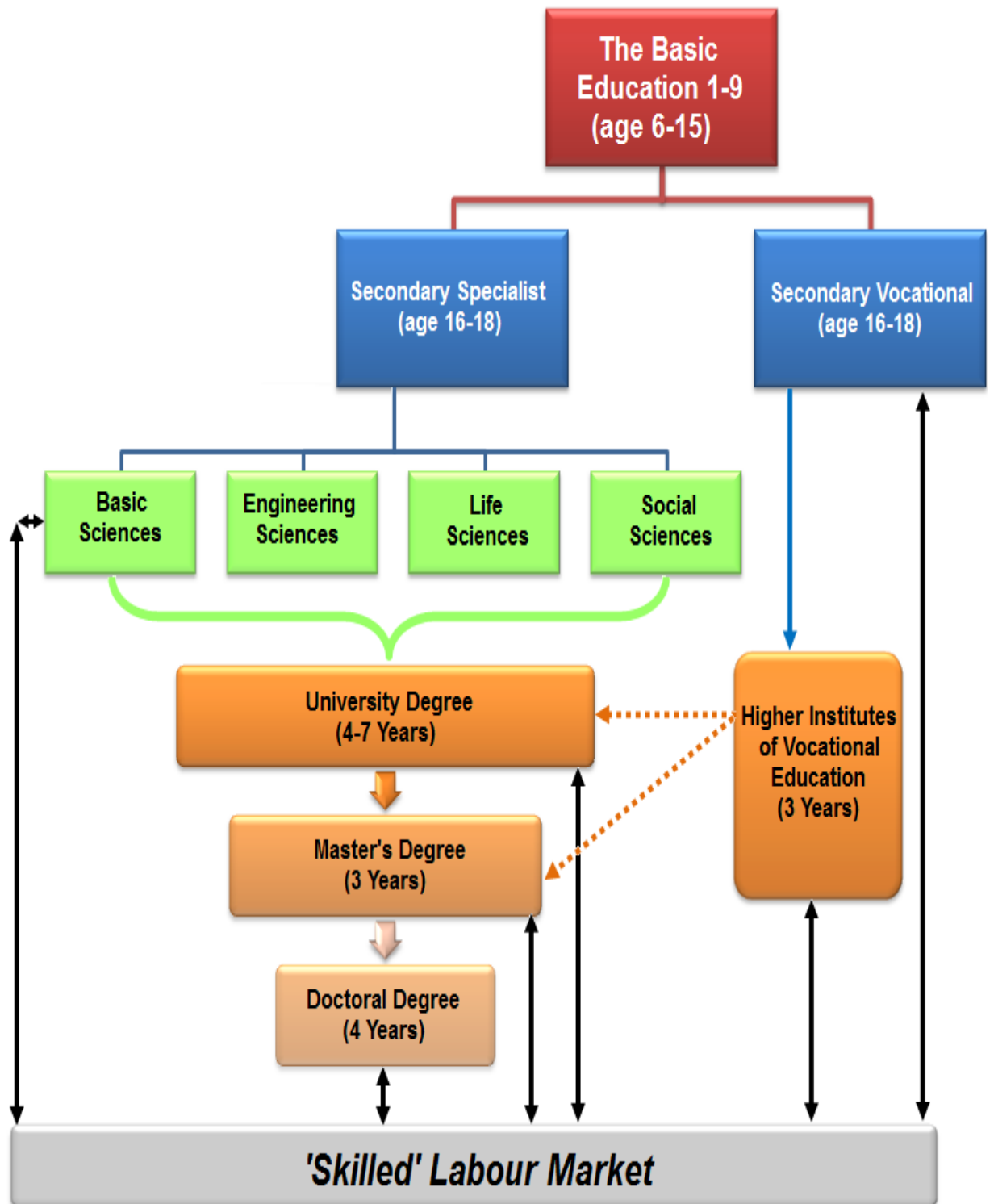
Figure 7-3: The relationship between the stages of the educational system and the labour market in Libya

Through an examination of the relationship between the stages of the educational system and the LM in Libya as shown in the Figure 2-3, it can be noted:

1. The basic education (age 6-15) only leads to secondary specialist education or secondary vocational education, so there is no direct relationship between the basic education and the LLM.

2. Secondary vocational (age 16-18) leads to higher institutes of vocational education and/or LLM. Secondary vocational graduates can go to higher institutes of vocational education or work in one of the economic sectors. For example, some of them can work as auto mechanic or electrical technician or technician of refrigeration and conditioning etc.

3. Secondary specialist (age 16-18) leads to university and/or LLM. Secondary specialist graduates can go to university or work in one of the economic sectors. For example, some of them can work as assistant engineer, social Work and laboratory technician etc.

4. Higher institutes of vocational education: higher institutes of vocational graduates should go to LLM, but some of them can go to the university if their graduation grade is high (2 from 4, and above). But they need to study additional courses (Pre-master) in order to join a master's degree.

5. A university degree leads to master's degree and/or LLM. And master's degree leads to doctoral degree and/or LLM. Doctoral degree leads to LLM.

6. Also, can be note that there is two-way relationship between LLM and some stages of the educational system. So that workers can return to the educational system in order to continue in the study or get short or long-term training courses.

This section has discussed the key issues in the context of the research literature available about the development of HE and LM in Libya based on the secondary data available on both sectors, this comprises mainly the statistics for the number of students in universities and graduates, also by data on the educational status of the wider Libyan population, also the available research on the economically active population by sectors of economic activity. In the same context, through an examination of the statistics in the Tables and figures in this section about LHE and LLM, there are three key facts:

1. Although there is a geographical spread of universities throughout the country, the HE system in Libya lacks diversity.

2. That the contribution of HE graduates to the human resources needed by the LM in Libya was very low.

3. That the proportion of women graduates of HE was very low if compared it with the size of females in the age group (15-64)

Section three: General characteristics of LHE and LLM

These points above have explained the quantitative development of HE and LM in Libya. In order to capture the general characteristics of HE and LM in Libya, an extensive literature survey was conducted to identify existing related literature. Therefore in this part of the research, some previous studies about LHE and LLM are reviewed.

- *Previous studies about LHE:* It should be noted that the literature on this specific topic is very limited by comparison with many other countries and so the conceptual foundation for this study is limited. Considerable effort has gone in to making an exhaustive search for literature on this topic both in Libya and internationally. The result is that this is one of the first studies of its kind to collate this literature and bring it together with the data in order to assess the baseline for the research on the relationship between LLM and LHE. Of what literature there is, most of the literature is written in Arabic language (Al-Badri, 1993; Mniena, 2001; Al-Badri, 2003), though some of literature is available in English language (Bubtana, 1976; Elzalitni, 2008).

  Also, very few studies are of an empirical nature, i.e. based on primary data analysis. The rest are non-empirical (descriptive analytic study, descriptive study and document descriptive analysis). This research therefore is unique in providing a detailed an integrated analysis of the Arabic and English language research on HE in Libya together with the collection and limited analysis of primary data. The sparse and limited nature of the literature makes the need for an exploratory study like this all the more urgent. The Table 13-3 includes a summary of the previous studies that are relevant to the focus of this thesis.

Table (13-3)
Summary of previous studies about LHE

Researcher and Date	Main objective	Key findings
Bubtana (1976)	To know the role of the university system in national development of Libya.	The policies of student admission at Libyan Universities are inconsistent with development plans.
Al-Badri (1993)	Evaluate the admission policy at Libyan universities In the light of contemporary trends.	The aims of LHE since the fifties of the twentieth century have revolved around the preparation of teachers and administrative staff to working in the government departments.
Mniena (2001)	To know the effect of structural and administrative changes on the policies of student's admission at Garyounis University.	Those policies of student's admission at Garyounis University, which were applied between 1980 and 1994, are not clear and unstable.
Al-Badri (2003)	To know the reality of the internal efficiency of postgraduate level management education and training at Libyan universities.	Lack of clarity in the philosophy and objectives of postgraduate studies. Also, there is weak relationship with the society problems and aims.
Elzalitni (2008)	Contribute to the body of knowledge about the Public Higher Vocational Education and Training Colleges sector.	There is a substantial mismatch between the outcome of Public Higher Vocational Education and Training Colleges and the exact requirements of the society; most of the suffer from limited human and physical resources, and the unavailability of standard criteria for the establishment and development.
Theeb (2009)	To an analysis of the changes in the LHE institutions management system.	The HE governance needs to find a clear mechanism for the process of evaluating the course of HE institutions and everything related to the role of a university, identifying its strengths and weaknesses and identifying opportunities for development, both at the university level and in HE management and policy-making to enhance the effectiveness of this vital sector in various areas.

Sources: Researcher concluded the data from raw data published in the Bubtana (1976), Al-Badri (1993), Mniena; (2001), Al-Badri (2003), Elzalitni (2008) and Theeb (2009).

Based on the results of the studies mentioned in Table 13-3, the general characteristics of LHE can be summarised as follows:

1. An absence of scientific planning to satisfy the essential requirements or demands of society for qualified manpower, due to an absence of the overall vision and strategic outlook for the role of university education in the future development and investment of Libyan national resources.

2. No balance in the distribution of students between the departments at universities, due to failure to adopt a well-defined and articulated policy for admission of students at Libyan universities based on scientific standards.

3. Highly centralized management of LHE where the faculties cannot even conduct their own affairs, except through Supreme Council of Universities or the level of university administration, which may delay and hinder the educational process.

4. Haphazard planning and improvisation of the establishment and distribution of universities, due to absence of criteria and systems for assessing the performance of HE institutions.

5. Weakness of practical training during the undergraduate, due to reliance on traditional teaching methods in many disciplines (method of memorization).

6. The lack of good information system at universities and therefore the lack of adequate information for decision-makers and curriculum designers.

7. Absence of the effective role of the faculty staff and the scarcity of scientific research activity due to long teaching hours or of a lack of the potential for scientific research.

As a consequence of these key conclusions of the analysis of the available literature, a comprehensive study of the HE sector in Libya and its links to the country's LM is clearly required. The points above indicate a lack of a coherent planning process or long term strategy for the development of the HE sector and its role in society. One of the key aims of this thesis is to address some of these issues through establishing a baseline understanding of the HE sector in Libya, followed by an exploration of the relationship between the HE sector and the LM sector as well as an exploration of future scenarios for the HE sector.

- *Previous studies about LLM:* A literature survey was also conducted to identify existing related literature the LLM, and to gather data and information about the issues associated with the research problem. As in the of the literature on HE in Libya it should be noted that the literature on the Libyan LM is equally sparse and an exhaustive literature search was carried out in Libya and internationally on this topic.

Most of the literature about LLM is written in Arabic (El-Hawat, 2005; Al-Maqury, 2006 and Al-Shakshwky, 2006a), on the other hand some of literature is written in English language (Vaughan, 1968; Mogassbi 1984). Also, very few studies are of empirical nature, based on primary data analysis such as Vaughan, (1968) and Mogassbi (1984). The rest are non-empirical - descriptive analytic study, descriptive study and document descriptive analysis - such as El-Hawat (2005), Al-Maqury (2005) and Al-Shakshwky (2006a).This research aims to provide a unique insight by bringing this sparse literature together in English and Arabic, drawing on the limited primary research and diffuse secondary data to bear on an original study of the relationship between the Libyan HE and LM. Table 14-3 shows summary of the studies available on the Libyan LM.

Table (14-3)
Summary of previous studies about LLM

Researcher and Date	Main objective	Key findings
Vaughan (1968)	To assuming simple linear relationship between non-petroleum sectors and supply of labour.	It was shown, within these limitations that neither the supply of capital, nor the balance of payments appeared to be the active constraints on Libya's growth of non-petroleum sectors. The supply of labour of certain skill levels may pose an active constraint. In view of this, the optimum allocation of labour was determined using only labour skill supplies as constraints.
Mogassbi (1984)	To development perceptions for the HE system and manpower development in Libya.	To conclude the findings it is obvious that the majority of the respondents to the questionnaire showed their agreement that the present university functions and roles are not able to respond to the needs of national manpower, therefore they should be revaluated and reformed.
El-Hawat (2005)	Studying the relationship between the preparation and qualification of human resources and development in the province of Tripoli.	Develop basic principles of human resource development strategy through Improve the quality of education, and awareness of social, cultural and economic, also review of legislation and labour laws.
Al-Maqury (2006)	To know the nature of the relationship between HE and the LM.	Low contribution of the HE output in the LM, and concentration in the services sector.
Al-Shakshwky (2006a)	Analysis of the reality of the labour force in Libya.	Lack of coordination between workforce planning and economic development planning

Sources: *Researcher concluded the data from raw data published in the Vaughan, (1968), Mogassbi. (1984), El-Hawat, (2005), Al-Maqury, (2006) and Al-Shakshwky,(2006a).*

Based on the results of the studies mentioned In Table 14-3, the general characteristics of LLM can be summarised as follows:

1. Absence of a clearly defined philosophy and objectives.

2. Chronic mismatch between LHE outcomes and the skills required by the local LLM.

3. Lack of specialization and division of labour within the economic sectors.

4. Low productivity of Libyan labour force.

5. The lack of continuous assessment and follow-up in order to achieve human development.

6. There are no specific criteria for measuring the performance of workers or companies and factories.

7. Weak institutional environment within the public sector.

8. Low contribution of the HE output in the LM, and concentration in the services sector

The points above indicate a lack of policies or long term plans to the development of the LLM and its role in economic-social development, as said above one of the key aims of this thesis is an exploration of the relationship between the LM sector and the HE sector as well as an exploration of future scenarios for the LM sector.

The points made above on LHE and LLM - with the results of Semi-structured Interviews in Chapter 5 - may help in building the scenarios of LHE and LLM, because they show us the weaknesses in both systems.

Section four: Development HE and LM in Benghazi

The thesis analyses secondary data for the whole of Libya, but it was necessary to focus on one specific location in order to make the primary data collection manageable. Benghazi was selected as this is it is the second city of the country and has a significant HE sector with two HE institutions. This city is also well-known to the researcher and so contact networks in the HE and LM sector will be used to recruit participants in the employer interviews, discussions with HE decision makers and the DT expert panel.

In this discussion of the evolution of HE and the LM in Benghazi, is difficult to find accurate statistics about the LM and HE especially from 1954 to 1973. Considerable efforts have been as part of this research to gather what data is available in order to provide a baseline for the

city's HE and LM. But firstly a consideration of the general population in Benghazi is necessary to provide context. Table 15-3 indicates the population growth in Benghazi from 1954 to 2006. As in the previous table showing the population data for the whole of Libya, the researcher has gathered this data from separate census datasets and placed them into this combined table.

Table (15-3)
Population growth in Benghazi from 1954 to 2006

Year Census	Libyans				Non-Libyans				Total
	Gender			Growth rate	Gender			Growth rate	
	Males	Females	Total		Males	Females	Total		
1954	88,986	79,076	168,062	-	2,143	1,255	3,398	-	171,460
1964	147,075	131,751	278,826	4	3,923	3,275	7,198	5.3	286,024
1973	144,595	133,555	278,150	- 0.03	35,685	18,498	54,183	7.9	332,333
1984	213,459	207,902	421,361	3.1	42,775	26,189	68,964	1.9	490,325
1995	300,298	285,720	586,018	2.6	49,851	30,830	80,681	1.3	666,699
2006	320,699	302,148	622,847	0.5	29,192	18,758	47,950	- 6.2	670,797

Sources: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

Through an examination of the figures in Table 15-3 can note that the growth in population in Benghazi is in line with the national growth rate [See Table 1-3]. It seems there is an overall upward trend over the period with some minor deviation from this in particular years, but it should be noted that these data only provide for censal years and so there are gaps between each point in time. This may be due to the instability of the administrative division of the Shabia [Governorate or States] that would result in a reduction or an increase in the number of people in order to separate some densely populated areas or the annexation of areas of low population density.

In contrast, the growth rate of non-Libyan population has declined sharply to 6.2% in 2006, which could be due to low rates of reliance on non-Libyan workers because of stop the development process.

Education in Benghazi, as is the case throughout Libya, is compulsory and free. Compulsory education continues up until ninth grade. University education is also free for all Libyan citizens. There are three universities in Benghazi; two public universities - Garyounis University and the Arab Medical University - and one private university - the International University of Medical Sciences -.

Table 16-3 illustrates the total number of HE level graduates in Benghazi from 1954 to 2006.

Table (16-3)

The total of graduates of HE in Benghazi from 1954 to 2006

Year Census	Graduates				
	Males		Females		
	Numbers	%	Numbers	%	Total
1954	00	00	00	00	00
1964	252	95.5	12	4.5	264
1973	1,129	89.7	130	10.3	1,259
1984	3,979	76.8	1,204	23.2	5,183
1995	13,791	65.6	7,220	34.4	21,011
2006	18,383	49.9	18,456	50.1	36,839

Sources: Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

In Table 16-3 it can be noted that the numbers of graduates grew steadily, and that the rate of increase was high, in 1964 there were about 264 graduates and by 1995 there were 21,011 graduates. Also, that the HE graduates representing approximately 0.09% of the total population in Benghazi city in 1964, 0.5% in 1973, in 1984 becomes 1.2% then in 1995 3.6%, this means that their contribution was low, since there are very few of them relative to the general population.

Honestly, due to similar policies and procedures of HE in Benghazi and at the national level It is possible to ascribe these growth trends in the number of HE graduates to the several reasons that have been noted at the national level, which have been confirmed by some Libyan researchers such as: Al-Badri (2007) and Mniena (2001).

In the same context, Figure 8-3 below shows the proportion of males and females of the Libyan HE in Benghazi.
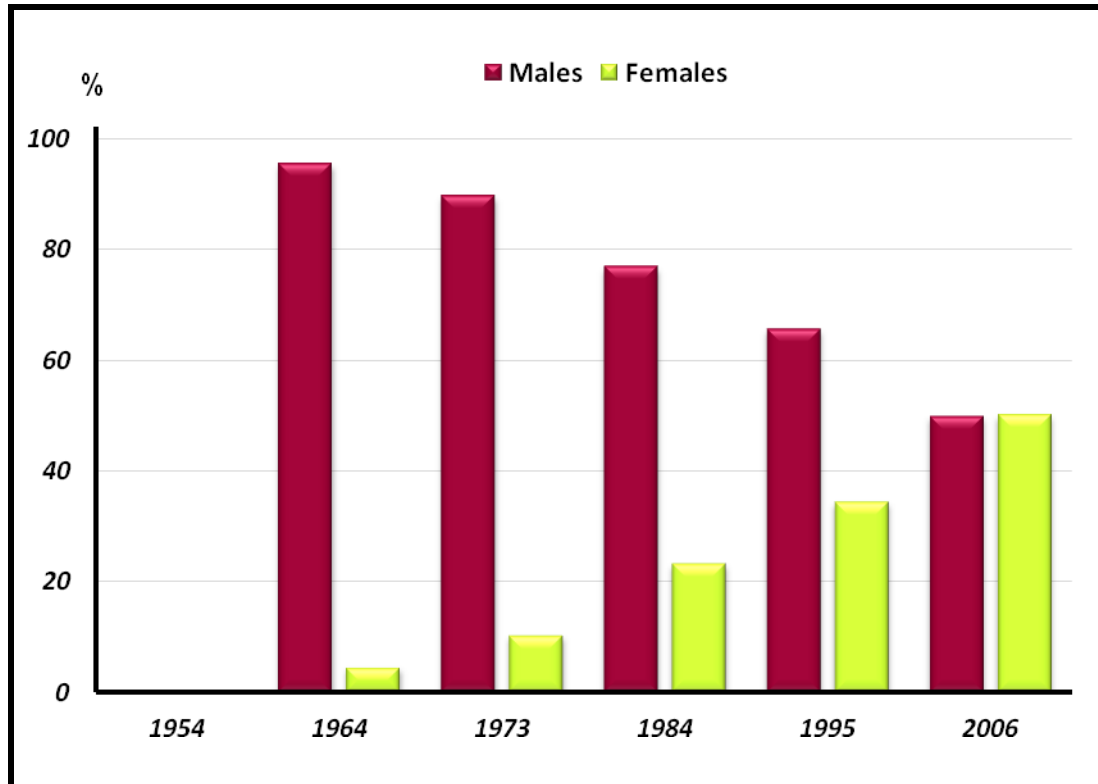
**Figure 8-3: The relative population of male and female
HE graduates from 1954 to 2006 in Benghazi**

Sources: after LGPC 1954, 1964, 1973, 1984, 1995 and 2006.

What is more, through the Figure 8-3 can be noted:

- That the proportion of females' graduates from HE was between 4.5% in 1964 and 34.4% in 1995, this means the proportion of women graduates of HE grew during the period considered, but was still low if compared with the size of females from total of population in Benghazi.

- The growth rate of females increased steadily since 1954 while the growth rate of males decreased significantly during the same period. This means the proportion of women graduates of HE has increased markedly, which made the proportion of male to female graduates is very close to parity.

Based on the foregoing review the economically active population in Benghazi by sectors of economic activity from 1954 to 2006, is shown in Table 17-3.

Table (17-3)
Economically active population citizens in Benghazi (15 and above) by sectors of economic activity from 1954 to 2006

Sectors Economic Activity	Gender	Census Years					
		1954*	1964	1973	1984	1995	2006
Agriculture, Forestry, Hunting and Fishing	Male	48616	21124	5069	4658	7363	9,595
	Female	1267	316	61	283	307	1,245
Mining and Quarrying	Male	58	3762	971	1874	3191	4,125
	Female	2	16	17	84	233	387
Manufacturing	Male	3574	3460	1922	5550	10398	6,630
	Female	3237	156	90	689	1739	595
Electricity, Gas, Water and sanitation	Male	419	1497	1477	1266	4619	5,363
	Female	1	29	13	75	284	363
Construction	Male	1520	5495	4342	2256	2930	5,908
	Female	3	28	11	99	145	324
Wholesale and retail trade	Male	5934	5636	6416	7164	15756	16,655
	Female	100	71	48	1256	780	520
Transport, Communication and Storage	Male	3155	5404	8566	8640	11401	9,768
	Female	3	40	61	440	448	438
Financing, Insurance, Real Estate and Business Services	Male	**	**	1013	1121	2180	2,502
	Female	**	**	51	349	743	873
Public Services	Male	23881	15603	22694	41680	41275	42,353
	Female	71457	1068	2557	9339	16736	25,209
Activities not adequately described	Male	42929	6813	3222	00	692	2,948
	Female	40697	436	29	00	38	349
Total	Male	130086	68794	55692	74209	99805	105,847
	Female	116767	2160	2938	12614	21453	30,303
	All	246853	70954	58630	86823	121258	136,150

Sources: *Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.*

Note: ** Age Classes from 10 years and above. ** The sector of financing, insurance, real estate and business services was incorporated into public services sector.*

Through an examination of the figures in the Table 17-3 find that public services was consistently the biggest sector in terms of the number and proportion of workers in it, in 1964 the proportion was 38.6%, either in 1954 this proportion was 23.5% and in 1973 became 43.2%, and in 1984 was 58.7%, and in 1995 was 47.8%. In 2006 we find that this proportion

increased to 49.62%. But must not forget that public services sector has been included (Community Services, Personnel Services, Education and Health services).

And the sector of financing, insurance, real estate and business services was smaller sector in Benghazi - this sector had accounted 1.8% of the total economically active population in 1973 and became 1.7% in 1984, while in 1995 was 2.4%. In 2006 this proportion became 2.48% -, in terms of size of force labour, which absorbed.

Through the figures in the Tables 10-3 and 17-3 the comparison can be made between the size of the labour force in the economic sectors in Benghazi city and at the national level, as follows:

1. That the proportions grow at size of the labour force in the economic sectors in Benghazi city or at the national level are almost similar. For example: national level the proportion of workers in the sector of public services in 1954 the proportion was 46.2% in 1864 this proportion decreased 21.31% and in 1973 the proportion increased 37.4% in 1984 this proportion became 64.85% also in 1995 this proportion decreased 56.06% either in 2006 this proportion increased to 63.63% [see Table 10-3].

2. In the same context, in Benghazi the proportion of workers in the sector of public services was 23.5% in 1954 in 1864 this proportion increased to 38.6%. Too in 1973 this proportion became 43.2% in 1984 the proportion increased 58.7% either in 1995 this proportion decreased 47.8%. Finally 2006 this proportion increased to 49.62% [see Table 17-3]. Because of this, possible to say that the movement of the workforce at the national level similar to a large extent with its movement in the city of Benghazi

3. That the order of economic sectors in accordance size of the labour force in each sector in Benghazi or at the national level is almost similar. For example: The sector of public services is biggest sector in terms of the number and proportion of workers in it, this also applies at the macro level.

4. A low participation of women in the labour force in Benghazi and at the national level.

These four points above clarify a very important dimension of the structure of the Libyan LM: that there is the lack diversity at in the Libyan economic structure, because the Libyan economy is a consumer economy depend its mainly on oil and gas. In fact, this show how the LM at the state level is similar to a large extent with the LM in Benghazi, therefore can be considered the results of this study - to a large extent - apply to the Libyan case, due to similarity between the conditions at the macro and local levels in Libya.

This focus on the discussion of the economically active population in Benghazi has so far not considered the economically active non-Libyan population, and the Table 18-3 provides details of the economically active of non-Libyans population in Benghazi by sectors of economic activity from 1954 to 2006.

Table (18-3)

Economically active of non-Libyans population in Benghazi by sectors

of economic activity from 1954 to 2006

Sectors Economic Activity	Gender	Year Census					
		1954	1964*	1973	1984	1995	2006
Agriculture, Forestry, Hunting and Fishing	Male	12	-	3038	3963	6490	4223
	Female	00	-	29	92	17	103
Mining and Quarrying	Male	3	-	326	388	316	153
	Female	00	-	22	39	9	5
Manufacturing	Male	133	-	2644	3178	4493	1741
	Female	6	-	33	90	49	26
Electricity, Gas, Water and sanitation	Male	8	-	298	696	357	69
	Female	1	-	8	7	18	00
Construction	Male	22	-	15537	16904	10260	5544
	Female	00	-	47	156	46	36
Wholesale and retail trade	Male	172	-	1261	1522	6969	5717
	Female	12	-	90	79	93	73
Transport, Communication and Storage	Male	50	-	429	627	699	315
	Female	00	-	58	21	9	15
Financing, Insurance, Real Estate and Business Services	Male	**	-	248	83	123	169
	Female	**	-	93	30	23	32
Public Services	Male	961	-	3506	4802	6429	1805
	Female	661	-	1417	1924	1424	685
Activities not adequately described	Male	123	-	1036	00	301	232
	Female	114	-	30	00	3	12
Total	Male	1484	-	28323	32163	36437	19968
	Female	794	-	1827	2438	1691	987
	All	2278	-	30150	34601	38128	20955

Sources: *Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.*

Note*: * There were no statistics about economically active population (non-Libyan) in Benghazi. ** The sector of financing, insurance, real estate and business services was incorporated into public services sector.*

Through the Table 17-3 was noticed that construction sector was largest sector -where it had accounted about 1% of the total economically active of non-Libyan population in 1954, and it rose to higher level in 1973 where it amounting to about 51.7% and in 1984 was 49.3%, while this proportion had fallen in 1995 to 27%. In 2006 this proportion has declined to 26.62%-, in terms of size of labour force which absorbed.

And the mining and quarrying sector, and sector of financing, insurance, real estate and business services were smaller sectors , in terms of size of force labour, which absorbed;

1. That the sector of mining and quarrying was not absorbing a large number of economically active of non Libyan populations in 1954 did not exceed 0.1%, either in 1973 the proportion was 1.2%, and in 1984 this proportion was 1.2%, while this proportion was 1% in 1995, this proportion had fallen to about 0.75% in 2006, in terms of size of labour force which absorbed.

2. Unfortunately, there is not any data about the sector of financing, insurance, real estate and business Services in 1954, because this sector in 1954 was considered within the public service sector. However, this sector had accounted 1.1% of the total economically active of non-Libyan population in 1973 and this proportion became 0.3% in 1984, while in 1995 was 0.3%. Afterwards in 2006 we find that this proportion increased to 0.99%, in terms of size of labour force which absorbed.

Indeed, that the points have made about non-Libyans can help to know the size of the foreign labour force, and therefore know the size of jobs that could be obtained by the Libyans in the event of acquisition of skills required by those functions. Also, in this thesis it helps us to plan and building scenarios for LM.

In contrast, the lack diversity at Libyan economic structure led to the similarity of the situation of the economic sectors in Benghazi and at the national level, through the proportions grow at size of the labour force, the order of economic sectors and low participation of women in the labour force. Therefore the results of this study -to a large extent- apply to the Libyan case, due to similarity between the conditions at the macro and local levels in Libya.

Section five: Conclusion

Increase in the proportion of urbanization in Libya, where more than 86% of the population of Libya's 5,298,152 million, according to the 2006 Census are living in cities and urban centres and the population density measurement refers to the existence of an imbalance in population distribution, while the rest of population is distributed in municipalities spaced from each other,

which constitutes a demographic imbalance reflected on LHE and LLM in the focus of their services in the areas of population density and need to provide HE services and employment opportunities in communities scattered and distant and sparsely populated. In light of all that has been said about LHE and LLM, a brief summing up of the main findings of this chapter can be summarised as follows:

I. The low participation of Libyan graduates of HE in the labour force.

II. The low participation of Libyan women and non-Libyan women in the labour force, if we compare it with the size of females from total of population.

III. That the universities are still weak in their policies and programmes; and quantified in its output and weak in its input.

IV. The lack diversity the economic structure in Libya.

Those main findings above help us to make some important points in this study are:

- That the knowledge the size of the contribution of each sector in economic activity by knowing the size of the labour force in those sectors can help us to study the LM needs, also it help us sample from those sectors.

- Furthermore it helps us to plan and building scenarios for HE and LM consistent with the size of each sector, and aims of HE.

Chapter 4

Research Methodology

This chapter explains the research design and methods used in the research. The four sections outline the research methodology, research procedures, data analysis methods and approach to research methods used in the research.

Section one: Research methodology

In all educational research there is a specific purpose for forming a particular position to persuade of the significance of its claims, and there is methodology, which can be used in that research (Clough and Nutbrown, 2002). This means that a research project must be designed to use research methods in the best way in order to achieve the research objectives.

A qualitative method is used in this study, because it is more appropriate for research objectives as the research objectives do not revolve around the factors causing the patterns identified. As Hancock, (1998, p. 2) has stressed:

> *"Qualitative research is concerned with finding the answers to questions which begin with: Why? How? In what way? Quantitative research, on the other hand, is more concerned with questions about: How much? How many? How often? To what extent?"*

As noted above one can instead note that there are not questions about the causes of research problem, and therefore there is no need to collect quantitative data. Additionally, the qualitative research is especially effective in obtaining culturally specific information about the values, opinions and behaviours in order to understand research problem. This means that this study needs qualitative data in order to answer the research questions, which can be collected through qualitative research methods. As Demircioglu (2008, p. 8) said:

> *"The purpose of qualitative research is to develop an understanding of individuals and events in their context"*

Accordingly, the researcher used semi-structured interviews, as a means of collecting data on the views of employers of graduates on the HE and the LM sector in Libya. This approach to interviewing is intended to provide a richer of data on the conditions in these sectors in order to better understand their attributes and the relationships between them.

Hence the main aim of using DT in the study is to build a range of plausible scenarios for the future, which are likely to help researchers and policy makers to identify strategies that can meet current and future challenges effectively. The study will then evaluate the usefulness of this technique in the context of Libyan educational planning.

With regard to primary data collection methods, this research design will adopt a four phase approach to the data collection, as section two shows (research procedures).

Section two: Research procedures

Table 2-4 shows that most of the work for this thesis was completed prior to February 2011, because after this date the situation changed in Libya due to the 17th February revolution. This did not affect the results of this study because the main objective of the scenarios-building in this study was reform and development of HE and LM sectors in Libya. It is possible to see later (Chapters 6 and 7) how the new Libyan government may benefit from the results of the 17th February 2011 revolution to achieve these scenarios.

(1) <u>Data collection methods:</u> This research used four primary sources of data collection, namely:

I. Analysis of secondary statistics and official documents as sources for data: These sources have been collated and evaluated in order to provide the thesis with a baseline for the primary data collection and the analysis and interpretation of this data. The aim of the analysis of these statistics and data is in order to understand tends of development of HE and the LM in Libya. Also, data were collected on the economic sectors in the case study city of city of Benghazi, where most graduates work. However, there were significant challenges in the collection of this data such as:

A. Data is not available on employment and the workplace in Libya, because there is not a system for the collection of this data at the workplace and a national level. Also, there is a lack of clarity of the administrative division [Functional structure of work] in the workplace.

B. There is no specific body responsible for coordinating most of the economic sectors, which would have an overview of these sectors or data relating to them.

C. Some officials refused to give any data.

II. Meeting with experts: Meetings were held with academics staff at universities to discuss the research project. Also, an open-ended questionnaire (Appendix No 5) was distributed to a selected group of academic staff. These academics were chosen according to a number of criteria:

A. 9 people (about 22%) are working in the research centres.

B. Furthermore, 19 person (about 46.3%) of them work in the disciplines related to HE and the LM, such as Labour Office, LCEQAIHE and GPCE.

C. Whereas, 13 people (about 31.7%) of them had been working with some international organizations such as: UNESCO and the ILO, which are concerned with education and the labour markets nationally and internationally.

D. What is more, most of them (93%) had published research in the form of working papers or books on HE and the LM.

The discussions with experts have helped develop the criteria by which to measure some HE skills and LM needs that relate to research aims.

III. Data collection by Semi-structured Interviews: Various data collection techniques are used to develop grounded theory, so this project used semi-structured interviews with a range of representatives of organisations that employ graduates, in order to address Research Question 1, which is: In what ways could HE skills and changing LM needs in Libya be better aligned? As David and Sutton (2004, p. 87) have emphasized:

> *"Semi-structured interviews are non-standardized and are frequently used in qualitative analysis. The interviewer does not do the research to test a specific hypothesis"*

This approach can provide a rich source of data on research question. In addition, directly addressing the key issues with respondents is culturally inappropriate and may result in refusal to participate.

Semi structured interviews allow the researcher the flexibility to approach the subjects needed in the data collection in a sensitive way that will elicit the data required. As a result of not structuring the interviews, the respondents are allowed to drive the conversation and talk to the researcher about the issues that are important to them,

where Short (2005, p. 8) says in relation to interviews that may involve digression from the research project, that:

> *"Rambling is both an advantage and a disadvantage. The advantage is that you really are getting the information from the point of view of the interviewee".*

In contrast, Corbetta (2003 p. 270) explains semi-structured interviews as follows:

> *"The order in which the various topics are dealt with and the wording of the questions are left to the interviewer's discretion. Within each topic, the interviewer is free to conduct the conversation as he thinks fit, to ask the questions he deems appropriate in the words he considers best, to give explanation and ask for clarification if the answer is not clear, to prompt the"*

Apart from this, Woods (2006, p. 11) in his research about qualitative research said:

> *"Here the researcher decides the structure interview and sets out with predetermined questions. As with systematic observation, this is less naturalistic .But there is clearly not as much scope for the interviewee to generate the agenda. For this reason, some researchers use semi-structured interviews - interviews which have some pre-set questions, but allow more scope for openended answers".*

Fundamentally, in this type of approach, the interviewer may be able to re-formulate questions within the interview, as well as between interviews thus adding to the richness of the data. Each interview for this study was tape recorded in Arabic, then transcribed, summarised and translated into English. It was considered that twelve interviews would provide a sufficient range and a manageable volume of work. No names of respondents are used in the data presentation or analysis, and respondents were encouraged not to name anyone or any organisation or company. The organisations will only be identified by the broad economic sector in which they operate.

In addition, six workplaces have been chosen for interviewing with twelve directors and assistant directors. The workplaces are: Two public hospitals, two public schools and two public companies. These workplaces have been chosen for several reasons namely:

A. They are the largest workplaces in Benghazi.

B. Many of the university graduates work in there.

C. They are distributed in various places within the city of Benghazi.

D. There are different specializations of staffing in these places such as: teachers of social sciences, teachers of applied sciences, language teachers, engineers, nurses, doctors, surgeons, administrators, technicians and others.

E. There were other places that were selected, but officials refused to cooperate with researcher.

F. Private workplaces have not been chosen because the private sector is very small in Benghazi and therefore unlikely to be a significant influence in the short to medium term future scenarios of HE and LM management and planning in the city.

With regard to steps in undertaking the interviews, the following protocol was used:

A. Choose the workplace for interviewing.

B. Interviews with twelve directors and assistant directors.

C. Dump the interviews from tapes which recorded interviews by it - to transcribe them -, in order to write a hard copy (Appendices 6 to 17).

D. Analysis of interview data: using content analysis methods.

E. Draw conclusions.

IV. Data collection by use of the DT: The final stage in the research process will address Research Question 2, which is: How can the DT be adapted and applied to an understanding of the relationship between HE skills and LM needs in the context of Libya? This stage will use the DT to develop a series of scenarios for the project.

This method has been used in education planning to build scenarios, for example Droll (2005) used DT to derive a common definition for work-related education and Shehata (2006) used it in a study on pre-school child education in Egypt. However, at the time of writing there are no published examples of its use in Libyan educational planning, or any other method.

The DT method comprises a number of stages. The first stage is to establish a panel of ten experts who are directly involved in the issue. These are surveyed using a bank of open response questions about aspects of the topic.

The statements that attract 80 per cent agreement will survive to a third iteration when a questionnaire is once again put to the panel. This can be repeated until a stable series of statements are accepted by the panel, providing a robust set of scenarios.

In this project, the questionnaire design was informed by the first two stages of the research process. The aim of phase one is to explore underlying assumptions. Scenarios are then developed from this, and put back to the panel in a second iteration of the process involving closed response questions to a series of statements about future scenarios.

Before the initial contact with experts information was collected on a number of candidate panellists and analysed. The initial panel list was 23 experts, with the information being gathered from a wide range of sources, including websites, labor offices and universities. Under those circumstances, how can experts be identified a priori? In principle, Dalkey et al (1970) and others have used various systems of self-rating; for example,

- Are you an expert in this field, working in it daily?
- Do you work in this field occasionally?
- Are you knowledgeable about this field through occasional professional reading?
- Would you classify yourself as an informed layman?
- Are you uninformed about this field?

In this study, for the rigorous implementation of the Delphi research method, the panel members should meet the minimum requirement being identifiable as experts and practitioners in the fields of higher education or the labour market in Libya. During the initial contact - face-to-face or online - with the nominated persons the potential panel member is told about the DT and invited to participate, and it is explained that none of their statements will be attributed to them by name (see Appendix 1). After meeting with each expert, the size of the 'expert panel was finalised at 10 persons. This final panel size is partly, because 4 persons excluded themselves, and the researcher has ruled out 9 persons because they did not have minimum requirement of the Delphi experts that Table 1-4 shows:

Table 1-4
Guidelines to rigorous identify of the Delphi experts and causes of exclusion

Characteristic	*Minimum requirement*
Identifying potential experts	• Experience in HE or LM in Libya. • Participated in conferences and symposia about the HE or LM in Libya. • Published research and studies about HE or LM in Libya. • They head a board administrative position or scientific position in Libyan institutions of HE or LM.
Qualifying panellists as experts	• Primary or secondary writer of at least three peer-reviewed journal articles • Invited to present at a conference • Member or chair of a nationally recognized committee e.g., LCEQAIHE, GAI, etc • Membership in international organizations e.g., UNESCO, ILO, OECD, etc • At least 4 years of professional experience in the LHE or LLM or both. • Faculty member at an accredited institution of LHE • Writer or editor of a book or book chapter on the topic of HE and LM, or DT • Advanced degree in the field of HE, LM, or other related fields minimum of a bachelor's degree.
Causes of exclusion	• Five persons uninformed about DT or HE or LM or all of them. • One person has tried to know other panellists. • Researcher has not received the second version of the DQ from two experts. • Researcher has not received the third version of the DQ from one expert.

Source: Analysis of the author's survey and the results of meetings with Libyan academics

(2) <u>The Delphi technique (DT):</u> It uses a series of carefully designed questionnaires interspersed with information summaries and feedback from preceding responses. The questionnaires are not for the collection set quantitative data, but for the purpose of gaining knowledge of the experts' views. DTs have been used in educational research previously. As Colton and Tim (2004, p. 2) in their study about Delphi performance (1975), suggested:

"For forecasting questions, groups with eleven participants were more accurate in their predictions than larger groups. For fact-finding questions as included in this dissertation, groups with seven participants had a higher performance in his controlled study."

In contrast, Dalkey (1972, p. 257) commented that:

"Under favourable conditions, the group response can be more accurate than any member of the group".

The literature suggests that as with most techniques which gather the views of participants, there are advantages and disadvantages of DT as Table 2-4 shows.

Table 2-4
Advantages and disadvantages of DT

Advantages	Disadvantages
• Allows participants to remain anonymous. ** • Inexpensive. * • Free of social pressure, personality influence and individual dominance. • A reliable judgment or forecast results. *** • Allows sharing of information and reasoning among participants. * • Conducive to independent thinking and gradual formation. ** • A well-selected respondent panel can provide a broad analytical perspective on potential growth impacts. ** • Can be used to reach consensus among groups hostile to each other. *	• Judgements are those of a selected group of people and may not be representative. *** • Tendency to eliminate extreme positions and force a middle-of-road consensus. ** • More time-consuming than the group process method. * • Should not be viewed as a total solution to forecasting. * • Requires skill in written communication. ** • Requires adequate time and participant commitment (about 30-45 days). ***

Sources: adapted from * Linstone and Turoff (1975). Hsu et al, (2007). **Yousuf (2007, p. 85). ***Skulmoski, Hartman and Krahn, 2007.

Based on the data in Table 2-4, the argument can be made that DT is beneficial when other methods are not adequate or appropriate for data collection. It is particularly useful when the problem does not lend itself to precise analytical techniques. This method is therefore very well suited to the application in the case of the Libyan HE and LM sectors, where little is currently known with confidence about their futures. Moreover, DT provides confidentiality, due to the fact that it is generally done by correspondence. This also allows many barriers to communication to be overcome, and it helps prevent a 'group-think'. According to Yousuf (2007, p. 85):

"Helmer (1983) agreed that Delphi is a technique frequently used for eliciting consensus from within a group of experts that has application in reliability and has many advantages over other methods of using panel decision making. Helmer (1983) agrees with Linstone and Turoff (1975) in regards to the application of Delphi. Helmer (1983), Linstone and Turoff (1975), and Dalkey (1972) all found that one of the major

advantages of using Delphi as a group response is that consensus will emerge with one representative opinion from the experts".

Fundamentally, DT appears to be a straightforward approach to doing research in the area of forecasting and for building consensus. Researchers, at first glance, think of Delphi as a simple technique that can be done easily. However, one must carefully consider the problems associated with Delphi before designing a Delphi study (Yousuf, 2007). In order to reduce the impact of the disadvantages of the DT, the following protocols were used:

- Research ensures that all the community is proportionately sampled.

- Researcher edits the results into a manageable summary of items presented in random order. Prepare the next questionnaire in an appropriate format for rating or ranking.

- Each member rates or ranks each item for the final time, in the light of the emerging pattern of group consensus and the reasons for dissent.

- The results of questionnaire are tabulated and presented as the final statement of group consensus.

As pointed out above, one of the disadvantages of the DT is that it can be time consuming. But there are some researchers such as Weaver (1972), Dalkey and Rourke (1971), Yousuf (2007) and Shehata (2006) who argue that certain steps need to be taken to conduct a successful DT, as Table 3-4 show:

Table 3-4
Steps of Delphi technique (DT)

N	First Step	Second Step	Third Step	Final report
1	Choose questions and build questionnaire	Receive responses to first set of reformulated responses	Receive responses to second set of reformulated responses	Receive responses to third set of reformulated responses
2	Choose a panel of 'experts' and contact them to get their consent	Analysis and reformulate responses	Analysis and reformulate responses	Analyze and formulate responses
3	Supply the panel with questions	Feed reformulated responses back out to the same panel	Feed reformulated responses back out to the same panel	Write final report

Table 3-4 represents the three steps for DT as it will be applied for this research, beginning with question selecting and building questionnaire, and ending with writing final report. Also, in each step the responses were received, reformulated, analysed and responses reformulated and responses are then sent back out to the same panel. Fundamentally, Hanafin and Brooks (2005, p. 6) have confirmed:

"The Delphi technique is a research approach used to gain consensus through a series of rounds of questionnaire surveys, usually two or three, where information and results are fed back to panel members between each round".

"Delphi is based on the group dynamics notion that a number of minds addressing a question usually leads to more informed answers. Structure is enhanced by iterating pre-designed survey questionnaires through a number of survey rounds to objectify agreement of the resulting consensus. Delphi allows the participants to remain anonymous; and by so doing, encourages them to express themselves freely. Each round of questions are analyzed, revised, and reissued for additional rounds of refinement. (Romano, 2010, p. 236)"

But, In contrast, some DT applications use more than three iterations, if there is no stable series of statements - a lack of consensus - that are accepted by the panel. As Worthen and Yousuf (2007, p. 83) confirmed:

"Iterative procedure can continue for several more rounds, but the payoff usually begins to diminish quickly after the third round".

With regard to this study, email was used to gather information, and provide feedback from/to the 'expert panel'. However, the researcher made efforts to meet as many of the panel as possible while in Libya in order to explain the procedure to them face-to-face and engage them in the process. There were three steps, as shown in Chapter 6.

(3) <u>Scenario:</u> The idea of scenarios - in general - was originally designed by deal with the expected and unexpected. Specifically, the scenarios task is intended to be a round view and evaluation of a wide network of different perspectives. The aim is to try to gain a better understanding of the complexity of the environment under consideration, and learn to change faster, and adapt to changes through plans and alternative strategies. The basic context for the usual use of scenarios is the context in which forward-looking visions and future plans are to be developed, for country or sector or company. The development of use of DT provides realistic scenarios that allow for planning, as Cavanna and Abkula (2009, p. 6) state:

"Scenario planning, using 'drivers of change', is a tool to facilitate strategic thinking and policy decisions. Until recently, it has most commonly been associated with the corporate world, or with governments, or the military. However, scenario planning can be employed equally well to help vulnerable or marginalised communities influence policy decisions that affect their lives. It is therefore a valuable tool for use in the development field".

In the same context, the scenarios alert policymakers to emerging problems and provide a reference point for long-term strategic planning, because the scenario portrays what realistically might happen, why it might happen, and with what consequences. Apart from this, there is no one best way to apply the lessons of scenario work.

Actually, there are many different processes to develop scenarios, but, there are benefits and drawbacks to these processes. Most also involve a common set of steps. However, there are many writers and researchers who have put some steps into developing the scenario process, such as Lee Droll: (2005) and Shehata: (2006), which can be seen in the following stages:

- **-** <u>Stage (1):</u> Clarify the purpose and structure of the scenario exercise: In this step must be an identification of stakeholders, establishing the nature, scope of the scenarios, Identifying themes, targets, indicators, and potential policies.

- **-** Stage (2): Lay the foundation for the scenarios: Also, in this step it is important to identify drivers and creating a scenario framework.

- **-** Stage (3): Develop and test the Scenarios: in this step the scenario narratives will be elaborated, also undertaking the quantitative analysis and exploring policy.

Indeed, there should be a clear overview to outputs from these steps to make plan for the scenario process. In addition, the steps in the scenario planning will most likely happen consecutively but can overlap. This plan will depend on many factors such as: available resources, time horizon and the nature of policy analysis.

(4) <u>Designing and conducting the field study:</u> Designing and conducting the field study as Table 4-4 shows.

Table (4-4)

Designing and conducting the field study

Headlines	Time		Working
	From	**To**	
Data collection to field work	2nd Sep 2009	13th Oct 2009	Data (preliminary and secondary) collection from: 1. Human Resources Office. 2. The workplace: hospitals, schools, factories and Government departments. 3. Universities: meetings with academics at universities and distributed of open-ended questionnaire.
Field work 1 Primary data collection through semi-structured interviews	17th Oct 2009	12th Dec 2009	1. Choose the places for interviewing. 2. Interviews with twelve directors and assistant director. 3. Recorded the interviews.
Data analysis 1 Semi-structured Interviews	15th Dec 2009	16th Jan 2010	1. Dump the interviews from tapes. 2. Analysis of interviews data 3. Draw conclusions.
Field work 2 The first phase of the DQ	17th Jan 2010	25th Feb 2010	1. Sent open-ended questionnaire to ten experts for build the DQ. 2. Choose 102 paragraphs for the second copy of DQ.
Data analysis 2 The first phase of the DQ			Conducted two types of tests, are: 1. Virtual test honesty. 2. Test the internal consistency.
Field work 3 The second phase of the DQ	30th Feb 2010	31th Mar 2010	1. Choose 71 paragraphs for the second phase of DQ 2. Sent the second phase of DQ to "panel experts"
Data analysis 3 The second phase of the DQ			1. Receive version the second phase of DQ from "panel experts" 2. Data analysis the second phase of DQ.
Field work 4 The third phase of the DQ	5th Apr 2010	14th Jun 2010	1. Sent the third phase of DQ to "panel experts"
Data analysis 4 The third phase of the DQ			1. Receive version the third phase of DQ from "panel experts" 2. Data analysis the third phase of DQ
Final Data analysis of DT	21th Jun 2010	19th Oct 2010	1. Data analysis all phases of DQ. 2. Building strategies for LHE and LLM. 3. Building scenarios for LHE and LLM.

Section three: Data analysis methods

Three methods were used to analyse the data interviews and the DT questionnaire. These were:

(1) The qualitative content analysis: This can be used to analyze various types of data. In this research, this method is used to analyse the semi-structured interview data. However, generally the data need to be transformed into written text before analysis can start. 'Schilling (2006) questioned whether all the questions of the interviewer or only the main questions from the interview, as well as observations during the interview (e.g., sounds, pauses, and other audible behaviours) be transcribed. The decision should be based on the research questions. While a complete transcript may be the most useful, the additional value it provides may not justify the additional time required to create it.' Then add: 'The additional work involved in translating the transcripts made the decision not to transcribe the complete interviews obvious.'

In this study the content analysis has been used to identify core consistencies and meanings of the content of text data of semi-structured interviews through the systematic classification process of coding and identifying patterns.

(2) Correlation coefficient: The correlation coefficient was used to measure the correlations, - in order to test for internal consistency - between different items on the DQ. The intention was to strengthen the evaluation of the most robust statements to retain in the selection process of the later steps.

(3) Percentages: The percentages were used to summarise the ratio of the arbitrators' agreement with paragraphs in the DQ paragraphs. Also, percentages were used to assess the rate of consensus among panel experts through a series of rounds of questionnaire surveys.

Section four: Research ethics

Privacy is a fundamental value and so the access, control and dissemination of personal information are essential to ethical research. Information that is disclosed in the context of a professional relationship, such as the relationship between the researcher and the researched, must be held confidential. Breaches of confidentiality may cause harm, and so the research proposed was conducted within the framework of the University of Gloucestershire's Research Ethics Code. This involved giving a personal letter - Appendix No 1 - to the participants, assuring them of the time required, the purpose of the research and the confidentiality of the

data provided. Respondents participated in research activity 2 and 3 above and in each case the non-disclosure of the identity of the respondents was discussed with them. The reporting of the translated transcripts was coded to ensure their identity is not disclosed.

This chapter has expounded the research methodology by providing details of, and justifying, the qualitative research method chosen in order to achieve the research aims. Data is collected by four main methods: analysis of secondary statistics and official documents as sources for data; meeting with experts; semi-structured interviews and use of the DT. Also, this chapter has expounded the DT and scenario, and the design and procedure for conducting the field study.

Three methods to data analysis are outlined: qualitative content analysis and correlation coefficient; and percentages, each used to analyse a specific type of data.

Chapter 5

Findings of the Semi-structured Interviews

This chapter focuses on the presentation of a section of the primary data collected as part of the research for this thesis. It intended to answer the research question 1:

- **-** In what ways could HE skills and changing LM needs in Libya be better aligned?

This research question will be addressed in two main ways, through:

- Present the results of the semi-structured interviews carried out with some representatives of organisations in Benghazi that employ graduates.

- Discussion of the interpretation of the results of the semi-structured Interviews in the context of the analysis of the other data gathered as part of the research for this thesis.

Introduction

In order to address research question 1, the semi-structured interviews were used with a range of representatives of organisations that employ graduates - see Appendices 2, 3 and 4 - . This approach may provide a rich source of data on this research question. Directly addressing the key issues with respondents, for example using a questionnaire survey is culturally inappropriate and may result in refusal to participate. Semi-structured interviews enable the respondents to drive the conversation and talk to the researcher about the issues that are important to them and so it was decided to adopt this approach to the data collection [see Chapter 4/ Section 2].

The findings of the semi-structured interviews are reported in the form of a summary of the responses of the whole group of interviewees. Only individual data of special significance to the area of research are reported independently. However, in order to preserve confidentiality, the analysis will not identify the names of the interviewees.

This chapter will analyse of the results of the observations collected during the field study. In the same way, the results of studies and previous research will be used to analyse and interpret those results. As discussed in the discussion of research methodology in Chapter 4, content analysis will be used to analyse of interview data.

This chapter presents the results from the semi-structured interviews in four sections, each focusing on different aspects of the focus of this thesis. The first section provides a discussion of the ability of HE to meet the Libyan LM needs. The second section provides and discussion of the LM ability to absorb Libyan HE skills. The third section provides a discussion of the employer views of the employees' skills. The fourth section provides a main conclusion and arguments that show how the results from these data build towards the scenario development in the next chapter.

Section one: The ability of HE to meet the LLM needs

The following analysis is based mainly on data collection from 12 interviews [see Chapter 4 for more detail]. The main result about LHE is: the LHE outputs are not able to meet changing LM needs in Libya. The reasons are discussed below:

(1) The respondents mainly agreed that the Libyan universities focus on a transfer of information mode of teaching, without a definition of how to use the information based on a certain position at work. This maybe because of the weakness of the facilities at the Libyan universities [Lack of laboratory, libraries and equipment etc], a focus on the theoretical aspects of the courses and because of the use of memorization only as a method of teaching and assessment. Also according to the respondents, there are similarities between the courses at all Libyan universities. This opinion was expressed by interviewees IN.1, IN.2, IN.3, IN.4, IN.6, IN.7, IN.8, IN.9, IN.10, IN.11, and IN.12. For example, one interviewee (IN.8) reported that:

> *The positive changes in the learning environment evolve over time and do not occur quickly, the Libyan universities were started in 1957 but they use same teaching and transfer information methods. In fact, they are using the method of memorization in the teaching, where they focus on the transfer of information without the definition of how to use them depending on the position.*

What is more, another interviewee (IN.9) recounted:

> *Due to weakness of the facilities at the Libyan universities, and focus on the theoretical aspects and transfer of information without the definition of how to use them at workplace, so that we can note the new graduates do not know how they can deal with the devices and equipment.*

Apart from this interviewee IN.6 said:

> *The technological changes at workplace have made competencies of the HE so important for greater knowledge. Also, HE provides effective tools to develop the teacher's skills. But, unfortunately, the Libyan universities are just focusing on information transfer without the definition of how to use them at work.*

There are three main points raised here: a focus on the transfer of information approach to teaching, the use method of memorization in learning and all Libyan universities has similar courses. These three points created a fundamental problem in the inability of graduates to apply the information they have learned at university in their workplace after graduating, and this may be because of lack of facilities of the Libyan universities [laboratory, libraries and equipment etc].

In contrast, this result is again supported by Elfenish, et al, (1998) who suggest in relation to Libyan HE that: Focus on the transfer of information more than the practical training, led to inability of students to apply and develop their skills and abilities. Also, some curriculum are focused to teach some of the issues and local problems such as the problems of population, migration, water, pollution and other without helping students to use methods of problem-solving or to develop critical thinking and decision-making skills.

Apart from this, Kuiken and Van Der Sijde (2009, p. 2) - in their study about knowledge transfer and disseminative capacity "the ability to publish" - have stressed:

> *"The transfer of knowledge from university to companies is a major issue for policy makers, theory development and (business) practice. A major issue for concern is: the problematic connection between the exploration activities of universities and the exploitation activities of companies...To be able to bring knowledge to the market universities need to be or become more entrepreneurial and to be more effective in knowledge transfer".*

The Libyan universities still suffer from weakness in the production of knowledge and in some of its fields such as knowledge management and knowledge transfer in the fields of organizational development etc. there is a focus on the transfer of information over the production of knowledge. In other words, universities rely on delivering existing knowledge to students without attempts to renew knowledge through scholarship or research. Also the Libyan universities do not have the mechanisms to identify a range of strategies or practices to ensure knowledge availability for future users. Libyan universities do not have long-term plans.

(2) Respondents commented on the weakness of the practical training at the university due to the weak material and financial resources and human resources at the Libyan universities, and focus on the theoretical aspects and use the method of memorization. This result has been commented on by nine of the interviewees. For example as one interviewee (IN.2) confirmed:

> *Due to weakness of the facilities at the Libyan universities, there is focus on the theoretical aspects and transfer of information without the definition of how to use them at the workplace and use the method of memorization only, this leads to weakness of practical training during the study at the university. For example, the new teachers do not know how to prepare lessons well, and they do not know how to deal with the devices and equipment located in the school laboratories. This may be because the practical training time was a very short and it is limited to the final year students only.*

Moreover, another interviewee (IN.11) reminds us:

> *The practical training of university students is very important in order to provide them with the necessary expertise to use equipment and devices that are available in hospital laboratories. But, I think the practical training at the university is low because of weak the possibilities of material and human resources.*

Consequently, the practical training is intended to provide and develop the skills required in the manpower for all economic sectors and services required by society. But the main problem here is weakness of the practical training at the university. This is certainly true, because the practical training period at Libyan universities is just a few weeks in the final year. Unfortunately, this does not allow students to apply theoretical studies in the workplace. In the same context, the ILO (2007, p. 36) has emphasized that:

> *"Developing countries often face difficulties in providing meaningful vocational education and skills training to enhance the quality of their labour force. Many trainers and training instructors are unable to access learning opportunities to improve their instructional techniques and many instructors do not have sufficient industrial experience and technical expertise. Similarly Iran reports that on the whole, instructors do not have the necessary competencies to facilitate learning and motivation of trainees".*

(3) Respondents in the interviews reported that they considered that there is no relationship between technical learning and scientific thinking, and failure to develop the systematic

thinking at the university. This result has been referred to by five of the interviewees. As one interviewee (IN.12) summarized:

There are several factors that led to the lack of a relationship between use of technology and education at the university such as: dependent on the method of memorization, weakness of the possibilities, same curriculum and similar academic background, maybe all these factors have resulted in a failure to develop the scientific thinking [systematic thinking] among students.

More specifically, another interviewee (IN.5) has commented:

Through the use of advanced technology, learning can also be qualitatively different. The process of learning at the university can become significantly richer as students have access to new and different types of knowledge, but this process does not occur at the Libyan universities correctly.

In contrast, another interviewee (IN.10) has emphasized:

The rate of introduction of new technology into the university is very low, so cannot find a relationship between technical knowledge and learning at most Libyan universities. A related finding is that the underdevelopment of technical knowledge all economic sectors is the main reason for the absence of the relationship between technology and learning. To be more precise, the wages of highly educated employees are higher than less educated employees. Therefore, companies are using less educated workers.

These employers are indicating that they need graduates to that have learned about new technologies and that this does not mean only to learn the principles of a computer or how to run the machinery and equipment, but also how use these systems and knowledge of tools available, and systems that can be applied in a work environment.

In Libyan universities, because there are not clear policies for HE, the humanities and social sciences courses dominate HE institutions, because of reliance on traditional methods of teaching, it was found that:

"The vast majority of courses provided were in the areas of education and social sciences. Clearly, humanities and social sciences courses dominate higher education institutions. One explanation of this strong and continuing dominance of such courses is the fact that these courses are taught by the traditional methods of "chalk and talk" and text books which do not require expensive equipments or special laboratories/workshops. The tendency has long been prevalent in the Public Higher

Vocational Education and Training Colleges. Although practical training should comprise 60% of the courses' time, it is clear that the opposite is true". (Elzalitni, 2008, p. 142)

As one might expect, failure in the link between technology and education at the Libyan universities could be because:

- ‐ Learning depended on the method of memorization and;

- ‐ The weakness of the opportunities for learning and skills development and;

- ‐ Same curriculum and similar academic background at the Libyan universities and;

- ‐ Rate of introduction of new technology into the university is very low and the universities do not provide enough practical training.

In most cases, as some interviewees said, " the underdevelopment of technical knowledge in all economic sectors is the main reason for the absence of the relationship between technology and learning" (IN.10), that is right, because economic sectors have not used modern technology, so have not employed highly skilled workers, which leads to lack of relationship between technical and education at Libyan universities. To be more precise, we do not mean the technology only is learn the principles of a computer or how to run the machinery and equipment, but also usage and knowledge of tools, techniques, crafts and systems.

(4) The respondents were asked about a small group of skills that are associated with graduates. These skills and their selection for this research are discussed in more detail above. The views expressed by the respondents are that there appears to be no method to teach these skills [job commitment skill, competitiveness skill, desire for excellence skill and teamwork and problem-solving skill] in the curriculum. Also, according some of the respondents there appears to be absence of the concepts of career commitment, competition and excellence at university. This issue has been indicated by eleven interviewees as important. As interviewee (IN.2) has remarked that:

All undergraduate degree programmes at Libyan universities are comprised of general education programme requirements. The length of a degree programme is measured in credit hours and all university degrees are at least 120 hours. Unfortunately, courses in the major field of study do not allow students to explore in depth an area of study and does not provide much of the preparation needed for their future careers. To be more

precise, in these courses, students do not have an opportunity to develop their essential skills.

In this thereon, another interviewee (IN.10) has stressed:

The Libyan universities have the same curriculum, books and teachers with similar academic background and with the same method of teaching and learning. Hence, the Libyan universities do not have an ability to develop thinking in general and scientific thinking in particular or to develop concepts such as career commitment, competition, and excellence.

Beyond this, interviewee (IN.6) reminds us:

In order to pass a certain level of education, the students must meet specific courses this can be slightly confusing, but at the university the diversity of a curriculum is an attractive point to students. In fact, the curriculum must be designed to improve student skills and develop some of concepts such as: career commitment, competition, and excellence etc, but there are no methods to teach these concepts and skills in the university curriculum.

These quotes seem to indicate that the respondents perceive an absence of a way to learn these skills [job commitment skill, competitiveness skill, desire for excellence skill and teamwork and problem-solving skill] in the university curriculum and an absence of the key concepts of career commitment, competition and excellence at university, (as some of the interviewees confirmed). This may be because:

    I.   there is not enough practical training and;

   II.   there are insufficient libraries and laboratories and;

  III.   the curricula do not contain programmes that can help students acquire these skills and concepts and;

 IV.   The Libyan universities have unclear aims, and similar curriculum, books and teachers with similar academic background and with the same method of teaching and learning. For more information [See: Al-Badri (2006, 2007) discussed in more detail in the Chapter 3, and Al-Badri (1993, 2003), Mniena (2001), Bubtana (1976), Elzalitni (2008) and El-Hawat (1996) discussed in more detail in the Chapter 4.]

What is more, the ILO (2007, p. 35) - for developing countries - has stressed on:

"Curriculum was not relevant to the specific needs of the LM. This often prevents trainees from locating suitable employment following their graduation. Some countries were trying to move from a supply to a demand driven training system but there were still many outdated training courses being delivered because teachers did not feel comfortable to change to new areas".

As discussed elsewhere of this study, the Libyan universities have the same curriculum, books and teachers with similar academic background. The same methods of teaching and learning, cause a gap between the Libyan universities and their surrounding environment, because these curricula and methods do not take into account the cultural differences between regions and differing needs of the LM from one area to another. This result is again supported by published research, writers and organizations such as Bubtana (2009, p. 73) who suggests that:

"In Arab countries, content of the curriculum still promotes the concept of education for work in clerical jobs, and this concept does not create methods to link between academic study and action field especially the technical work".

In the light of all that has been said, it is important to note that the Libyan universities are teaching students to live and work in relatively limited geographical location, about 69.3% of HE graduates living in Tripoli and Benghazi (Al-Maqury, 2006). This limits the opportunities for growth in other areas.

(5) Lack of coordination between HE aims and the economic sector's needs, because their aims are not consistent with the needs of these sectors. This result was only mentioned by two interviewees (IN.7/ IN.8). The interviewee (IN.7) said:

I think the LHE needs to reforms, because its aims are not consistent with the needs of economic sectors especially with health sector.

What is more the interviewee (IN.8) said:

We suffer from a major problem which is the lack of coordination between the aims of economic activity and policies, and the aims of the education sector in general and HE in particular. This applies to the relationship between the health sector and institutions of HE.

In general, the concentration of universities on humanities and social sciences' fields at the expense of pure and applied academic fields has contributed to mismatch between HE aims and the economic sector's needs (see Chapter 3). This seems clear from concentrate 85% of total graduates of HE in the services sector (Al-Maqury, 2006), which pushed us to say that there is no coordination between the aims of economic sectors and HE aims.

With regard to this result, there is some agreement in the literature on the issues raised by these respondents. For example Mogassbi (1984, p. 223) when interpreting the results of a survey of perception of the higher education system and manpower development in Libya (1984) concluded that:

"It is obvious that the majority of the respondents to the questionnaire showed their agreement that the present university functions and roles are not able to respond to the needs of national manpower, therefore they should be revaluated and reformed".

And, Elzalitni (2008, p. 141) has argued that:

"The domination of liberal arts rather than scientific and technological subjects, this situation has led to mismatch between the outputs of HE institutions and LM needs".

Apart from this, the ILO (2007, p. 36) when discussing the wider context of developing skills and employability for young emphasized that:

"A consistent issue is that there is a lack of effective coordination between government departments and educational agencies within countries. A coherent institutional framework is a crucial factor in facilitating effective training policies towards the development of a skilled human resource base. However, many developing countries do not possess the institutional capacity or organization to systematically coordinate their national TVET policies".

It seems obvious from the data collected for this research that the Libyan universities are not able to respond to the needs of LM, because universities have focused on humanities and social sciences' fields at the expense of pure and applied academic and that there is a lack of coordination between HE aims and the economic sector's needs, therefore they should be revaluated and reformed.

(6) A number of the respondents indicated that they felt that most of the faculty members of the Libyan universities were more focused on the educational aspect of their work, without focusing on community development and scientific research. They also use memorization

as a method of teaching. This result was referred to in the interviews with three interviewees (IN.4, IN.6 and IN.11). As recounted by one interviewee (IN.4):

Effective education is critical to the success of any investment in the education sector. I think the educational aspect must be committed to meet ongoing education needs and the community development and scientific research, but the Libyan universities have not done so.

As well another interviewee (IN.11) remarked:

The most important obstacles that stand in the way of attention to community development and scientific research is that the focus of most of the faculty members on the educational aspect by using memorization as a method of teaching.

To be more precise, most faculty members have focused on the performance of routine without focusing on the community development and scientific research, and this maybe due to several reasons which can be summarised as follows:

- The high volume of daily teaching hours and multiplicity of courses they teach.

- Working with more than one university at same time.

- High density of students at the academic departments.

- Lack of appliances and equipment that help in the performance of the business.

These points have also supported by other researchers such as Al-Badri (2006, p. 150) when he noted to "weak contribution of the faculty member at the scientific research and local community development because the high volume of daily teaching hours".

In the same way, in 2008 the UNESCO was written about the international situation in the context of contributing to sustainable development - *Reinventing Higher Education: Toward Participatory and Sustainable Developmen*t - where emphasized that:

"There is a serious shortage of a critical mass of university educators who are equipped with the appropriate capacities, skills, passion and commitment for PD practice. Most university lecturers originate from rather comfortable middle-class backgrounds preoccupied with the pursuit of the 3Cs (credit card, car, condominium) in their lives rather than spending time and energy with communities that they think they cannot benefit from. Most of them are not interested nor do they have the orientation or desire to work for social change, except for their own betterment". (UNESCO, 2008, p. 106)

(7) A small number of the respondents indicated that in their view the weak educational qualification of teachers were an issue that merited comment. This was considered to be the case because most of them did not study teaching methods at faculty, where they studied at faculty such as engineering, medicine, economy and science etc. As one interviewee (IN.3) said:

> *In fact, the central concern in the education sector is how to bridge the deficit of teachers, without taking into account if they are educationally qualified or not. Unfortunately, the General People's Committee for Education has recruited the engineers and doctors and graduates of the faculty of economy and Law to work as teachers.*

In the same way, another interviewee (IN.6) has remarked:

> *The fact is that of teachers with scientific disciplines (Engineering, Medicine, Economy and Science etc) have weak educational qualifications because most of them did not study teaching methods at university.*

Fundamentally, there are many shortcomings at the process of preparation and training of teachers at university level, this because most of them did not study teaching methods themselves when they were training at university. It seems that there is a need to review and revise the methods, which are selected together with the methods for the appointment of teachers, because in the education sector the main problem concerns trying to meet the deficit of teachers at school level [primary, preparatory and secondary]. As Abu-Saloum (2004, p. 12) suggests that:

> *"There are many shortcomings at the process of preparation and training of teachers. It seems that there is a need to review and revise the procedures and policies of education, which relate to the process of preparation and training of teachers, and attempt to address the factors, which affect them".*

The appointments policy in the Libyan LM is based on absorption of most of the graduates without taking into account who then they are educationally qualified or not. This seemed a reasonable approach to the contract in the seventies, eighties and even the nineties, when the economic sectors were dependent on foreign workers because of a lack of university graduates. However, as has been shown in Chapter 3, the growth in Libyan graduates of Libyan HE institutions suggests that there is a growing locally developed graduate base. The primary data collected for this research however, questions the quality of the Libyan produced graduate resource.

In general, the education sector for example needs to be producing a certain level of quality of graduates that have high teaching skills, as Boser: (1993) has stressed that, research indicates that changes in ways of preparing teachers will result in changes in classroom performance. The challenge to technology teacher educators is to select and implement the most.

There are many shortcomings at the process of preparation and training of teachers at university level. For instance, the teachers with scientific disciplines (Engineering, Medicine, Economy and Science etc) do not know teaching methods, thus, as the respondent data indicates, their performance in the classroom is very low. It seems that there is a need to revise the procedures and policies relate to the process of preparation and training of teachers.

(8) A small number of the respondents indicated that they felt that there are no strategies and implementation mechanisms, which explain beliefs and perspectives of the university, because of ambiguity of these policies and aims. This result has been commented on by one interviewee (IN.4) who stressed:

> *... it's the most important problems facing the Libyan universities are: there are no strategies and implementation mechanisms to explain the universities beliefs and perspectives, Also, I think that is the main reason for the lack of clarity in the policies of each economic sector.*

More specifically, other interviewee (IN.11) has said:

> *Specifically, I think there are no implementation mechanisms to explain the universities perspective about their aims and policies. So we noted there is ambiguity in these policies and goals, and therefore it is difficult for us to understand the policies of the HE institutions.*

At Libyan universities is accommodating the largest number of students, is a dominant policy, because of an absence of strategies and implementation mechanisms that explain beliefs and perspectives of the university. In 1996, El-Hawat has supported this finding when he was writing - in his research about higher education in Libya - about the enactment by the Libyan government of laws defining the role and extent of the Libyan education system:

> *"What was in these laws was a general set of principles for the organization of universities and it was not detailed and accurate. This means that Libyan universities*

are working randomly because orientations of the community were not formulated in the form of aims and an interdependent philosophy, which can be linked to programmes and specific plans" (El-Hawat, 1996, p. 6).

The problem for the universities is not so much their fault, because that the Libyan community has not clearly defined its needs and concerns and therefore the universities do not what role they can fulfil. So Al-Badri (2006, p. 150) writing about the role of Libyan HE system, say:

"There are not clear aims and philosophy for the HE system, also there is no effective administrative system of HE institutions in order to achieve aims, for which it was established".

In particular, there are not implementation mechanisms of the strategy for the science, technology and innovation at the Libyan universities. Accordingly, all Libyan universities are not making efforts to develop science and technology in order to reap the benefit for their students and develop their financial resources. It might be because of this that the universities' fiscal revenues depend heavily on the general budget. There is also no stability and clarity in policies and decisions that govern the work of institutions of HE, where it can be noted that through a multiplicity of the decisions and laws governing the work and study at universities, as Elzalitni (2008, p. 140) confirmed that:

"Development planning in general and HE planning in particular have long been based and formulated on theoretical rather than practical considerations. In other words, it is often based on a traditional objectives' planning and not on a problem-based planning approach. This lack of a planning mechanism and procedures has affected the overall performance of the HE system in the country".

In 1998 the Arab Regional Conference on Higher Education (ARCHE) (1998) has recommended: the Arab States must enact policies and legislations as well as establish effective mechanisms for dealing with the HE institutions, with due consideration to the promotion of institutional autonomy and the participation of all sectors concerned.

And finally, Theeb (2009, p. 71) has supported this result when he stressed that:

"One of the most important elements in the evidence of the fluctuation of policies and strategies of Libyan higher education is the instability of the administrative structure, in terms of exposure of the sector in different years to the abolition or merger with other sectors; and thus it applies to universities and higher colleges in similar circumstances,

leading to transition of the sector from centralization in the management of these institutions to decentralization, and back".

Section two: The ability of the LM to absorb LHE skills

The evidence from the interviews with representatives of the graduate employing organisations suggest that a key challenge in the relationship between the Libyan LM and HE sectors is that the LLM has not demonstrated the ability to absorb the HE outputs. The respondents have indicated several reasons for this and these are now discussed below:

(1) One of the main areas of explanation in relation to the poor ability of the LM to absorb HE graduates is indicated by eleven of the respondents (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.10, IN.11 and IN.12) as the weakness of the competitiveness of employees. As one interviewee (IN.3) has said:

> *The teachers do not have the ability to have dialogue and discuss and this makes them unable to participate effectively in decision-making. For this reason we can note weakness of the competitiveness of teachers because the teachers have not been involved in decision-making regarding curriculum.*

Another interviewee (IN.2) summarised his opinions in this way:

> *Unfortunately, we cannot find any a useful framework for competitive analysis within school, because this competitive analysis may help us to understanding the behaviour of teachers. Evidently, because of a failure to involve teachers in the decisions regarding curriculum we can note weakness of competitiveness between them.*

In the same way the interviewee (IN.11) said:

> *The important question is how staff can use their skills to be able to compete with each other; here we can find that the staff do not look for the development of their performance, due to failure to involve them in the decisions of regarding methods and techniques to work, so I think this makes them unable to compete.*

Moreover, the interviewee (IN.8) has remarked:

> *We observed weakness in competitiveness - competitiveness is the concept of the ability and performance of staff at a workplace to provide services in a given institution - among the new doctors, nurses and other employees. I think this is because of a failure to involve them in the decisions regarding methods and techniques to work*

within the hospital appointments policy, which led to a rise in the number of employees led to raise intensity of labour.

In most cases, the weakness of the competitiveness of employees - as some respondents indicated in their interview responses - may be because of:

I.   The laws and regulations that limit their participation in the decisions regarding methods and techniques to work;

II. lack of experience and lack of training for new employees to use the devices and equipment;

III. the appointments policy, which led to the rise the number of employees leading to a rise in the intensity of labour, increasing the number of employees in the workplace and;

IV. Employees not looking for the development of performance.

Indeed, any strategy for enhancing competitiveness among employees must be supported. All efforts aimed to develop the competitiveness skills of employees in the longer run, will in turn, help to increase the productive capacity, where the competitiveness-supporting environment can help employees to understand the work mechanisms correctly. As Alhadi Salem (2006) has stressed, there is emphasis on quantity rather than quality because the outputs of HE represent the supply side, which led to weakness of the HE system response to meet the skills needs of the LM, and thus a shortage of skills and increasing unemployment rates.

In contrast, Ismail, Awang and Siang (2010) have not agreed with this result in their study about the determinants of workers' competitiveness in Malaysian information and communication technology sector. where they have reported, the workers' competitiveness index [The index measuring competition among workers] in the ICT sector is quite high with 42.9 per cent achieving a high level and 50.8 per cent achieve a moderate level. Nevertheless, there are 4.9 percent of the respondents still at the low level of competitiveness index and only 1.4 percent of the respondents are at the high level.

Apart from this, their study has added: [The human capital variables like year of schooling, working experience and training attended are significantly determining workers' competitiveness in the ICT sector. Also workers' attributes like job satisfaction and work ethics, values and personality contribute significantly to workers' competitiveness index, whereas demographic and ethnicity variables are not significant (Ismail, Awang and Siang 2010)].

It seems likely that this difference in results between this study and the Ismail, Awang and Siang (2010) study is due to a combination of factors such as level of education for workers, type of training, technology used in the work and ethics and values of work. And also there are another set of factors related to members of the community study, sample size, methodology of the study and its aims.

(2) The respondents indicated that the inability of employees to take part in dialogue and discussion was a key factor that merited consideration. This inability makes them unable to participate effectively in decision-making; because of they do not have communication skills whether relating to the technical work or human relations. This issue was raise by the seven interviewees (IN.3, IN.5, IN.6, IN.7, IN.8, IN.9 and IN.11). This issue is summarized well by the interviewee IN.5 talking about graduates working in the education sector:

> *The issue of teachers' empowerment and their full participation in decision-making at school are very important for the development of some concepts such as career commitment and competition. Unfortunately, the teachers were unable to participate effectively in this process.*

Moreover, interviewee IN.6 said:

> *That the process of decision making is an essential skill for success in teaching especially and career success generally, but this process needs an ability at dialogue and discussion. Unfortunately, most teachers have not understood what they can do to make timely and well-considered decisions.*

Furthermore interviewee IN.9 believed:

> *Unfortunately, for the most part the new university graduates do not have the ability to work as a group; because they do not have communication skills whether relating to the technical work or human relations.*

One of the factors that affect the efficiency of workers is the inability to make the process of communication effectively because they do not have the communication skills. Thus they do not have the ability to engage in dialogue and discussion or draw conclusions. This result has been stated by Glio and Abulifa (2006):

> *The new standard to measure the efficiency of graduates professional skills, which require them to possess efficacy and technical competence such as team work skills, dialogue skills and problem-solving skills.*

The evidence from the interviews suggest that many of the respondents feel that it is very important that workers are able to engage in open dialogue and discussions about the way they relate to each other, because they need to be able to find ways to understand their jobs.

As Elaokali (2000) - in his study on the relationship between communication methods used by managers of secondary schools and some of their personal characteristics – said, (the interactions and responses can encourage workers to understand the need for strong, supportive relationships in the workplace [schools]. A related feature of the ability to participate in dialogues and discussions will eventually be created in the workplace where workers [Principals, teachers and administrators] feel confident about relating to each other, and thus reducing the barriers to the communication process.)

(3) The interviews raised the issue that HE graduates do not know how to deal with information technology and computers applied in the workplace, because they did not study computer systems or information technology adequately at university or institute. This result has stated by six interviewees (IN.2, IN.4, IN.8, IN.9, IN.10 and IN.11). For example one interviewee in the education sector (IN.2) has recounted:

> *The computer and information systems play a vital role in the implementation and administration work at school. I think in the modern workplace, it is imperative that Information Technology works both effectively and reliably. So, teachers should have the knowledge of computer systems and how to manage information, but it seems to they do not know how can to deal with information technology and computers. This may because they did not study computer and information systems at the university.*

More clearly, another interviewee (IN.9) has said:

> *For the most part of the new university graduates I think they do not know how can to deal with information technology and computers, this may be they did not study computer system or information technology adequately at university. For example, when I ask someone to run a particular system, he starts asking questions, which shows he/she did not know what I am talking about.*

In contrast, another interviewee, this time from the health sector, (IN.11) reminds us:

> *When computer and information technology are combined, I think the result is understanding how to perform tasks effectively. Today, information technology has ballooned to encompass many aspects of jobs. So, the staff do not work effectively*

without knowing how to use a computer. Unfortunately, most nurses and other staff (male/female) do not know how to deal with information technology and computers, and apply it at the workplace effectively.

On the basis of the researcher's personal experience and direct observations during the field study as well as from the results obtained from the interviews, it seems clear that most HE graduates do not know how to deal with information technology and computers because of:

I.   Lack of knowledge of modern computer systems.

II.   Inability to cope with modern appliances and equipment.

Furthermore, there are two factors that are influences in this case, are:

- Poor training courses.

- The computer systems and information technology have not been studied at the university.

Apart from this, this result has not been stated by any Libyan writer or researcher in the published literature, but Elmograbi (2006, p. 170) says:

"The employees have highly qualified, skills, ambitions and knowledge, also ability to use the technology, and have organizational and administrative capacity"

In contrast, Praveen (2006, p. 21) writing about the training of teachers for the school sector - in Kerala, India - believed that:

"There can be no doubt about the fact that tomorrow's students will be techno-savvy. So the aim of teacher education programmes should be to develop appropriate knowledge and skills for using and integrating the right technology in the right manner, through Networking of Teacher Education Institutions that attempts to tap the three C's – Creativity, Cooperation and Collaboration resulting in Quality in Education".

What is more, the Human Development Report (HDR) (2001, p. 84) writing in the context of wider benefits of the provision of training in skills with information technology, has confirmed:

"That the secondary and HE are also crucial for technology development. University education creates highly skilled individuals who reap the benefits through higher salaries. But it is also at the heart of creating national capacity to innovate, to adapt

technology to the country's needs and to manage the risks of technological change-benefits that touch all of society".

(4) Respondents have raised the issue of weak training courses for all employees in all specialties. This result has been mentioned by eight interviewees (IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8 and IN.11). For example, the one interviewee (IN.2) remarked:

We can note that the General People's Committee for Education has provided laboratories and equipment but the teachers cannot use it well, because they have not been trained to use it.

Also, another interviewee (IN.4) has argued in the context of the health sector that:

Providing training is very important to guarantee the quality of the work, and the training must conform to the needs of the work at the hospital and the LM. But there is no law or regulation determines system of training.

This illustrates the importance in this respondent's mind of the link between the quality of training and the quality of work. This highlights the fact that there is no explicit quality assurance system. Another interviewee (IN.8) makes a direct link between this lack of quality assurance and productive labour performance in the context of the health sector:

I think the most important factor of poor performance within the hospital is the lack of training for all employees in order to provide them with the skills necessary to use devices and equipment, Also, the lack of training leads to a decreased rate of performance among them.

A broader point about training that could also be relevant for on-the-job training is relevant for the graduate employees and managers and that relates to the understanding of the importance of training for the individual (IN.11) reminds us:

Indeed, many managers have not understood that training was the best way to improve performance of staff. In fact, I noticed that training for staff has become very low these days in all specialties.

Unfortunately, all economic sectors appear to have the same weakness in relation to the importance of training. It appear that new equipment is frequently ordered without building into the purchasing plan the need to train workers on how to use it [This is apparent through the adoption of most companies to foreign experts for long periods to maintenance

equipment]. This is a major cause of lack maintenance of the machines and equipment, because employees used them incorrectly. As Belhaj and Karoash (2004, p. 29) remarked:

"In fact, most of the teacher training programmes during work are not advanced in its structure and tactics and free of any strategy for the renewal or innovation"

Apart from this the World Bank (WB) (2008, p. 222) in the World Development Report (WDR) 2008 has confirmed the importance of training, when it stated that:

"Enterprises also provide training, available only to those with formal jobs, usually those with higher levels of education. Smaller enterprises train less frequently and often use apprenticeships, which can perpetuate traditional skills that may not be useful in changing markets".

This indicates the challenge to an emerging economy like Libya where change is taking place rapidly. The introduction of technology places considerable demands on the workforce, but often the capacity and the flexibility is not there to absorb the rate of change. In this context, the ILO (2007, p. 35) has talked about lack of coordination between labour institutions and training centres; as:

"A common issue was the lack of effective linkages with industry. Qualification systems were often not understood by industry and companies had low perceptions of training institutions and qualifications that they offered. Partly for this reason industry representatives were reluctant to talk to training organisations to specify their training requirements"

One possible exception to this general trend is that of the oil companies in Libya. These companies have progressed rapidly in the last years. Because of this companies have the policies and specific training plans, which give their employees opportunities for training in Libya and abroad. As the National HDR in the Kingdom of Saudi Arabia (2003, p. 69) has confirmed:

"Offering high quality training programmes and increasing the use of advanced technology should lead to a significant improvement of manpower competitiveness".

(5) A number of the respondents raise the issue of the intensity of labour within the workplace due to the appointments policies. This result has been raised by two interviewees (IN.2 and IN.7). As one interviewee (IN.2) recounted:

In quantitative terms, we find that there is intensity of labour within the hospital. But in terms of quality, we note that there is a shortage of doctors and technicians, I think all this is due to the appointments policies in the health sector, which are not governed by defined rules.

This suggests that the number of staff in the organisation is sufficient, but that the balance of skills is not necessarily matching the needs. This point is made more explicit in the testimony of another interviewee (IN.7) says that:

For a long time the recruitment policy was based on the absorption of all the graduates this led to a rise in the intensity of manpower within the hospital.

As discussed elsewhere in this chapter, in the field study the researcher noted there is intensity of labour within the workplace. This is due to the appointments policy, which based on the absorption of all the graduates. This result has again supported by Maqury (2006, p. 101) who further suggests that:

"Statistics show that 76.64% of the total labour force working in the public sector, because control of the public sector on manage the economic activity in Libya for more than thirty years".

This control extended to the employment of the workforce including the recruitment of graduates of the HE sector. In the same way Salem (2006, p. 199) has stated that:

"There is a surplus in the output of HE; we want to return them to production [demonstrates disguised unemployment where productivity is low and where too many workers are filling too few jobs], and there is a large quantity of manpower (76%) working in the public sector".

Under those circumstances, there is a high concentration of labour in the public sector, and the services sector, as well as a geographic concentration mentioned earlier. This limits the opportunities for growth in the private sector, and other public sectors, and between different regions in Libya.

Section three: Employers views of the employees skills

The interviews also covered the theme of the skills that HE graduates bring to the workplace as employees. As indicated in Chapter 2, in order to narrow the focus of the study the data

collection focused on four employee skills: (job commitment, competitiveness, desire for excellence; and teamwork and problem-solving).

Many of the employers interviewed indicate that they felt that most of their employees have not had these four skills, although most of them believed that the work at hospital, school, factory, administrative buildings and others requires these skills, as show in next points:

Job commitment skill: Many of the respondents in the interviews expressed concern that most employees do not have job commitment. This can be manifest in the following ways:

1) One of the main manifestations of the lack of job commitment is a failure to maintain confidentiality of information, which is work-related. There is also a lack of interest in the institution's reputation, because most employees try to obtain personal gain in the formal meetings. The respondents indicate that many employees talked about disadvantages of the company without its advantages because of they do not feeling belonging to the workplace. This view was mentioned by eleven interviewees (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10 and IN.12). For example, one interviewee (IN.2) in the education sector summarised the issue in the following way:

> *Unfortunately, the teachers and other employees at this school do not differentiate between the secrets of work and personal information. Also they are not interested in the school's reputation. What is more, they are looking to obtain personal gain. For instance, when setting the lessons agenda, we can note that each one is trying to get the timing of the lesson commensurate with his personal circumstances. This opinion is based on my long experience as schoolmaster, and this opinion should not be construed as expressing any opinion on the ethics of specific individuals.*

Moreover, another interviewee (IN.9) argues that:

> *It is common, that the employees in this company do not differentiate between the secrets of work and personal information, leaking information about the work. For example: if I told one of them something about the decisions that could be generated by the administration regarding functional promotions and allowances Etc, he/she told most his/her colleagues. What is more, they are talking about information concerning the technical department, and lack of separation between the personal information and work-related, with indifference to the consequences.*

In the same way, another interviewee (IN.10) confirmed that:

Reputation is a fundamental instrument of the work system. It affects many issues in everyday working inside or outside the firm. But the employees do not care about the reputation of the company. For example, some technical problems may occur, but employees are talking about these problems with customers incessantly.

To be more precise, the employers claimed that most workers do not know when disclosure does not constitute a breach of confidentiality. Too they indicated that most workers do not understand that the principle of confidentiality is not only intended to justify withholding information, but that it is within the context of professional ethics.

2) The respondents indicated that many employees are not looking to develop their performance. There is no serious and substantive work in the workplace, and negligence using equipment. Furthermore, there is delay at time of the administrative work. This result has been raised by eleven interviewees (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10 and IN.12). For example, as recounted by one interviewee in the education sector (IN.3):

There is no serious work among teachers. More importantly, there is no work substantive among them. I think we can know this through negligence in the use of devices by teachers in the laboratory and classrooms. Indeed, the teachers do not understand that every aspect of work has to form a bridge between personal requirements and the requirements and interests of the school; the fact is that many teachers handle their work as a very routine job.

This respondent is expressing frustration that the employees in his or her organisation demonstrated only minimum commitment to the organisation and a lack of professional commitment to the job. As another interviewee (IN.9) has approved:

There are many examples of a lack of dedication to work such as: coming to the workplace after the office hours started and leaving the workplace before the end of office hours. Also, some of them did not maintain their equipment. Whereas, we find that the employees that have long experience have a high level of commitment more than the new employees.

In another cases, another interviewee (IN.12) said:

> *The question posed here relates to serious and substantive work, here we can talk about the serious and substantive work through defining rights and duties which are established by law. So, we can note, first, the employees do not carry out all provisions of laws and regulations, second, the laws and regulations do not change accordance to evolution of the company's business, and third, there is negligence using devices ... They are not looking for development of performance and they are routinely performing their work without any attempt to develop methods of work.*

According to the employers interviewed for this research, the employees of graduate employing organisations are not looking for the development of performance, because:

I.   They are routinely performing their work without any attempt to develop methods of work and;

II.   There is a specific time-frame to implement the work [In the education sector], so, most of teachers are trying to complete the work in a timely manner, but cannot do so, because of lack of experience.

3) Interviewees indicated that there is no full commitment to working hours and punctuality, because most staff are working at other workplaces, and social factors relating to marriage (this factor for females), or the customs and popular traditions. This result has been raised by three interviewees (IN.1, IN.7 and IN.11). For example this is confirmed by one interviewee (IN.1):

> *.. Also some of them were leaving the workplace before end of office hours ...,*

And other interviewee from the health sector (IN.7) has said:

> *I think there is no full commitment to working hours and punctuality, and this may be because most doctors, nurses and other employees are working in private hospitals or laboratories. Also, we do not forget the impact of customs and traditions to work especially with respect to the mother's labour.*

In contrast, another interviewee also in the health sector (IN.11) pointed out that:

> *First of all, I want to say there is no full commitment to working hours and punctuality by most workers in this hospital, because most of them are working at other hospitals. In fact some of them are working in more than one place at the same time. I really do not know how they do so, but I guess they have manipulated the official working hours.*

4) There is exploitation of the authorities in some procedures that have not directly affected the human element, because of laws and regulations. This result was only supported by one interviewee (IN.4) who stressed:

> *In fact, there is no abuse of authority because if there is any attempt to abuse authority that leads to the creation of significant problems. For example, if anyone tried to manipulate the tables of the distribution of work among staff, this will create confusion, because all of the staff know their hours of work. But maybe there is exploitation of the authorities in some procedures which do not affect the human element directly, such as manipulating the quantities of drugs or equipment, and this is also not high because of the difficulty of the procedure.*

5) Interview respondents reported that there are delays in some administrative work due to negligence and indifference. This result has risen by four interviewees (IN.4, IN.7, IN.8 and IN.11). For example, one interviewee (IN.4) from the health sector reported it in this way:

> *Modern jobs have an incredible number of time-saving devices. We seem to end up working more all the time, and we must be able to take advantage of the time. Also, we must be able to reduce the time-working through the development of procedures. However, in this hospital, we noted that there are delays in some tasks related to of administrative work, whilst there are not delays in actions relation to medical work tasks. Because there is no specific time for completion of the work, because they are dealing with medical conditions that do not impose a specific time, they always try to deal with them by giving them the maximum possible degree of priority.*

Furthermore another interviewee (IN.7) also in the health sector said:

> *With respect to the time limit for the functions we noted that there is delay at time of the administrative work, because most employees do not look for the improvement of performance. About the medical staff work I can say that there is no specific time for completion of their work, because they are dealing with medical conditions that do not impose a specific time.*

Also, another interviewee (IN.8) said:

> *In many cases, we note that there is delay in the proceedings relating to administrative work and this of course affects the actions of medical staff. For instance, when we demanded some medicine or equipment, this demand may be delayed for several weeks because of competent administrative unit does not complete the procedures.*

Equally importantly, these issues raised by the respondents above (the discussion points 1, 2, 3, 4 and 5) may be influenced by some common factors. These can be described in the following way:

- *-* Social factors: The control of customs and social traditions on the relationship between members of the community lead to the weakening of control systems and legal accountability.

- *-* Legal factors: The absence of laws governing HE and the LM led to lack of managerial efficiency, poor of institutional capacity, nepotism and corruption etc. This result is consistent with the findings of the Elasheg (2005, p. 34) who has stated in her study about the effect of technical change on Libyan organizations, where he remarked:

  "The study revealed no changes in the management system. Bureaucracy, lack of managerial efficiency and corruption were the direct cause of the lag of the Libyan industrial sector".

Similarly, the evidence is widely available that indicates that Libya is not alone in facing this challenge in the LM. In 2003 the Economic Commission for Africa (ECF) (2003, p: 31) published a wide-ranging report on reforms in public services across the African continent. In this report it remarked that:

  "...public sector institutions have been afflicted by problems of corruption, nepotism, inefficiency, poor coordination, poor management and institutional capacity, non-existent salary policies and political interference..."

- *-* Economic factors: Because of the low national minimum wage the workers are working at other workplaces [private sector] as well as their main public sector appointment [there may be sensitivities around the respondents self-reporting in this situation]. As the Bertelsmann Transformation Index (BTI) (2010, p. 11) has noted in Libya:

  "Average salary levels are not substantially above the basic guaranteed salary, although at the beginning of 2007 some public sector salaries were increased by 110% and petroleum sector salaries to 275%. Still, even at this salary level, civil servants are forced to take second jobs or find other ways of earning money".

- *-* Organizational and political factors: The LHE planning and LLM planning is often based on traditional objectives' planning and not on a problem-based planning approach.

This maybe because the absence of laws governing planning process, and lack of coherence and coordination between the planning system and authorities responsible for implementation, leads to lack of administrative and organizational efficiency. As Elzalitni (2008, p. 140) has said:

"Development planning in general and higher educational planning in particular have long been based and formulated on theoretical rather than practical considerations. In other words, it is often based on traditional objectives' planning and not on a problem-based planning approach. This lack of planning mechanism and procedures has affected the overall performance of the higher education system in the country".

The lack of planning mechanism and procedures has affected the overall performance of the HE and LM system in Libya. This led to an absence of clearly defined philosophies and objectives within the HE and LM systems.

6) The workers in the education sector have identified breaches in the general professional appearance of the teachers in terms of dress. On the contrary, the workers in the health sector have seen that there is commitment of the general appearance of the doctors and nurses. This has been said by eight interviewees (IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8 and IN.11).

Two different views have found. The first one is coming from the education sector. As summarized by the interviewee IN.3:

We can note that there is breach in the general appearance of the teachers in terms of dress, which must fit with the profession in terms of modesty and dignity. Also, it must fit with the teachings of the Islamic religion,..., in this school there are 388 students and all of these are children, they are particularly susceptible of exposure to disease because of there are large number of them. But most of the staff (teachers and administrators) is not interested the school hygiene, and they say there are workers for school hygiene.

Here the interviewee (IN.3) believed that the appearance is not just about the personal side, but also to the whole school, students, teachers and buildings. And another interviewee (IN.6) from the education sector reminded us:

We live in an Islamic society, and our religion is Islam [Libyan society is a conservative society and the Libyans adhere to Islamic clothing as much as possible], so the

teachers (male and female) must abide by a minimum of the teachings of this religion. Also, there are customs and traditions that give to the teaching profession a special place, and therefore society is bound to consider teachers differently from the rest of the staff in other sectors. Finally, I think most teachers are breaching the general appearance, …., I think that the school health is one of the key problems at this school, where we note most teachers and administrators have not been interested to the school hygiene and appearance.

The second is coming from the health sector, as summarized by one interviewee (IN.4):

Of the most important features of the laws and regulations that govern the work in the hospital that it is characterized by strict, ... , and there is commitment of the general appearance of the doctors and nurses (male/female) in terms of dress, which must fits with the profession in terms of modesty and dignity.

As also another interviewee (IN.7) from the health sector has recounted:

Because of the law we find that there is commitment of the general appearance of the doctors and nurses (male/female) in terms of dress [the Libyan society is a conservative society and the Libyans adhere to Islamic clothing as much as possible], which must fit with the profession in terms of modesty and dignity, and this may be because of laws and regulations.

In the same way another interviewee (IN.8) said:

If we are talking about the dress code allocated to work at the hospital, we consider that there is a commitment, but if we are talking about Libyan customs and traditions this is a different matter. Because I see that a lot of employees - especially women - do not maintain our customs and traditions.

Actually, this difference of views about general appearance among workers in both education and health sectors might be due to the nature of the work where that work in the health sector requires employees to wear certain uniforms, while this is not the case in the education sector, this does not mean that doctors and nurses are maintaining a professional appearance where it the teachers are not, but there are two factors that affect the wearing of uniforms in each sector:

I.   The laws and regulations that govern the work in each sector. In the health sector there are laws, decisions and regulations governing the appearance of staff, while we do not find the same thing in the education sector.

II.   Different people's perspectives on appearance because of the diversity of customs and traditions in Libya and religious beliefs derived from the Islamic religion.

7) The respondents have identified that there is a key issue relating to maintaining the equipment, because of the laws and regulations, as defined and policed by the state and the institution concerned governing this work. This result has said by interviewees IN.4, IN.7 and IN.11. As one interviewee (IN.4) recounted:

Of the most important features of the laws and regulations that govern the work in the hospital can be characterized as strict. So we note that there is no negligence when you use the equipment ...,

Furthermore, this result has been pointed by another interviewee (IN.7):

I think the new staff - whether they are doctors or nurses or administrators - make mistakes due to lack of experience and training.

In fact, the interviewee IN.11 was reminded us:

That the use of devices and equipment properly leads to preservation of them. So we can note there is maintenance of the equipment, because of the laws governing the work at this hospital.

These views suggest that where laws govern the expectations of a particular job, that this will be done. Indeed, it can be argued that the issues raised by the respondents that are categorised under points 6 and 7 are not consistent with what was mentioned in the previous points (1, 2, 3, 4 and 5). However, it should be noted that the point was stated by some interviewees, in particular the health sector officials. Also they have reminded us:

... Failures to maintain confidentiality of information..., the employees do not look to develop their performance.., there is no full commitment to working hours and punctuality..., and there is exploitation of the authorities in some procedures which do not affect the human element directly...

Consequently, they are trying to find excuses for the mistakes made by their staff. In fact, if workers have breached the laws and regulations, the department should take disciplinary action. According to Act No. 45/1976 for the Libyan Civil Service, the department can take the following disciplinary action:

- A written admonishment (strongly said).

- *-* A financial penalty.

- *-* Transfer to other duties.

- *-* Reduction in functional level.

- *-* A temporary or permanent reduction in salary.

- *-* Termination of employment.

The main aim of disciplinary action is to maintain proper standards of conduct by workers at the workplace to protect the reputation of the institution, even if the consequences of disciplinary action for a worker are severe, but must not forget that the aim of disciplinary action is not to punish. As noted above some interviewees (such as IN.4, IN.11, IN.12) have stressed "laws and regulations can be characterized as strict, so there is no negligence when you use the equipment", this means that the existence of laws and regulations limit the wrong use of equipment.

8) Some of the respondents suggest that employees who have long experience and obtained places on training courses, have a high level of commitment, because they know that there is good opportunity for advancement on their job if they have the right skills. This result was raised by ten interviewees (IN.1, IN.2, IN.3, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10 and IN.11). For example, as interviewee (IN.1) emphasized:

... The employees who have a high level of commitment have long experience, which they obtained by working hard and training courses.

As well recounted by another interviewee (IN.5) in the education sector, there are links to long work experience and training to performance and commitment:

In fact, work experience can be a great help if the teachers want to develop their performance. Also, it can help new teachers to chosen the kind of job they want. In this school, the teachers that have a high level of commitment they have long experience.

Apart from this, in the health sector the work experience can help medical staff and other employees to do better job and the impact of training seems evident in the performance of some employees. As interviewee (IN.7) stressed:

Training is evident in the work done by same the medical staff, compared the covered to the rest of the employees and therefore they have a high degree of credibility, because of they have long years of work and many of them studied at foreign universities.

And interviewee IN.10 remarked:

The employees who have a high level of commitment, they have long experience, whereas the new employees do not have commitment because they are not looking for the development of their performance and their competitiveness is low. What is more, most of them are looking to obtain personal gain in the formal meetings. For example, the old employees are coming to the workplace before new employees and leave after them, also in the formal or informal meetings most new employees talk about their personal problems whilst old employees do not do that.

Past research has failed to find a strong relationship between prior work experience and job performance. In this study, it seems that most workers have stressed the impact of experience on commitment and job performance. Conversely, Dokko, Wilk and Rothbard (2007, p: 33) in their study "Unpacking prior experience: how career history affects job performance" have said:

"Workers have differing portfolios of knowledge and skill gained from prior work experience, and these portfolios contribute differentially to a worker's current job performance".

Consequently, it may be time to recognize in the Libyan LM institutions the positive impact that training courses could have on job performance, so the LLM Institutions can use training process to address performance issues among workers.

Competitiveness skill: This skill is identified for this study as one of the key skills. A number of the interviewees suggest that they consider most employees do not have competitiveness, and this is known through a number of factors to which the respondents allude:

1) Employees do not participate in the formal and informal activities or volunteer activities such as conferences and scientific symposia or training courses. Unusually, this result has been pointed by all interviewees (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10, IN.11 and IN.12). This result was summarized by one interviewee in the education sector (IN.2) when he acknowledged:

The teacher is a person who provides schooling for others and his role is often formal and ongoing. A teacher's role may vary between cultures. This role may be providing instruction in craftsmanship or vocational training, religion, or life skills etc. But this role requires a teacher to be able to participate in various activities within the school and outside, but teachers do not participate in the conferences and scientific symposia or

training courses. Also, they use a lesson plan to facilitate student learning, providing a course of study which covers a standardized curriculum, all this pushes me to say they do not have any attitudes to self-development.

Furthermore, another interviewee (IN.4) said:

I think this [referring to not to participating in the formal and informal activities] may be because of a lack of awareness of the importance those activities or they do not know methods and techniques of scientific research. Also these conferences and courses have impacted on their financial return by depriving them of overtime. On the other hand, the doctors have been participating in conferences more than nurses and administrative staff; here we can exclude new graduates because they do not have sufficient experience and skills.

This indicates the respondent's view of the importance of professional development and that they perceive that professionals are not as diligent in taking up the opportunities available them to as they could or should be. In fact, the professional development is critical because it develops the performance of employees, also pushes them to participate in the most professional and scientific activities within the institution. What is more, one other interviewee (IN.7) has argued that:

..., because these conferences, symposia and seminars at times do not fit the conditions of work and it impacts on their financial yield by depriving them of overtime. In addition, lack of awareness of the importance those conferences and courses or they do not know research methods. Apart from this, doctors have been participating in the conferences more than other staff; because they need to conduct research and provide worksheets to preferring functional.

Another interviewee (IN.12) has recounted:

I think because the voluntary activities do not give any financial gain, hence the employees do not participate in these activities.

And later this same interviewee adds:

Ironically, most of the employees at this company are graduates of the university but they do not participate in the conferences and scientific symposia, and this is because they do not know the research methods.

Indeed, in the published literature, there were not Libyan writer or researcher has been written about this result. Under those circumstances, most of interviewees have said that the employees do not participate in formal and informal activities or volunteer activities because:

I.   the volunteer activities do not give any financial gain and;

II.   these activities at times do not fit the conditions of work and it impacts on their financial yield by deprive them to overtime and;

III.   they do not understand objectives of these activities clearly and;

IV.   they have weakness of the scientific training and;

V.   they do not know the research methods and;

VI.   there is lack of awareness of the importance those conferences and courses.

About the doctors, one can say: they are participating in conferences more than nurses and administrative staff. This may be because of their need to conduct research and provide worksheets to obtain preferring functional. In contrast, the respondents have specifically excluded new graduates from this comment because they do not have an enough experience and skills as other employees.

The evidence from these interviews suggests that a widespread view amongst the respondents is that most university graduates do not know research methods because they did not study at the university enough, because of the weakness of scientific research at universities and higher institutes. In 2005 the GPCE in the draft for the LHE strategy (2005) stated:

"There is a weakness in the scientific research at universities and institutes of HE and they do not yet start production of knowledge, In addition, we note the weakness of postgraduate studies. Furthermore, research centres do not seek to provide quality because those centres are conventional and did not work by scientific methods" *(GPCE, 2005, p. 3).*

2) The respondents indicate in their responses to the interviews that their employees do not know how to deal with the results of development process. This view was widespread amongst the respondents, as it has been pointed out by all interviewees as an important issue. As one interviewee (IN.1) acknowledged:

As I said before most of the employees at this company were graduates of the university but they do not know how to deal with the results of the development process

in general. This may be because there is not a clear development plan in this company and a weakness of the employees' training - graduates - at the university. On the other hand, employees are not familiar with the local experiences and the international because they do not effectively participate in the formal and informal activities or volunteer activities and do not participate in the conferences symposia or training courses.

And other interviewee (IN.2) has agreed:

Like all Libyan economic sectors, there is no clear plan to develop the education sector or schools; therefore, teachers do not know how to deal with the results of this process. Although this operation is aimed primarily at developing the teacher's skills, in my opinion, due to poor scientific preparation of the teachers and unfamiliarity of the other local and international experiences, the teachers are not accepting the development process.

In addition another interviewee (IN.7) noted that:

In fact, the development plan is unclear in the health sector, which pushed the doctors, nurses and other employees to object to this process, whether development plans derived from the hospital or centralized by the General People's Committee for Health and Environment (Ministry of Health and Environment). Also, most of them do not know how to deal with the results of this process.

For the most part, then the evidence collected from the interviews with these employers, suggests an important aspect of their view is that employees do not know how to deal with the results of the development process, because:

I.   There is poor scientific preparation of employees or a weakness of the employees - graduates - training at the university and;

II. There is a lack of understanding of the objectives of development plans or there is no consistence between personnel and institution aims because of a lack of clarity of the objectives of the development process;

III. Employees are not familiar with the local and international experiences because they are not effectively participating in the formal and informal activities and;

IV. Most employees have thought that this process is a more general model aimed to develop the physical aspects of the company.

More generally, in 2009 Alarabi and Alakechlan from the Arab Academy for Science, Technology and Maritime Transport when commenting on the wider Arab context have said:

"The reasons for the opposition to development in institutions could be attributed to personal motives conflicting with the objectives of the institution and therefore many people may think they will be lose their position or power. Apart from this, it would be difficult for some people to absorb the causes of change, because of the ambiguity of motivations in the development process". (Alarabi and Alakechlan, 2009, p.101)

In another case this result has been summarized by Kaddoumi (2008, p. 56) in his study about recognizing quality assurance aspects at business school where he informed that:

"There is no clear perception among the members of the community study about the general trends and strategic objectives at any institution".

This means that workers cannot understand the objectives of the institution in the short and long term, due to lack of clarity of the aims or their personal motives conflicting with the objectives of the institution.

3) An absence of flexibility in the performance of employees was another issue raised in the interviews. This result has pointed by most interviewees. This is considered a key benefit of the provision of HE as discussed above and one interviewee in the health sector (IN.4) has recounted that it is important to the effectiveness of the work carried out by the employees:

I think flexibility is a critical ingredient to work effectiveness in the hospital also improve employee engagement and job satisfaction and reduce stress. But the new staff - doctors and nurses - do not have flexibility in their performance, because they do not have the ability to take initiative.

As also confirmed by another interviewee in the education sector (IN.6) flexibility is considered an important aspect of the graduate professional's attributes:

In the present school environment, flexibility of performance has become one of the competitive tools. Flexibility refers to the teacher's ability to deal with all the factors that affect his work. But here we can note absence of flexibility in the performance of teachers because they are trying to complete the curriculum without the trouble, and weakness of the scientific training and unfamiliarity of the other experiences.

Moreover, another interviewee (IN.7) has indicated that although flexibility is an important skill, it is a difficult element to pin down:

In fact, there is no certain way to measure the flexibility of performance, but we can know about it through the ability of nurses and other employees to adapt to changing work conditions and their ability to show initiative. Here we note that the new doctors, nurses and other employees [due to inexperience and the quality of HE in Libya] do not have flexibility and initiative in their performance, and they are performing their work without trying to develop performance.

Furthermore the interviewee IN.12 links the issue of flexibility to graduate employees working at a minimal level of performance:

I think because weaknesses of the training employees, they are trying to complete their work without the trouble, we find there are absences of the performance flexibility and an inability to show initiative. In other words, that a lack of training has pushed employees to complete their jobs by any means. This explains the absence of the performance flexibility and the inability to show initiative.

With regard to the absence of flexibility the performance of employees, this may be due to the fact they are trying to complete their work without trouble and working under more stress; most of them work in more than one institution. Also they do not have ability to show initiative because of the weakness of their training and a lack of familiarity of other experiences. All this suggests a weakness in the ability of the employees to adapt to changing work conditions.

However, flexibility in the performance is not necessarily a panacea for all work problems, but the potential to increase in competitiveness may be undermined if there is not flexibility in their performance. Furthermore, Clancy (2009, p. 27) in his study about the need for workers has confirmed on:

"The level of skills in the workforce is of particular importance to employers and is an important feature in the demand for labour. This is because a rise in the skills level of people employed by a firm is associated with an increase in productivity. In addition, there is a link between investment in skills and innovation and flexibility".

4) The employers interviewed for this study indicated that their employees do not show any trends towards self-development. Because of this they do not tend to spend more time reading and learning because they are working under more stress, so they have less time

to learn themselves. Also, they are not looking for the development of their performance as professionals. This result has pointed out by four interviewees (IN.1, IN.3, IN.9 and IN.12). As one interviewee (IN.1) summarized it:

And as I said before the employees do not look for the development of their performance, therefore they do not have the ability to self-development or to contribute to institutional development. In fact this because a lack of scientific capabilities.

Apart from this, another interviewee (IN.3) has remarked:

... Also, that the lack of clarity in the policies of education sector limit the ability of teachers to self-development or contribute to school development, in light the lack of skills and scientific capabilities.

And other interviewee (IN.9) has reminded us:

In fact, self-development is particularly challenging for new employees, this may be because they do not tend to spend more time reading and learning because they are working under more stress, so they have less time to learn by themselves.

Fundamentally, self-development based largely on self-education plays an important role in perfecting skills and promoting professional growth. The National Youth Agency (NYA) in the UK (2010, p. 5) confirmed the need for:

"Recruiting and retaining the right people with the right skills to deliver its services and provision now and in the future, and identifying the range of job roles, and the qualifications, competence or experience needed to successfully perform those roles. Through, supervising and appraising staff to ensure they are able to work effectively and efficiently to achieve objectives and continuously improving the capacity of staff through their continuing professional development".

In this regard, self-development among Libyan workers has become something from the past, and it cannot be absorbed by the mechanisms of public educational. In 1999 the United Nations Development Programme's Human Development Report (HDR, 1999, p. 91) has stressed that:

"Unskilled workers need training to upgrade skills and be flexible in adapting to different situations. Training by governments, employers should also provide training to their employees. Just look at the way Sweden has taken workers' training seriously in dealing with changing LMs".

In principle, this underlines the important role of governments and employers in upgrading the skills of the workforce. This global perspective on the important of higher skills training leading to flexibility, which the UNDP see as an important attribute in the workforce, is also reflected in work on Arab and North African labour markets. As Qaier (2001, p. 163) has suggested weaknesses in the HE sector mean the quality of the skills and attributes amongst the graduate output is low:

"Some causes of low efficiency for HE, are: Using the method of memorization in teaching, weakness of the practical training at the university and Underutilization of the modern technology".

The implication here is that HE provision is of a poor and under-resourced quality, then the quality of the flexibility in the graduate employees will also be poor. However, self-development can be adopted on the informal mechanism to expand the knowledge base for all Libyan labour force by use various means of accomplishing this. The WB (2008, p. 222) has suggested methods that may be applicable here:

"Training programmes for firms in niche markets with good growth prospects have raised the productivity and income of enterprises by upgrading technology and managerial skills. In Madagascar training is targeted to small suppliers of intermediate goods for processing and exporting. Other examples include the Tanzania Integrated Training for Entrepreneurship Promotion and the Ghana Opportunities Industrialization Council".

Unfortunately, the efforts to expand the knowledge base are probably not enough to develop the self-development programme in the case of the Libyan LM due to absence of mechanisms, guidance and counsel correctly.

Desire for excellence skill: As interviewees said, most employees do not have the desire for excellence, and this can be known through:

1) The respondents indicated that most of the employees are not looking for the development of their performance due to the fact that they do not benefit from the equipment, tools and laboratories, which are available at their workplace. This view has been pointed by most of interviewees (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10 and IN.11). For example one interviewee (IN.1) said it like this:

Indeed, the employees are not looking for the development of performance. This might be because of the desire to obtain preferment functional more than development of

work. For example some of them do not ask about how to perform the work until making a mistake, and they do not try to take advantage of the most experienced workers.

Furthermore, other interviewee (IN.4) said:

In fact, there are a lot of laboratories and equipment at this hospital but the nurses and other employees do not benefit from them. This may be because most of them are working in other hospitals [private sector] or the social factors relating to marriage (this factor for females). And therefore they are not looking for the development their performance.

Apart from this, another interviewee (IN.5) has reminds us:

In fact, for a process of performance development to be effective, it needs to have the commitment of the senior team and be aligned to strategic priorities and a working plan. The teachers also need to understand that they will be largely responsible for implementing the performance development plan and bringing about a culture of continuous improvement. But the teachers in this school are not looking for development of performance, because they possibly desire to complete the curriculum on time or they do not have the willingness to work as teachers because some of them are -trained as teachers- engineers and technicians.

What is more, other one interviewee (IN.7) has noted:

As I said before the new doctors, nurses and other employees do not have the flexibility and initiative in their performance, and they are performing their work without trying to develop a means of performance. Apart from this most of them do not benefit from the facilities available at hospital such as laboratory and equipment, because they are working in other hospitals (private sector) or social factors relating to marriage where the mother's labour has been experienced or because of social pressure because of family obligations.

In contrast, interviewee IN.9 reminds that:

In today's rapidly changing workplace, we mostly focus on performance of the employees. In fact, that performance is more important than ever before. But many employees do not understand how performance takes place and what can be done to make the performance process better than before. For these reasons we find most employees in this company do not look to develop their performance.

This result was pointed by Said (2006, p. 200) - in his study on the higher education in Libya "Dilemmas and Development" - when he remarked:

> *"The policy of reward has been overlooked and a policy of pursuit of punishment has led to those employees (Teachers and administrative staff and others) not benefiting from the equipment, tools and laboratories, which are available at the workplace, although it represents an important factor for business success".*

To be more precise, most employees are not looking for performance development because:

I.   They want to move to a higher position or more important job without too much effort and they do not prefer to work in their current jobs, because they do not have adequate skills to do better job than they do or working in other workplace (private sector).

This is important issues raised in the interviews for this research project are corroborated by Said's (2006, p. 200) work on Libya. He suggests that the context of declining economic situation may also exacerbate this:

> *"That the bad financial situation of the employees led to a decreased levels of the performance, frustration and hatred of everything related to the workplace, also this situation pushed to work in places not right for them, all this for more income".*

II.   Social factors relating to marriage where the female employee has had children, or where the employee experiences social pressures because of family obligations.

III. They do not have the ability to take the initiative and solve problems among themselves, and they have a low level of acceptance to the new technology. As Elasheg (2005, p. 34) in his study about the effect of technical change on Libyan organizations has stressed that a:

> *"High level of acceptance to the new technology from workers and supervisors especially as the new technology in the Libyan environment has not been associated with job reductions. Managers insist that new technology was an essential element in the survival of their companies".*

2)   The respondents in the interviews for this research found an absence of the spirit of Initiative and creativity among workers. This result has been pointed out by eight

interviewees (IN.1, IN.2, IN.3, IN.5, IN.6, IN.9, IN.10 and IN.11). As one interviewee (IN.1) has said:

On the basis of my personal experience and direct observations during working with the new employees I can say they do not have an ability to take decisions especially with some cases, which require direct action to resolve it. And this may be due to laws and regulations governing the work, which characterized by highly centralized, or lack of training and experience.

Furthermore, other one interviewee (IN.5) recounted:

Indeed, that the success of the spirit of initiative depends upon the willingness of teachers, officials and administrators at all levels to embrace the concept and apply it in their approach to every aspect of their work. But in this school we can note an absence of the spirit of initiative among the teachers and employees.

Apart from this, another interviewee (IN.11) in the health sector argued that:

As I said before, the nurses and administrative staff are not looking for the development of performance and therefore they do not have a spirit of initiative and creativity, especially in some cases that require direct action to reach a resolution. This may be due to the laws and regulations governing work or lack of experience, and because some of them are not fit to work in the hospital such as lab technicians who did not study in the faculties of medical technology.

In most cases, the absence of the spirit of initiative and creativity among workers maybe because of:

I.   Laws and regulations governing the work - the centrally planned nature of the Libyan economy - and;

II. Respondents have suggested that some of their employees are not fit to work in their current jobs, such as teachers who have not studied teaching methods or medical lab technicians who did not study in the faculties of medical technology and;

III. Respondents also pointed to a lack of experience and training, and a limited ability to take decisions especially with some cases, which require direct action.

This result does not seem to be consistent with the findings of the Obaidat and Sada (2010, p. 85) in their study Skills Availability in the Jordanian Educational Process Outputs Compared with the Local LM Needs, where they said:

"The rate of acquisition of initiative and creativity skills among Jordanian university students was relatively high 67%, but there are slight differences between males and females".

Although there are similarities between the Jordanian society and the Libyan society, this difference in results between the current study and Obaidat and Sada (2010) study might be due to a number of factors, notably the nature of the community under study, the study's aims, the sample size and, the methodology of the study. However, the study makes a point which resonates with the testimony of the respondents. That is the graduates do not have a strong ability to take their own initiative and work and learn in an independent way.

The WB (2006, p. 11) in its report about Equity and Development at a global level stressed that there are wider social and political implications of an inflexible workforce. Put another way there are social and political benefits at a national level of a workforce with a higher level of flexibility that needs a good quality HE system:

"Inadequate mechanisms to help workers cope with change restrict entrepreneurship and the adaptability of workers. The inadequacies can also increase resistance to reforms that would benefit society as a whole".

3) The respondents in these interviews indicated that their employees do not contribute to the development and dissemination of the vision and mission institution. This result has been pointed by all interviewees (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10, IN.11 and IN.12). For example, as one interviewee (IN.5) has concluded that:

The vision and mission of the school revolves around providing students with an appropriate education, which emphasizes high academic and social expectations for all students. Unfortunately, most of teachers do not understand this vision and mission correctly, and this may be because of a lack of clarity in the education policies or unwillingness to work as teachers.

Moreover, another health sector interviewee (IN.8) has reflects on their perspective thus:

The vision and mission of the hospital revolves around providing medical services to citizens without exception, but unfortunately, most of the staff do not understand this correctly. I think there are several factors have led to a lack of understanding amongst

the staff. These factors can be divided into three types: the first factor is a social factor relating to marriage (this factor for females) and working in other hospitals (private sector). The second factor is the education factor relating to lack of skills and scientific capabilities. The third factor is regulatory; relating to a lack of clarity of the policy of health sector.

The interviewee (IN.9) has remarked:

In general we can note that there is not a clear development plan in this company, because all the development plans have been made by the central administration in Tripoli. These plans are often general and non-specific targets. For this reason, the employees do not contribute to the implementation of plans and policies work.

Employees are not contributing to the development and dissemination of the vision and mission institution that because:

I. Most of them do not understand this vision and mission correctly because lack of the clarity in policies. This result resonates with the argument put forward by DuPree et al (2000, p. 40) in a discussion of business in general where they said:

    "In building an organization, having a clear focus is essential. The process of defining a vision, mission and objectives can serve to clarify goals and arrive at a niche for the organization. Supporters of the foundation will want to know that the new organization has a clear idea of what it wants to do and does not duplicate existing efforts".

II. There are social factors relating to marriage (cultural expectations of married women) for females in Libya and;

III. They are unwillingness to work in their current jobs, because of working in private sector and;

IV. They are not looking for development of performance, therefore they do not have ability to institutional development or self-development because a lack of scientific capabilities.

Teamwork and problem-solving skill: Most interviewees said, employees do not have the teamwork and problem-solving skills, and the evidence for this can be grouped into the following categories:

1) The employees do not express their ideas and trends of positive or negative feelings towards the institution or organisation. Also, they do not seek to influence the decisions of the team. This result has been pointed by all interviewees (IN.1, IN.2, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10, IN.11 and IN.12). For example, as one interviewee (IN.2) has recounted:

> *The relationship between teachers and school is a formal relationship, because most of them do not express their ideas and trends of positive or negative towards the school, and this may be because of indifference or lack of interest in interaction with the team in matters that do not belong to the work. We note that the teachers do not interact with the school administration in matters that do not belong to the work.*

And later the same respondent (IN.2) elaborated on this issue, in particular the relationship between the graduate professional and any team based decision making saying:

> *Every decision making process produces a final choice for selection of a course of work among several alternatives. But in this school we find that the vast majority of teachers and other employees do not seek to influence the decisions of the group, and this may be because teachers and other employees have limited ability to debate and dialogue, and they have limited ability to draw conclusions that may result in a lack of understanding of orders. Also, they implemented decisions and orders in order to avoid the risks, which may result from the contravention.*

Furthermore, another interviewee (IN.4), this time from the health sector, said similar issues:

> *The nurses and other employees do not express ideas or trends -positive and negative- towards the hospital, and this may be due to some reasons already mentioned, such as: working in other hospitals (private sector), social factors relating to marriage (this factor for females), they do not know how to deal with the results of the development process, lack of clarity in the policies of the sector of health and lack of skills and scientific capabilities.*

Also, another interviewee (IN.6) from the education sector has expressed their observations in this way:

> *... They do not express their ideas and trends of positive or negative towards the school ... In fact, we engage in dialogue and debates to exchange opinions with one another for facilitate harmony with others. Actually, in this school we need to use the*

best methods of communication to influence the opinions and decisions of others, because the vast majority of teachers and other employees do not seek to influence the decisions of the group...,

What is more, one other interviewee (IN.7) said:

In brief, I say there are three key factors affecting the feelings of the workers about belonging or not belonging to this institution. These are: They do not know how to deal with the results of developing process, a lack of clarity in the policies of the sector of health, and lack of skills and scientific capabilities. I think all these factors pushed the employees and nurses to not express ideas or trends -positive and negative- towards the hospital.

In contrast, another interviewee (IN.9) has reminds us:

We need to make the relationship between employees and those responsible for this company within trust and honesty. It is part of the support for new employees. So they can complement learning and training on the job. I think this may be encouraging the employees to express their positive ideas towards the company and focusing on future performance ... I think the new employees often feel alienated from other employees. They may be unsure how to relate to old co-workers who question their abilities. So, the new employees treat the old co-workers differently. Under those circumstances, the new employees do not seek to influence the decisions of the group, because of a weak interaction on issues that do not belong to the work.

Simply put, the employees did not that express their positive or negative ideas and feelings towards the institution because of:

I.   Indifference or lack of interest in interaction with the group in matters that do not belong to work;

II.   not working with the group because of the nature of work, limited ability to debate, dialogue and to draw conclusions;

III. working in other workplaces such as the private sector;

IV.   social factors relating to marriage for married women;

V.   not knowing how to deal with the results of the development process because a lack of clarity in the policies, and;

VI.   Lack of skills and scientific capabilities.

The factors are corroborated by some researchers, such as Alarabi and Alakechlan (2009, p. 101) where they say about working relations in Yemen:

"That the employees do not seek to influence the decisions of the group because of a lack of advanced preparation and surprise and fear of the unknown and uncertainty. Also, low level of human relations in the organization".

Otherwise, Guznov (2009, p. 41) writing more generally about teamwork situations, has stressed the importance of cooperation between teamwork members when he until:

"These findings highlight the benefits of performing in a team due to its ability keep team members engaged in the task, which gives better chances to maintain a steady level of engagement, which in turn may have an impact on overall performance. They also suggest that training as part of a team may serve to maintain engagement over time than training alone".

Actually, the making decisions within a group can often be difficult because there are a lot of different ideas among the workers, and there is also a difference between the aims of individuals and of the institution, but if things go well, the work can go well. On the other hand, when things go wrong the group could intervene in conflicts, so we find that for every person looking for personal gain, others may be disruptive, while others again may not contribute anything.

What is more, Barak and Maymon (1998, p. 11) - writing about motivation in the context of teamwork - have remarked: "in some cases, the high-level of motivation to complete the task contributed to high cooperation among group members, and to mutual assistance between groups. However, other cases of high motivation among group members found spontaneous expression in competitiveness towards other groups". Hence, when a group works through debate and dialogue, this gives the group members plenty of opportunity to configure their own opinions on how to accomplish tasks and problem solving.

2) The employees have limited ability to debate, dialogue and draw conclusions. This result has been pointed by most of interviewees (IN.1, IN.3, IN.4, IN.5, IN.6, IN.7, IN.8, IN.9, IN.10, IN.11 and IN.12). For example, one interviewee (IN.3) has summarized:

I think one of the biggest problems that you may experience at work is unwillingness of teachers to work with the group, this is due to limited ability to debate and dialogue among teachers, and this may lead to a limited ability to draw conclusions or

understand orders and instructions. And therefore, the teachers implemented the decisions and orders only, because of fear of punishment.

However, may there is people only do what they are told and not take the initiative. On the other hand there are others having the spirit of initiative, but they may constitute a small proportion so cannot observation it easily. Furthermore, another interviewee (IN.5) said of the employees in his organisation: *...*

They have limited ability to debate, dialogue and draw conclusions... For this we can say they have implemented the decisions and orders in order to avoid the risks, which may result from the contravention.

Apart from this one other interviewee (IN.6) noted:

..., there is a limited ability to debate and dialogue among teachers. This is because they do not know the methods of communication or they do not know how to use it. The result is that the teachers do not have ability to draw conclusions for them; this may result in a lack of understanding of orders and instructions. Finally, the teachers and other employees do not interact with the group in matters that do not belong to work because of the nature of work.

What is more, another interviewee (IN.8) said:

I think the limited ability to draw conclusions and a lack of understanding of the orders or instructions are two main reasons limiting the ability of staff to engage in dialogue and discussion.

As for the interviewee (IN.12) has stressed on:

In fact, we need new approaches to re-consideration of the decision making process and opportunities to improve decision making in the context of complex problems. It is common, that the employees implement decisions and orders in order to avoid the non-compliance risks.

More specifically, limited ability to debate, have dialogue and draw conclusions among employees can be traced to:

- A lack of understanding of orders and instructions or implemented the decisions and orders in order to avoid the risks, which may result from the contravention;

- The fact that they do not interact because they do not work with the group because of the nature of work;

- *-* A lack of the communication skills;

- *-* Failure to involve them in the decisions of regarding methods and techniques to work.

This result has been found by Glio and Abulifa (2006), and was again Elmograbi (2006, p. 169) who suggests that:

"HE should be based on scientific practice, problem analysis, the production of new sources of education and promising individuals should be able to create new job opportunities. And also, the content of HE must be based on an environment of political, social and economic development through training programmes that facilitate improved human relations and effective communication."

Unfortunately, in Libya there is no standard to measures the internal efficiency, which takes into account the proportion of students who complete the programme, curriculum and the time spent in the course. Furthermore, there is no standard to measure the external efficiency, which measures the learning and skills acquired during the programme to know the abilities of students to successfully enter the LM. Consequently, national measurement standards are needed.

3) Many of the respondents indicated their view that is employees do not have the ability to do the process of communication effectively, because of they did not study communication methods at the university or higher learning institute and they do not know how to use methods of communication in workplace. This result was underlined by five interviewees (IN.7, IN.8, IN.10, IN.11 and IN.12). As one interviewee (IN.10) stated that:

The unfortunate fact is that most employees do not know how to communicate effectively within the workplace. In fact, how can we expect employees to execute strategies, meet expectations and achieve the company goals if they are not diligent in communicating these very things? Unfortunately, what we have got here is a failure to communicate...

Furthermore, another interviewee (IN.11) reminds us:

Unfortunately, universities in Libya do not teach their students the techniques and methods of communication that are commensurate with their specialties, for this reason the employees and nurses do not have the ability to do the process of communication effectively.

Apart from this, another interviewee (IN.12) has reminded us:

I think debate would lead eventually to truth or at least to decision-making. But we can note that failures to reach a decision or settle a dispute about work within the company were caused by unskilled communication, poor debate technique, this is because the employees did not study the methods of communication at the university or they do not know how to use methods of communication at work.

More importantly, in 2008, find the WB in its report on Agriculture for Development at a global level, has confirmed:

"Finding and maintaining employment requires broad-based occupational skills or specific job-related skills, acquired in training institutions or on the job. In today's rapidly evolving and globally competitive economy, they increasingly include personal capabilities such as flexibility, resourcefulness, and communication". (WB, 2008, p. 222)

What is more, in 2005 Salas, Sims and Burke have conducted a meta-analysis of teamwork in synthetic task environment that identified five core components and three mechanisms necessary for a good team where they found:

"The five core components include leadership, mutual performance monitoring, back-up behaviour, adaptability, and team orientation. Leadership was identified as an important component of teamwork since leaders facilitate interdependent actions, provide important information on team's standing, and establish behavioural and performance goals. Mutual performance monitoring refers to the members' responsibility of monitoring other team member performance while continuing their own task". (Guznov, 2009, p. 45)

Furthermore, the WB in the WDR of 2007 subtitled "Development and the Next Generation" has confirmed:

"Behavioural skills, developed from a very early age through late youth, have long-lasting effects on schooling, work, and social outcomes. They incorporate many traits, including motivation, persistence, self-discipline, self-confidence, and the ability to weigh options and come to a decision (decision-making skills). They also include social skills, such as teamwork and the ability to negotiate conflict and to resist peer pressure". (WB, 2007, p. 72)

4) Motivation to work is low and the performance is only a minimum required to complete the work. This was stated by ten interviewees (IN.1, IN.2, IN.3, IN.4, IN.6, IN.7, IN.8, IN.10, IN.11 and IN.12). As ratified by one interviewee (IN.1):

I think there is motivation to perform the work, but it is low. This may be due to low wages or the employees do not accept nature of the work.

As also summarized by another interviewee (IN.3):

In fact, that the motivation to work in a school is low ..., I think we can increase motivation to work among teachers by raising the rewards and incentives, and modify the system of wages.

In the same way, another interviewee (IN.7) pointed out that:

In fact, there is low motivation to work and the performance is only a minimum required to complete the work among employees and nurses, this is because the lack of incentives and relatively low wages...

Another interviewee (IN.11) believed:

In fact, the money is not the only motivator. There are other incentives which can also serve as motivators, because the motivation is a psychological process basically. In the absence of moral stimuli we noted that the motivation to work is low among nurses and administrative staff.

In addition, one interviewee (IN.12) reminded us:

... There are many negative effects on the company, because the employee's motivation to perform work is low. So, we must change the working climate prevailing in the company...

With regard to the low of motivation to work and performance the views of the respondents above indicate that this is a significant issue in the workplace in the institutions represented. With regard to the explanations of why this is an issue, the views of the respondents can be summarised in the following points:

    I.   Regulations and decisions;

    II.   a lack of incentives and relatively low wages and;

    III.   Nature of work and working climate prevailing.

Shinib (2001, p. 236) - in his study about the relationship between productivity and quality costs at the Libyan company for iron and steel - stated that:

"There is no awareness among workers and most supervisors about the concept of quality and its impact on productivity at the factory".

In the same context, Wright (2003) has confirmed, the employees' perception of the importance of the organizational mission and their desire to provide meaningful contribution to society are two factors that influence the degree of importance employees place on their job. This suggests that not only can public service motivation influence employee performance in the public sector but also that it is critical that public sector organizations clearly communicate to their employees how important the organization's function and performance is to society.

Section four: Conclusion

The main results of the semi-structured interviews are:

1. The LHE outputs were not able to meet changing LLM needs in relation to the four key skills identified for focus in this study: job commitment skill, competitiveness skill, desire for excellence skill and teamwork and problem-solving skill. According to the evidence of interview testimony of representatives of graduate employing organisations discussed in this chapter, this failure appears to be due to some factors that relate the LHE internal and external environment This will be discussed further in Chapter 6.

2. The LLM has not been able to absorb the LHE outputs in relation to the four skills. In the view of the respondents, this appears to be due to some factors that relate the LLM internal and external environment (as shown in the Chapter 6).

The analyses of the interviewees' responses have provided arguments to build scenarios for LHE where they explained their opinions as shown above. This will be taken forward in the Chapter 6 in the development of the scenarios using the DT. The justifications for internal environment are:

1. To provide the student with the necessary skills of how to work within a team, and the absorption of team aims and scientific capabilities to develop working methods.

2. To develop practical training during HE study, by increasing the hours of practical training to develop the skills of HE graduates to deal with information technology and computers, and skills needed in the workplace.

3. To develop the resources, such of the Libyan universities - including -, buildings, equipment, libraries and laboratory.

Furthermore, the evidence discussed in this chapter has provided arguments to build scenarios for LLM. The justifications for internal environment are:

I. To develop training programmes in the workplace.

II. To raise the level of performance through material and moral incentives.

III. To develop the ability of employees to engage in self-development and institutional development in all specialties.

In addition, the factors raised into evidence in this chapter associated with the external environment of LLM are:

- To develop the laws that regulating the relationship between workers and employers.

- To develop the labour unions and the centres of human resources development.

- To develop medical services in hospitals.

Finally, it is predicted there will be ebb in the role of the state in light of global changes. But the role of the state remains important and vitally necessary in Libya, because the state owns most of the sources of natural wealth, this means the development of public policies, setting goals, strategies and overseeing the implementation. This argument suggests that the forces at work seem to create a tension that the state has control and creates the fluctuation, but in order for the HE system to meet the needs of the economy and society it needs to have stability that independence from state control may bring.

Chapter 6

The Delphi Technique (DT)

'Scenarios building'

Introduction

DT is one of an important group of methods in futures studies. Its aim is to generate a consensus about possible future scenarios of a particular issue by a sequence of surveys of panel experts. In this study its aim is to generate a consensus about possible future scenarios of LHE and LLM by 10 experts.

This chapter presents the discussion of the application of the DT to the link between the Libyan LM and HE sectors in four sections. The first section discusses the process of building and the application of the DQ. The second section provides a discussion of the building and analysis of the SWOT matrix for LHE and LLM. The third section discusses building LHE and LLM strategies and scenarios. Fourth section provides conclusion.

Section one: Building and application DQ

According to the results of interviews - Chapter 5 - email used to gather information, provide feedback from/to the 'expert panel' - see Chapter 4 -. To achieve this, the three steps were put in place, which can be seen in the following points:

♦ *First step:* The Delphi process was started with an open-ended questionnaire; the open-ended questionnaire (Appendix 18) serves as the cornerstone for soliciting specific information about HE skills and LM. This questionnaire was sent to a panel of experts and practitioners in the Libyan fields of HE and LM. It is key to the technique that this process aims to gather a range of views of the people working in these areas. It should be noted that this questionnaire will be used as the survey instrument for the second step of data collection.

102 paragraphs - Appendix 19 - have been selected based on the results of interviews and the open-ended questionnaire used in the first phase of the DT. Some paragraphs were also selected from previous studies, such as Mogassbi (1984), Mniena (2001), Al-Badri (1993, 2003, and 2006), Elzalitni (2008) and Theeb (2009). Two types of tests of the efficacy of the questionnaire responses were then conducted, these were:

I.   Virtual test of honesty: The researcher selected paragraphs approved by 80% of the arbitrators, which resulted in the retention of 71 paragraphs (Appendix 21). It is important to note that arbitrators are not the 'panel experts' who responded to DT questionnaire, but they are group of specialists who work in departments of psychology, sociology, education and educational planning in some Libyan universities. The questionnaire was displayed to them and they were asked to indicate the level of their agreement with paragraphs in the questionnaire.

II.   Test of internal consistency: internal consistency is typically a measure based on the correlations between different items on the same test. For this research 30 employees [both male and female] were selected from three workplaces in Benghazi'.

After consideration of the options, it was decided to use a test re-test method of calculation of the correlation by using the Formula for Pearson's Correlation Coefficient. And all values were found to be statistically significant at level 0.01 (Appendix 20). The calculation of the correlation coefficient using the Pearson correlation method used the follows formula:

$$r_{xy} = \frac{\sum xy - \frac{(\sum X)(\sum Y)}{n}}{\sqrt{\left[\left(\sum x^2 - \frac{(\sum X)^2}{n_x}\right)\left(\sum y^2 - \frac{(\sum y)^2}{n_y}\right)\right]}}$$

Pearson's Correlation Coefficient is process made up of series of Items. They are listed below:

-   *rxy*: The Formula for Pearson's Correlation Coefficient between two variables (1st test **'X'** and 2nd test **'Y'**).
-   **(Σx)**: Sum of all the X scores (the top part of the formula).
-   **(Σy)**: Sum of all the Y scores (the top part of the formula).
-   $\sum x^2$: Square each **X** (the bottom part of the formula) score and then add them up.
-   $\sum y^2$: Square each **Y** (the bottom part of the formula) score and then add them up.
-   **Σxy**: This tells us to multiply each **X** score by its associated **Y** score (the top part of the formula) and then add the resulting products together.

- **(X)^2:** Square Σx all together (the bottom part of the formula).
- **(Y)^2:** Square Σy all together (the bottom part of the formula).
- **N**: This refers to the number of "pairs" of data we have.

The result of this equation is a figure between -1 and +1, where a complete correlation is expressed as 1 and a complete absence of correlation expressed as 0. A positive correlation indicates that as one variable increases so does the other, whereas a negative correlations indicates that as one variable increases the other decreases.

In this study this test is being used to test the internal consistency of the responses of the DT panel., This means that the DT data are in pairs and come from normal distributions - if data do not meet the assumptions for using a Pearson Correlation Coefficient, such as that the data are in a normal distribution, then there are other tools available for assessing whether or not relationships exist between two variables -, and the DT data is at least in the category of equal interval data.

In contrast, the data may reveal outlying points well away from the main body of the data, which could unduly influence the calculation of the correlation coefficient. For this reason Spearman is not appropriate because it replaces the observation with ranks.

In the same context, Spearman's rank correlation coefficient is used as a measure of linear relationship between two sets of ranked data, in which is it measures how tightly the ranked data clusters around a straight line. It is a non-parametric measure of statistical dependence between two variables and It assesses how well the relationship between two variables can be described using a monotonic function, as discussed by Altman (1991, p. 288):

"It is necessary to assume that both variables have a normal distribution. No such assumption is necessary for tests on Spearman's rank correlation. Thus we would elect to use Spearman's coefficient rather than Pearson's coefficient if either the data are ordinal or ranked or if it is unreasonable to assume that the variables are normally distributed".

After these tests were conducted, a second version of the DQ was sent to experts by e-mail.

♦ *Second step:* Each participant received a second version of questionnaire (Appendix No 21). This version has been adapted by the researcher according to the tests discussed above. Each participant is asked in this questionnaire to review the items summarized by the investigator based on the information provided in the first step. Accordingly, Delphi panellists are asked to rank-order items to establish preliminary priorities among items. This is intended to begin to analyse the priorities of the panellists and to begin to develop more specific views of the panellists which will be the basis for the more detailed aspects of the scenarios.

♦ *Third step:* Each participant receives a third version - See Chapter 4/ Section 2 - (Appendix No 22) of the questionnaire and is asked to review the items summarized by the investigators based on the information provided in the second step, where the proportion of panellists who agree on each paragraph is included in the information provided to them. This provides an additional layer of information to the panellists and prompts their responses. Also, this final questionnaire stage asked the Delphi panellists to re-arrangement of items to establish preliminary priorities among them.

The DT was used to produce a plausible range of opinions about the relationship between HE skills in Libya and its LM needs, and also to identify the factors and prospective developments that could contribute to the path of the relationship between them, which will be prove useful to build a number of strategies and scenarios for LHE and LLM. So, the DT is significant for this study due to:

1. This study focuses on future requirements of HE and LM in Libya rather than current practice, where relatively little is known about Libyan future requirements. So, DT is able to address these requirements while most other research methods are not. As Amos, Trevor and Pearse (2008, p. 96) stressed that:

    "Recognizing that quantitative forecasting tools alone cannot solve forecasting problems, as the historical data on which these techniques depend are unavailable or because the available data provide little or no insight into the probability of events of interest. It is also useful where there is a lack of agreement or incomplete state of knowledge concerning either the nature of the problem or the components which must be included in a successful solution, or when modelling is difficult".

2. This study is reliant on the use of expert opinion through utilising remote group processes, because the groups of experts are geographically dispersed within Libya.

As mentioned earlier, the Delphi is a form of remote group communication. It is argued by Saint-Germain, Ostrowski and Dede (2000, p. 163) that "the e-mail version of the Delphi method preserves much of the traditional method … can also improve upon the traditional method … and provide a quicker response and cut the drop-out rate among participants".

3. The adoption of an iterative process to create a consensus of opinion is a process requires an answer to one question before proceeding to the next. This implies that every opinion is accepted through the iterative process instead of face value. As Amos, Trevor and Pearse (2008, p. 96) reminds us:

> *"The Delphi uses an iterative research process. The typical Delphi requires a group of relevant experts to respond to an iterative series of written questionnaires (called rounds) interspersed with summarized information and feedback of opinions derived from earlier responses to stimulate thinking mailed or faxed to each respondent individually with the objective of the group reaching consensus".*

Indeed, the significance of the results from of the application of the DT is it shows that it can provide a broad analytical perspective on potential impact of HE and LM on each other through sharing of debate, information and reasoning among participants. In contrast, these debates, information and reasoning among the DT participants provide a more reliable judgment on current situations and possible futures because they are free of social pressure, personality influence and individual dominance.

Section two: Building and analysis of the SWOT matrix for LHE and LLM

The next phase in the process applying DT is to carry out a SWOT analysis. Normally SWOT analysis (Strengths, weaknesses, opportunities and threats) is concerned with the analysis of an organization's internal and external environment with the aim of identifying its internal strengths in order to take advantage of its external opportunities and avoid its external threats, while addressing its weaknesses. As Stacy (1993, p. 52) has defined:

> *"SWOT analysis is a list of an organisation's strengths and weakness as indicated by an analysis of its resource and capabilities, plus the list of threat and opportunities that an analysis of its environment identifies. A strategic pattern requires that the future pattern of action to be taken should match strengths and opportunities, ward off threats, and seek to overcome weaknesses."*

In contrast, Adepoju and Famade (2010, p. 354) have seen SWOT as a tool in a wider process of decision making:

"The SWOT analysis is a general tool designed to be used in the preliminary stages of decision-making and as a precursor to strategic planning in various kinds of applications".

Fundamentally, a scan of the internal and external factors is an important part of any strategic planning process. As David et al (2009, p. 46) confirmed:

"The SWOT Matrix is widely used among both practitioners and academicians of strategic management. This analytical tool utilizes the underlying internal and external factors to generate strategies that would be feasible to consider. Basically the SWOT Matrix matches key external and internal factors as a basis for generating feasible strategies".

In this research, the SWOT matrix will be used to analyse the HE's or LM's internal and external environment with the aim of identifying their internal strengths in order to take advantage of its external opportunities and avoid its external threats, while addressing its weaknesses, all this will help to building strategies and scenarios for LHE and LLM.

Internal factors usually can be classified as strengths (S) or weaknesses (W), and external factors can be classified as opportunities (O) or threats (T). Such an analysis of the strategic environment is referred to as a SWOT analysis.

The internal environment includes all components of human and material resources. For example in the case of a university this includes all the resources within the institution such as buildings, laboratories and libraries, devices, equipment, aims, curricula, strategies, conditions, entities, events, and factors, which influence its activities and choices, particularly the behaviour of the employees. As Zgodavova (2009) say:

The internal environment has been considered from the point of complex accreditation attributes, and from the point of the European University Association evaluating criteria. Considered as critical for success factors are: financing of university from budgetary and non-budgetary resources, ethics and corruption-free behaviour of individuals, quality and quantity of research and educational processes, critical interdisciplinary mass for research and education, and the university structure.

So, can be divided the HE institutions into the factors related to the internal environment including factors related to students (FRS), factors related to curriculum (FRC), factors related to the faculty members (FRFM) and factors related to the administration (FRA). In the Libyan

LM institutions the internal environment consists of factors related to workers (FRW) and factors related to the administration (FRA).

Beyond this, intricacy and inconsistency of some factors are due to not only the external environment but also to the university's internal conditions. From amongst external factors we have explored social, legal, economical, ethical, political and technological environment. (Zgodavová, 2009, p. 1).

In contrast, Abd-Aldaym (1984) and Elsaqir (2001) have classified the external factors as economic, political, demographics and social factors. Abdel-Fattah (2001) has categorized the external factors into general and special factors. The general external factors are: political, economic, social, technical and legal. The special external factors vary from system to another such as technology, competitors, suppliers, customer and funders. To be more precise, Daudi (2007, p. 39) has defined the external environment, when he said:

> *"The external environment is a combination of factors surrounding and influencing the organization and its strategies, It is intended that the factors are public and private variables such as political, economic, social, natural, technological, cultural, etc".*

Based on the classification of external factors by some authors and researchers from Libya and other nations and meetings conducted by the researcher with specialists in HE and the LM, these factors have classified to Economic factors (EF), Political factors (PF), Competitive factors (CF) and Social and cultural factors (SCF).

After application of the DT questionnaire in three rounds and analysis of the data, two initial and confrontation SWOT matrixes were constructed for the HE and LM. The SWOT matrices were used as an analytical tool to re-order the responses from the DT questionnaires about HE and LM in Libya. The researcher applied this re-ordering, but then the resultant SWOT matrices were reflected back to the DT panel for checking and validation of this re-ordering of the data.

Based on an analysis of HE initial SWOT matrix as shown in the Appendix No 23, a range of factors were found - some factors related to the internal environment (the strengths and weaknesses) and others related to the external environment, (the opportunities and threats)- of the LHE as the panel respondents reported them, the Table 1-6 shows four main factors related to internal environment, including related to students, factors related to curriculum, factors related to the faculty members and factors related to the administration. It also shows four main factors related to external environment, economic factors, political factors, competitive factors and social and cultural factors.

Table 1-6
Factors related to internal and external environment LHE

Internal factors	Strengths		Weakness	
FRS	1. Ability of students to absorb information and turn it into usable knowledge. 2. Ability to adapt and learn quickly and possess the skills necessary to do it. 3. Ability to work collaboratively within a group.		None	
FRC	4. Interest in foreign languages.		1. In curriculum there is no method to teach these skills. 2. There is no relationship between technical knowledge and learning, and another to develop thinking in general and scientific thinking in particular.	
FRFM	None		3 Using the method of memorization in teaching. 4 Focus most of the lecturers in the educational aspect without focusing on the community development and scientific research. 5 The absence of continuing education programmes for lecturers, and the inability of lecturers in innovation and continuous learning.	
FRA	5 There are multiple disciplines at the Libyan universities to meet the LM needs. 6 There are criteria for the selection of lecturers for the work at universities. 7 The actual study during the academic year is sufficient (between 22 and 25 weeks). 8 There are enough conferences and scientific symposia.		6 Weakness of practical training during the undergraduate. 7 The absence of precise criteria to the acceptance of students at Libyan universities. 8 There is no balance in the distribution of students between the departments at universities. 9 The lack of good information system at universities and therefore the lack of adequate information for decision-makers and curriculum designers.	
External factors	Opportunities		Threats	
EF	None		1. The low level of spending on HE. 2. There are not sufficient laboratories, and the libraries do not contain the modern periodicals and books. 3. Weakness of spending on research and studies. 4. The imbalance in the salaries of employees within the University	
PF	None		5. There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives. 6. The absence of administrative and organizational stability of universities. 7. There is no comprehensive philosophy or clear principles and requirements, targets and policies. 8. There is no relationship between the central planning system and planning system on the HE sector. 9. Absence of a board is responsible for HE on an ongoing basis.	
CF	1. There are specific criteria for measuring the quality of universities. 2. Harmony of the geographical distribution of universities.		10 Propagation of the establishment of small universities, which do not have human resources and capital assets.	
SCF	3. High cultural level and low rate of illiteracy among parents. 4. Decline in family size.		11 The absence of the concepts of career commitment, competition, and excellence in the Libyan society. 12 Not interested in the cultural diversity between regions. 13 Lack of attention of impact of the customs and traditions on the educational system.	

Source: Author's Survey

There is a need to develop specific strategies to address the shortcomings of the elements of the internal and external environment of HE. But before that, there is a need to discuss the positive elements identified by the DT panel in the Libyan HE. Through the data contained in Table 1-6 it is possible to observe that there are eight factors of strength in the internal environment of HE. The following discussion provides a detailed consideration of each of these results:

1   The ability of students to absorb information and turn it into usable knowledge (FRS).

2   The ability to adapt and learn quickly and possess the skills necessary to do it (FRS).

First of all, these results (1 and 2) are not consistent with the findings of the Elfenish, et al, (1998, p. 283) - their study was about Libya -, where they suggest to:

> *"Focus on the transfer of information more than the practical training, which led to inability of students to apply and develop their skills and abilities. Also, some curriculum focus on teach some of the issues and local problems such as the problems of population, migration, water, pollution and other without help students to use method of problem-solving or develop critical thinking skills and decision-making".*

This result could be interpreted by saying that panel perceive that Libyan students have the ability to absorb information and turn it into usable knowledge and they have the ability to adapt and learn quickly and possess the skills necessary to do it, but there is the urgent question, which information and knowledge can the students make usable? And which skills can the students learn quickly? And it can be said that a focus on the transfer of information over the practical training at Libyan universities may have led to an inability among students to apply and develop their skills in the workplace.

3   The ability to work collaboratively within a group, because of possession of skills of verbal and written communication and others (FRS): This result is inconsistent with the results of the primary interviews with representatives of the graduate employer organisations conducted for this thesis. Whereas it is consistent with the finding of the Obaidat and Sada (2010, p. 84) study of skills in Jordan, as they concluded:

> *"That the rate of acquisition of communication skills among Jordanian universities students was relatively high, Where was between 66% and 67%, but there are slight differences between males and females".*

4 Interest in foreign languages (FRC): This result is not consistent with Mirza (2002) who recommends in relation to Libya:

> *The institutes teaching English and other foreign languages should be supported, because these languages became the basis of scientific dealing in the areas of knowledge and technological development. In addition to the private sector, the State should support the public education sector by providing teachers of foreign languages from countries speaking these languages.*

In 1985 the teaching of foreign languages were abolished at all stages of education in Libya. However in the second half of the nineteen-nineties the Libyan government has decided to teach English language at all stages of education.

Indeed, there are more than fifteen years when foreign languages have not been taught in various stages of education in Libya. This naturally created a significant gap in the teaching of these languages. This also may limit the possibilities for Libyan students to experience and communicate with other cultures, and this is perhaps the reason that led some interviewees to say that the workers do not have to connect with expertise and international experiences.

5 There are multiple disciplines at the Libyan universities to meet the LM needs (FRA): This result is not consistent with the findings of Al-Badri (2007) - In his study about the problems of higher education policies in Libya - he suggests:

> *Returning to HE in our country and despite the spread of its institutions throughout the country, it is still weak in its policies and programmes and weak in its input. On the other hand, its outputs are not diverse, and that means that the HE system in Libya is lacks diversity.*

Despite the fact that the universities spread rapidly because of growth during the seventies and eighties of the twentieth century that the universities look the same all over the country as Alfaidy and Ibrahim (1997, p. 199) have observed: "that a large proportion of higher institutions tend to enrol in the social science and humanities, this is despite the fact that the society is badly in need of graduates of science disciplines." therefore there is a limited diversity.

6 There is a criterion for the selection of lecturers to work at universities (FRA): Al-Badri (2006) has supported this result, and he confirmed on: Adherence to standards specified to select the Libyan lecturers for the work at universities, to selection of non-Libyan lecturers

for the work at universities must ensure the scientific competence, university teaching experience, scientific activity.

There are no precise scientific criteria for the selection of faculty member in the regulations and decisions that govern the work in universities. But the LCEQAIHE (2007) has stated - in the guide to quality assurance and accreditation - some conditions that should be provided for appointment as a lecturer at the university. But these conditions did not identify the skills that should be available in persons who want to work at the university as lecturer.

7. The actual study time during the academic year is sufficient (between 22 and 25 weeks) (FRA): This result does not agree with the recommendation made by Abu-Jafar (2006) in his study about *private higher education in Libya*, where he said: The academic year in private higher education in Libya should be like the academic year in public higher education, and have a minimum 14 weeks actual study.

However, the numbers of instructional hours per week are not enough if compared it with the number and size of courses. For example: 'in the Department of Educational Planning, Faculty of Arts at Omar Al-Mukhtar University , Libya, the number of instructional hours per week dedicated to learning computer science is 1 hour 30 minutes. This is less than the required to learn the computer science due to lack of laboratory, computers and technicians etc, which cannot support computer skills. Whereas, the time required teaching the computer science is 3 hours per week (Omar Al-Mukhtar University , 2001).

In contrast, it can be noted that the amount of time weekly is about 18 or 22 credits, and thus the number of lectures allocated to each grade is between 9 and 11 lectures a week. The number is different from one department to another, but this is a large number (Omar Al-Mukhtar University , 2001).

8. There are enough conferences and scientific symposia (FRA): This result has not been supported by any Libyan researcher or writer, but on the basis of the researcher's personal experience and direct observations during the work at the Omar Al-Mukhtar University in Libya, it is clear that there were not enough conferences and scientific symposia. Although until 2006 there were 12 universities in Libya but there were 2 or 3 conferences and scientific symposia every year. In fact, this number of conferences and scientific symposia is very low if compared to the number of universities and colleges.

As shown in Table 1-6 that the most lecturers are focusing on the educational aspect of their roles without focusing on the community development and scientific research, and

there is an absence of continuing education programmes for lecturers, and an inability amongst the lecturers to innovate and take up continuous learning programmes. Accordingly, the conferences and scientific symposia are an important area in which to develop the skills and capabilities of faculty members.

In the same way, the Faculty of Arts at University Garyounis (2002) - in its report of a scientific study to evaluate and develop the educational system in the Libya - has confirmed that:

"That the lack of participation of faculty members in conferences and scientific seminars and workshops, and weak sources of information that will help in their work. All this led to impact on their abilities and knowledge". (Faculty of Arts, 2002, p. 3)

Apart from this, there are nine factors of weakness in the internal environment of HE which are presented in Table 1-6. Accordingly these factors can be discussed as the following:

1   The weakness of the practical training during the undergraduate programmes (FRA): Actually there is no Libyan research or writers who have confirmed this result. However, the ILO (2007) - in its report about developing *Skills and Employability for Young People in Asia and the Pacific* - emphasized that the developing countries often face difficulties in providing meaningful vocational education and skills training to enhance the quality of their labour force. This finding from the DT is therefore in keeping with what might be expected in a country of Libya's economic profile.

2   There is no method in the existing HE curricula in Libya for teaching practical skills demanded by employers (FRC): This result has been confirmed by some Libyan research such as Bubtana (2009) and Sheikh (2006). For example, Bubtana (2009) argued that:

Content of the curriculum still promotes the concept of education for work in clerical jobs, and this concept did not create methods to link between academic study and field work especially the technical work.

The ILO (2007, p. 35) reporting on a wide range of countries across Asia and the Pacific, offer a partial possible explanation for this situation: "there were still many outdated training courses being delivered because teachers did not feel comfortable to change to new areas".

3   There is no relationship between technical knowledge and learning, and a failure to develop thinking in general and scientific thinking in particular (FRC): This result was reported by some of the interviewees in employer organisations in the earlier phase of this

study. Elzalitni (2008) - in his study about vocational education and training programmes in the Libyan higher education sector - has remarked:

... Clearly, humanities and social sciences courses dominate HE institutions. One explanation of this strong and continuing dominance of such courses is the fact that these courses are taught by the traditional methods of "chalk and talk" and text books which do not require expensive equipments or special laboratories/ workshops...

4   Using the method of memorization in teaching at Libya's HE (FRFM): this result was supported by Qaier (2001, p. 163) - in his study about internal efficiency of education systems at the University of Garyounis -, when he reported:

"That some causes of low efficiency for HE, are: Using the method of memorization in teaching, the weakness of the practical training at the university and the underutilization of the modern technology".

The weakness of the practical training at the Libyan universities is a natural consequence of the adoption of the method of memorization in teaching, and this has led in turn to the students not having the ability to use modern technology.

5   The absence of precise criteria on the acceptance of students into Libyan universities (FRA).

6   There is no balance in the distribution of students between the departments at universities (FRA).

These results (5 and 6) have been confirmed by Mniena (2001) as she agreed:

The individual admission polices practiced by the different colleges at Garyounis University, and the transfer of many students from one college to another, reflected clearly the inability of Secretariat of Education (Ministry of Education) to implement and enforce its policies on one hand, and divided the central admission policy of its content and importance, on the other hand.

It may be that result 5 is the main cause of the imbalance in the distribution of students between the departments at universities, where Al-Badri (2006, p. 147) confirmed that:

"Those policies were not able to identify the number of students, who can be absorbed by universities, where that the admission of students at universities is not based on data and information or statistics, which indicate the need for those students in each discipline".

These results all point to the need for the Libyan universities to reform the student admission policies to be able to identify the number of students at university, colleges and departments, and the capacity of universities to accommodate these students. As SHEDL (2006) recommended - in relation to Libya - that:

Reform and rationalization of the student admission policies at the universities and higher institutes, and linked to the requirements of development and the labour market needs, and admission of students according to their abilities and inclinations.

7 The focus of most of the lecturers is in the educational aspects of the curriculum without focusing on community development and scientific research (FRFM): This result has been supported by some researchers and organizations, such as UNESCO (2008, p. 106) - Reinventing Higher Education - has emphasized in the case of developing countries "that most faculty members are not interested nor do they have the orientation or desire to work for social change, except for their own betterment (UNESCO, 2008,)", this situation applies to most faculty members in Libya, where they are working with more than one university to improve the living situation and therefore neglect of scientific research and local community development, as Al-Badri (2006, p. 150) remarked:

"Weak contribution of the faculty member at the scientific research and local community development because the high volume of daily teaching hours".

8 The absence of continuing education programmes for lecturers, and the inability of lecturers to maintain innovation and continuous learning (FRFM): Said (2006, p. 221) has supported this result, - in his study about the higher education in Libya "Dilemmas and Development" - where he recommended:

"The establishment of special centres to universities to be interested in developing the skills of faculty members to be abreast of the latest achievements in the fields of research and development. In the same context, give the faculty members short-scholarships for the purpose of viewing and gaining more skills".

Although most of the laws and decisions that organize the work of faculty members have confirmed that there should be continuing education programmes for lecturers to develop the ability of faculty members to innovate and pursue continuous professional learning and development, which as discussed earlier they have been unable to do in the absence of such programmes.

9 The lack of a good information system in the universities and therefore the lack of adequate information for decision-makers and curriculum designers (FRA): Ali (2006, p. 212) has supported this result - in his study about the reality of higher education and the development requirements in Libya - where he recommended that there was a need to:

> *"Develop an efficient system of information to be able to provide a realistic and clear picture about demand and supply, and predict the requirements of development and the labour market from all disciplines".*

The Libyan universities and the Ministry of Education must build an information system to support educational decisions in Libya through data collection and classification, accessing the education indicators and analysis and educational policy-making.

Additionally, the opportunities identified by the expert panel in the DT phase of the study include some elements, as following:

1 There are specific criteria for measuring the quality of universities (CF): In 2007 the LCEQAIHE has recommended, an analysis of the functioning of institutions and educational programmes and measure the level of performance and quality level to determine what may be shortcomings and the need to avoid in order to achieve the required level of quality, ten standards has identified to ensure quality and adoption of institutions of higher education, such as: an institution's mission and objectives, organization of administrative, tutorial and faculty members (LCEQAIHE, 2007).

These standards have not been supported by any Libyan writer or researcher, because they see that the standards developed by the LCEQAIHE are not effective due to the fact that they not include mechanisms and methods that will be evaluated.

For example: there is no mechanism to evaluate the faculty member, some private universities have been granted a license to operate without having facilities, such as buildings, lecture rooms or laboratories.

2 Harmony of the geographical distribution of universities (CF): Fundamentally, these results are not consistent with the findings of the Al-Badri (2006), who suggested that:

> *The haphazard and sudden expansion of universities has been conducted without taking into account the actual distribution and density of population. These ideas have probably been born of the moment because they did not take into account the simplest requirements of the HE institutions... (See Chapter 3)*

Beyond this, Elzalitni (2008, p. 45) has stressed:

> *"That this number of universities was excessive for a population as small as Libya's (about 5.5 million according to the census in 2006). And educational planners had suggested a ratio of 1 university to 1,000,000 people".*

For the most part, the harmony of the geographical distribution of universities is only formality - there is not an even spread of universities across the land of the nation - for example: can be noted that the 11 universities are concentrated on the Libyan coast while there is only one university in the south of the country. On the other hand, the universities in the western region is concentrated in Tripoli and nearby cities such as Misratah, Ai-Khums and Zawiyah while there is no university in the western mountain area.

3 High cultural level and low rate of illiteracy among parents (SCF): This result has not been supported by any Libyan writers or research, but the GAI (2009*)* in Libya has confirmed:

> *That the enrolment ratio of basic education has risen from 91.3% in 1995 to 97.1% in 2006, In contrast, the illiteracy rate has decreased from 18.7 in 1995 to 11.5 in 2006.*

The education provides knowledge and information, and changes in the way students think. It also develops the sense of self-esteem and self-confidence. In contrast, education is considered as instrument for developing human resources and for human capital formation, so that, the people who have reasonable literacy and numeracy skills tend to continue their education more than others. As Preston and Hammond (2002) - in their report about the wider benefits of further education in the UK - have confirmed:

> *Quantitative analyses reveal that esteem and efficacy are perceived as separate benefits of further education, and our qualitative findings suggest that esteem and efficacy bring about different classes of wider benefits. For example, esteem may lead to improved psychological health, whereas efficacy often leads to an increased propensity to participate in the community. Also, independence of thought, problem solving and improved IT skills are identified as outcomes of further education.*

4 Decline in family size (SCF): This result is consistent to some extent with the results of LGPC, but it must be noted that the decline in family size was not a large, the Appendix 27 shows the number of Libyan households size from 1954 to 2006 where the average of family members was 4.5 in 1954, in 1964 increased to 4.7, in 1973 became 6.0. Also, in 1984 has increased 6.82, and in 1995 were 6.96, in 2006 decreased to 5.9.

Nonetheless, the sociological and demographic literature refers to the relationship between family size and education. As Marteleto (2005, p.3) - in his study about family size, demographic change, and educational attainment - stated that:

"Theories regarding sibling's rivalry and resource dilution among siblings offer insights into how children's educational attainment relates to number of siblings. According to these theoretical frameworks children with many siblings are generally worse off than their counterparts in terms of several outcomes related to life chances, including nutrition, educational attainment".

According to the dilution of resources hypothesis developed by Blake (1985), a large number of siblings, or close spacing among siblings, dilutes the amount of parental time, attention, and money available per child, which tends to negatively influence several child outcomes, including educational attainment (Marteleto, 2005, p. 3). Simply put, parents with more children spend less time with each of them.

The DT panel surveys resulted in a number of threats being identified. These include following elements:

1   The low level of spending on LHE (EF): Al-Ezzabi (2006) has recommended:

The success of the role of universities and their contribution to the development programmes depends on such things as; develop possibilities of the material through the allocation of budgets enough to cover the requirements of universities.

This seems largely true because most of the spending on universities has granted for salaries and administrative expenses.

2   There are not sufficient laboratories, and the libraries do not contain the modern periodicals and books (EF): this result has been supported by Elzalitni (2008) when he said:

it is clear that most Institutions of HE do not possess the necessary supporting infrastructure facilities - such as laboratories, libraries, bookshop.- and human resources. These should be available for HEIs to enable them meet their exigencies and perform their functions adequately and accurately.

3   Weakness of spending on research and studies (EF): This has led to the weakness of scientific research at Libyan universities, as GPCE (2005, p: 3) has confirmed:

"Weakness of scientific research at universities and institutes of HE and they do not yet start production of knowledge, In addition, we note the weakness of postgraduate

studies. Furthermore, we find that the research centres interested in quantity and do not seek to quality because those centres are conventional and did not work by scientific methods".

These first three results (1, 2 and 3) seem largely true because most of the spending on universities has been granted for salaries and administrative expenses. In contrast, there is not enough spending on a scientific research or development of the laboratories, libraries and lecture rooms. Table 2-6 shows the public spending on education in Libya and different countries.

Table 2-6
Public spending on education in Libya and different countries

Countries	Public education expenditure		Public education expenditure by level (as % of all levels)	
	As % of GNP*	As % of total government expenditure	General Education**	HE
	1995-97	1995-97	1995-97	1995-97
Australia(1)	5.5	13.5	69.5	30.5
U.S(1)	5.4	14.4	74.8	25.2
Egypt(1)	4.8	14.9	66.7	33.3
Lebanon(1)	2.5	8.2	68.9	16.2
Libya(2)	0.16	30.7	97.67	2.33

Source: *Adapted from (1) Human development report, 2002, pp. 179-181. (2) Al-Tier, 2006, p. 44 and Salem, 2006, p. 396.*
Note: ** GNP = Gross National Product **Data refer to combined expenditures for pre-primary, primary and secondary levels.*

Through an examination of the above figures in the Table 2-6 it can be noted:

- That the share of the education sector of the GNP (0.16%) is very low where compared to other countries.

- Despite the high share of the education sector from government spending (30.7) if compared to other countries, but this is in the context that nationally the education sector holds the largest number of workforce.

- Higher allocations of general public education - primary, preparatory and secondary levels - (97.67%) if compared to other countries, because of the public sector dominates the in all Libyan economy sectors.

- That the rate of spending on HE (2.33%) in Libya is very low if compared to other countries.

Figure 1-6 shows the public HE expenditure (as % of all levels). Also, the Table illustrates that the rate of spending of HE (2.33%) in Libya is very low if compared to Australia (30.5%), USA (25.2%), Egypt (33.3%) and Lebanon (16.2%).
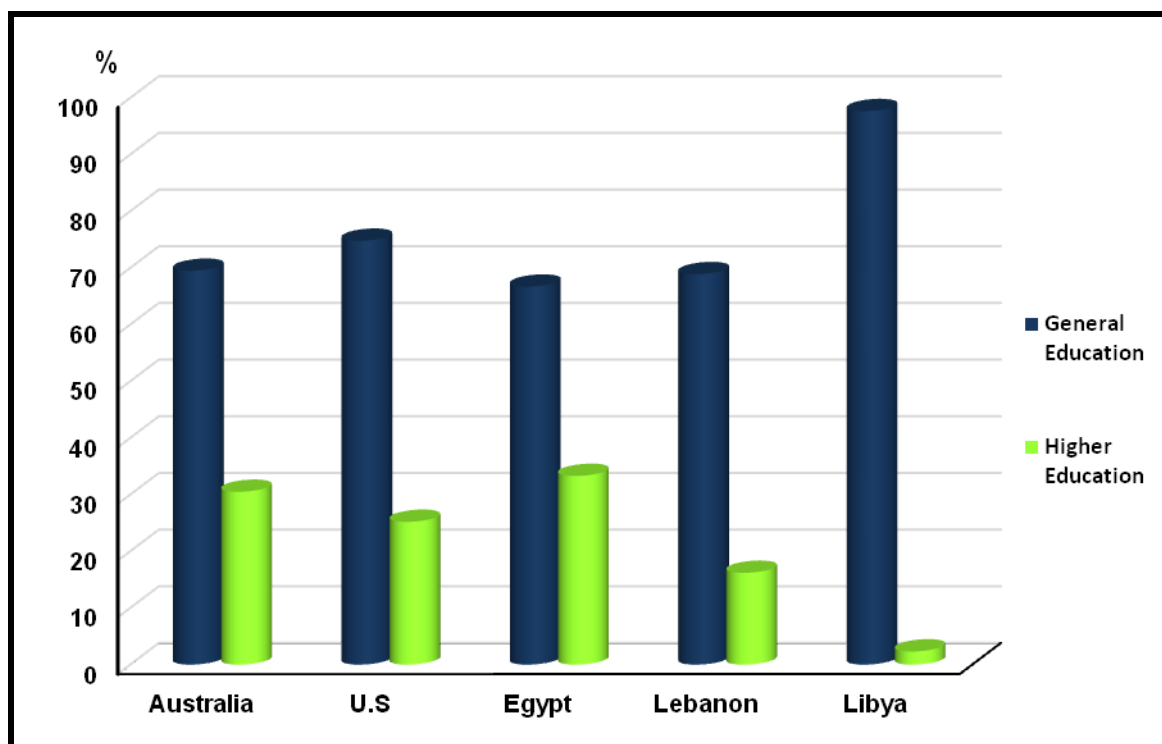
Figure 1-6: The public HE expenditure (as % of all levels)
Source: After human development report (2002), Al-Tier (2006) and Salem (2006).

According to Al-Tier (2006) between 90-93% from the public spending on HE in Libya was spent on salaries and administrative expenses. This means that only between 7-10% is

spent on scientific research and development in the Libyan universities. This is a very small proportion of a very small allocation to HE.

4 There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives (PF): This result has not supported by any Libyan researcher, but the ARCHE (1998) has recommended:

> *The Arab States must set up policies and legislations as well as establish effective mechanisms to deal with the overall governance of the HE system and institutions, with due consideration to the promotion of institutional autonomy and the participation of all sectors concerned.*

Fundamentally this requires that there be interest in developing policies and clarity about how to implement these policies, because the lack of clarity leads to errors in the implementation of these policies and therefore they do not achieve their objectives.

5 There is no comprehensive philosophy or clear principles and requirements, targets and policies (PF): This result has supported by Elzalitni (2008), and also Al-Badri (2006, p. 150) who argued:

> *"There are no clear aims or philosophy for the Libyan higher education system, also there is no effective administrative system of higher education institutions in order to achieve aims, for which it was established".*

As discussed above, that the lack of clarity leads to errors in the implementation of these policies and therefore they do not achieve their objectives. So, the unclear aims or philosophy resulted in the HE sector being is unable to achieve the aims for which it was established.

6 The absence of administrative and organizational stability of universities (PF): This result has supported by Theeb (2009, p. 71) when he stressed that:

> *"One of the most important bits of evidence of the fluctuation of policies and strategies of Libya higher education is the instability of the administrative structure, in terms of exposure of the sector in different years to abolition or merger with other sectors, or the distribution of key departments to other secretariats; and thus it applies to universities and higher colleges in similar circumstances, leading to transition of the sector from centralization in the management of these institutions to decentralization, and back".*

One of the main pillars of the development of any system is stability and administrative organization, since in the absence of stability there is no clarity in the policies, objectives or visions.

7   Absence of a board responsible for coordinating HE at a national level on an ongoing basis (PF). As El-Hawat (1996) supported this result, writing about the legal basis on which Libyan universities were founded and the future prospect for HE in Libya:

What was in these laws is a general principle for the organization of universities and it was not detailed and accurate. This means that Libyan universities are randomly working because orientations of the community are not formulated in the form of aims and interdependent philosophy, which can lead to programmes and specific plans.

Fundamentally, the absence of a board responsible for coordinating HE at a national level on an ongoing basis led to the lack of coordination between HE and other sectors in Libya, thus there is no clear relationship between with those sectors. Also there is no coordination in the plans and programmes between them.

8   There is no relationship between the central economic and social development planning system at a national level and the planning system on the HE sector (PF): This result has not supported by any Libyan researcher. But a lack of effective coordination between government departments and educational agencies in Libya may be due to the absence of an effective system to transfer information between them. The ILO (2007, p. 36) emphasized in a review of a number of countries including Libya that:

"A consistent issue is that there is a lack of effective coordination between government departments and educational agencies within countries. A coherent institutional framework is a crucial factor in facilitating effective training policies towards the development of a skilled human resource base. However, many developing countries do not possess the institutional capacity or organization to systematically coordinate their national technical vocational education and training policies (TVET)".

9   Propagation of the establishment of small universities, which do not have human resources and capital assets (CF): Alfaidy and Ibrahim (1997, p. 199) - in their study about the higher education and future challenge in Libya - have supported this result when they noted:

"Some of the new HE institutions have no economic value due to the lack of sufficient equipment and professional human resources, and not to mention the low level of educational attainment of this new faculty. It has also been observed that a large

proportion of higher institutions tend to enrol in the social science and humanities, this is despite the fact that the society is in badly need of graduates of science disciplines."

As mentioned earlier there is an imbalance in the distribution of universities between regions, but also, there was another imbalance in the propagation of the establishment of small universities where these do not have sufficient equipment and professional human resources. As Al-Badri (2007) has said [see Chapter 3]: the HE institutions in Libya are still weak in its policies, programmes, output and weak in its input, and this means that the HE system in Libya lacks diversity.

10 The absence of the concepts of career commitment, competition, and excellence in the Libyan society (SCF): Because of the dependence of the Libyan population on the State to provide all the necessities for long periods of time, the DT panel have noted that the concepts of career commitment, competition, and excellence in the Libyan society almost do not exist. As Mirza (2002, p. 11) has confirmed:

"The culture of profitability has influenced the mind of the educated classes to obtain a job - as insurance against unemployment - in the public sector. It requires an effort to change this culture and efforts in this direction will find social resistance because the culture of profitability has been established for a long time."

As already made clear in Chapter 3, the public sector absorbs the bulk of the labour force [74.64% of total HE graduates is working in the public sector] because of the laws that force the economic sectors on the employment of Libyans.

11 Not interested in the cultural diversity between regions (SCF): As discussed elsewhere, this may be due to the fact that the Libyan universities have similar courses, so they do not take into account the cultural diversity between regions. As Sheikh (2006) has argued:

In fact, there is no correlation between the curriculum and action field, this creates a gap between the educational institution and surrounding environment

To be more precise, Libya's population are not only Arabs, but there are other ethnicities such as the Amazigh, Tabu and Tuareg. Also, Libya is a country diverse in terms of environment and natural resources. Under those circumstances flexibility and diversity in curricula is needed. Accordingly, Elmograbi (2006) has recommended:

The content of higher education in Libya should be in line with the surrounding political environment, social environment and natural environment.

12 Lack of attention on the impact of the customs and traditions on the educational system (SCF): This result has been supported by Al-Maqury (2006, p: 119) when he confirmed writing about reality and possibilities of development in the relationship between higher education outputs and Libyan labour market:

> *"Reduce the impact of negative social factors on the relationship between the outputs of higher education and the labour market such as: the restrictions imposed on women and the negatives caused by tribal affiliation or family".*

Although, the proportion of females at Libyan universities (as discussed in Chapter 3, section 2) is almost on a par with or in excess of the proportion of males customs and traditions have affected the female students' choice of disciplines. For instance: In 2001 64.3% of total female graduates from university graduates were from the social science faculties and the faculties of economy. By contrast, 32.2% graduated from faculties of applied sciences, and 3.5% from other faculties (Al-Maqury, 2006).

13 The imbalance in the salaries of employees within the University (EF): This result has supported by Al-Badri (2006, p. 143) when he said of the situation in Libya's HE sector:

> *"The material and moral incentives are not available for faculty members, who teach in postgraduate or scientific supervision, prompting many of them to be satisfied with teaching at the undergraduate. Although salaries have improved, but the taxes lose their value, this has led faculty members to work outside the university".*

That the salaries of faculty members are ostensibly high, but the taxes lose their value, where salaries are subject to a wide range of tax such as: Income tax, social security, support companies tax and others. Here can be note that the gross income is high (amount before paying tax), but the net income is low (income after tax).[*]

Based on an analysis of initial SWOT matrix as shown in the Appendix No 24, a range of factors were found that determine the strengths, weaknesses, opportunities and threats to the Libyan LM. These are summarised in Table 3-6, which shows two main factors related to internal environment - factors related to workers and factors related to the administration - and four main factors related to external environment - economic factors, political factors, competitive factors and social and cultural factors -.

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[*] *Here the volume of taxes on income can be identified through access to a set of laws such as: Civil Service Act No. 55 of 1976, Salaries Act for Citizens Employees No. 15 of 1980, Income Tax Act No. 11 of 2004, and Act No. 12 of 2010 on Labour Relations.*

Table 3-6
Factors related to internal and external environment LLM

Internal factors	Strengths		Weakness	
FRW	1	High level of human relations within the LM.	1.	The manpower does not have the skills different from traditional skills requested for work routine.
	2	High cultural level of the workforce.	2.	The HE graduates do not know how to deal with information technology and computers, and how to apply the workplace.
			3.	Lack of knowledge of digital information systems.
			4.	Low of behaviour of graduates at the LM due to lack of their job satisfaction.
			5.	Low of manpower productivity.
			6.	Inability to work collaboratively within a group, because of lack of their communication skills.
			7.	Confusion between the concepts of competition and teamwork among graduates.
FRA	3	There is specialization and division of labour within the economic sectors.	8.	The lack of continuous assessment and follow-up in order to achieve human development.
	4	Understanding delegation of authority by the director to his subordinate.	9.	There are no specific criteria for measuring the performance of workers or companies and factories.
			10.	Weak training courses and inability to provide continuing education.
			11.	Weak institutional environment within the public sector.
			12.	The low level of leadership behaviours among the managers.
			13.	The absence of the concepts of career commitment, competition, and excellence in the LLM.
			14.	Lack of clarity in the structure of the LM and the ways in which control the flow of its work.
			15.	Poor decision-making capacity of the administrators as well as personnel.
External factors	Opportunities		Threats	
EF	1.	There is large private capital and free to work in the Libyan LM.	1.	Linking the wages and bonuses with position functional rather than linked to performance.
			2.	Incentives and rewards are low within different business sectors.
			3.	Scarcity of research centres dealing with the development of human resources.
			4.	The imbalance in the distribution of public spending between economic sectors.
PF	2	The laws and regulations prevailing are more effective for convince investors and companies to invest in Libya.	5	Weakness of labour unions
			6	The absence of laws regulating the relationship between workers and employers.
			7	The absence of clear strategies to develop the LM.
			8	There is no stability at the LM institutions.
CF	3	Low level of use of foreign labour.	9	Inability of the LM of rapid change in order to follow global changes.
			10	There is no diversification of the structure of the Libyan economy in order to ensure sustainability in the development process.
			11	Lack of attention to changes that occur in the work environment.
SCF	Non		12	Increasing influence of social values on the values of work, which limit of the accountability functional.

Source: Author's Survey

The data contained in Table 3-6 illustrates the scale of the weakness that affects the LM in Libya because of the large number of weakness factors and threats. On the other hand, there are few of the strengths and opportunities.

The following discussion focuses on the internal environment factors and the external environment factors in the next several points. Through the data contained in Table 3-6 it can be observed that there are four factors of strength in the internal environment of HE as follows:

1. There is specialization and division of labour within the economic sectors (FRA): This result is not consistent with the findings of the Council of General Planning (2004) in its report about the Prospects for development and administrative development in Libyan. This suggests:

    There are organizational problems that have affected on the performance of administration and the effectiveness of management such as: Lack of attention to building the realistic of organizational structures for specialization of labour, and weak functional classification that reflects the actual size of the work, and weak performance standards, also the absence of objective criteria for public office, and weakness the programmes of material and moral stimulus.

2. High level of human relations within the LM (FRW): Conversely, as discussed elsewhere [Chapter 5], this result is not consistent with the findings of the Alarabi and Alakechlan (2009, p. 101) - in their study about performance in higher education institutions -, where they stressed:

    "Employees do not seek to influence the decisions of the group because of lack of advanced preparation and surprise and fear of the unknown and uncertainty. Also, low level of human relations in the organization".

    However, this is not a total explanation. There is need to return to study the way in which workers interact each other in the workplace and different working conditions. On the other hand, it is important to know their organisational culture, because all organisations reflect its particular cultural values. In fact, these values often lead to the development of working practices.

3. Understanding delegation of authority by the director to his subordinate (FRA): Although this result was not supported by any Libyan researcher or writer. But, ECF (2003, p: 31) has remarked:

"...public sector institutions have been afflicted by problems of corruption, nepotism, inefficiency, poor coordination, poor management and institutional capacity, non-existent salary policies and political interference...".

Most developing countries suffer these problems because of the lack of transparency and non-application of laws, as Hodess, Banfield and Wolfe (2001, p. 87) have noted:

"To many Africans, public institutions … are synonymous with poor quality services, corruption and inefficiency. Numerous factors have been identified as encouraging corruption within the region's public administrations: over-centralisation of power, lack of media freedom to expose scandals, the impunity of well-connected officials, absence of transparency in public fund management, and low salaries".

4. High cultural level of the workforce (SCF): This result does not agree with the recommendation made by Salem (2006) - in his study about the reality of higher education in Libya and its impact on the workforce - when he said:

We need to address the educational situation of the Libyan workforce through eliminating illiteracy and low qualifications of the Libyan workforce.

In most cases, the culture intersects in various ways to create an innovative capability. Innovation requires workers to be able to generate new ideas. So, the role of culture is enabling and encourages innovation and gets rid of the mistakes before they pose a threat to the workflow. Boedker et al (2008, p. 15) - in their report about Enabling Innovation: Leadership, Culture and Management at the Workplace Level - have argued:

"That organisational culture can be a source of sustained competitive advantage. For example, those who have a cooperative culture supporting innovation may find that it is this culture that gives them a competitive advantage. There are many ways to create a culture supportive of innovation, ranging from pure training and education, and incentives, through to social norms and other 'invisible' artefacts, including symbols and symbolic behaviours. The former are usually the easier to manage, yet the latter are often the more powerful ones".

There are fifteen factors of weakness in the internal environment of LM, which can be discussion as following:

1. The manpower does not have the skills different from traditional skills requested for work routine. (FRW): As Alhadi Salem (2006, p: 401) has stressed:

   "The HE is drive by supply rather than demand, and there is emphasis on quantity rather than quality, also weakness of the HE system response to the LM needs, which led to a shortage of skills and increasing unemployment rates".

   Apart from this, the result does not agree with the findings of the Ismail, Awang and Siang (2010) - in their study about the determinants of workers' competitiveness in Malaysian information and communication technology sector - when they have pointed out:

   That workers' competitiveness index in the ICT sector is quite high with 42.9 per cent achieve a high level and 50.8 per cent achieve a moderate level. Nevertheless, there are 4.9 percent of the respondents are still at the low level of competitiveness index and only 1.4 percent of the respondents are at the high level.

   Today, the workforce should have skills different from traditional skills requested for work routine because the nature of work has changed. Also, the working methods have evolved rapidly over the past years.

2. The lack of continuous assessment and follow-up in order to achieve human development (FRA).

3. There are no specific criteria for measuring the performance of workers or companies and factories (CF).

   Indeed, these results (2 and 3) have been supported by El-Deruish and Salem (2006) when they recommended:

   It has became necessary to adopt a sophisticated system to assess performance, because the adoption of process control and evaluation in Libya on the follow-up reports are no longer sufficient Therefore recommends that researchers need to pay attention to the development and planning systems, supervision systems and evaluation systems of performance in the organizations of the business and general administrative units.

4. The HE graduates do not know how to deal with information technology and computers, and have to application at the workplace (FRW).

5. Lack of knowledge of digital information systems (FRW).

Alike, these results (4 and 5) have not been supported by any Libyan writer or researcher, but as discussed previously Elmograbi (2006, p. 170) has recommended:

"The staff must be highly qualified, have high skills, high ambitions, knowledge and use the technology and organizational and administrative capacity".

In contrast, El-Duaibi (2002, p. 8) has confirmed that what is needed is:

"Work on the development of education systems and vocational training in order to respond to all the developments of globalization, IT and electronic communication techniques".

Today, all employees should know how to use information technology because most businesses are managed with modern methods, especially in countries where population is relatively small.

6. Weak training courses and inability to provide continuing education. (FRA): As Belhaj and Karoash (2004, p. 29) agreed:

"In fact, the most of the teacher training during work programmes are traditional in its structure and tactics and free of any strategy for the renewal or innovation".

In 2003 the National HDR has said: should be use of advanced technology and offering high quality training programmes in order to improvement of manpower competitiveness.

7. Weak institutional environment within the public sector (FRA): Because of this the WB (2006, p. 11) has stressed that:

"Inadequate mechanisms to help workers cope with change restrict entrepreneurship and the adaptability of workers. The inadequacies can also increase resistance to reforms that would benefit society as a whole".

8. The low level of leadership behaviours among the managers (FRA): This result was supported by Elasheg (2005, p. 34) when he said:

"The study revealed no changes in the management system, bureaucracy, lack of managerial efficiency and corruption were the direct cause of the lag of the Libyan industrial sector".

As has been said previously, in most developing countries, public institutions are synonymous with poor quality services, corruption and inefficiency because of over-centralisation of power, lack of media freedom to expose scandals, the impunity of well-connected officials and an absence of transparency in public fund management.

9. Low of behaviour of graduates at the LM due to a lack of job satisfaction (FRW): That when employees succeed it is often because they have combination of behavioural competencies and technical skills. This is supported by the WB which wrote in 2007:

    "Behavioural skills, developed from a very early age through late youth, have long-lasting effects on schooling, work, and social outcomes. They incorporate many traits, including motivation, persistence, self-discipline, self-confidence, and the ability to weigh options and come to a decision (decision-making skills). They also include social skills, such as teamwork and the ability to negotiate conflict and to resist peer pressure". (WB, 2007, p, 72)

    In addition to considering the technical skills and experience, it is also necessary to think what behaviours, knowledge and factors will be necessary for success, which may include appreciating social responsibility by developing positive relationships, and sustainability through planning how to achieve work and personal aims, also humanity and ethical considerations through taking personal responsibility to resolve problems and integrity and ethics in judgement about work and organisational issues.

10. Low manpower productivity (FRW): As Shinib (2001, p. 236) stated:

    "There is no awareness among workers and most supervisors about the concept of quality and its impact on productivity at the factory".

    Productivity is one of the most important issues in both developed and developing countries. It is very important to know factors negatively affecting labour productivity. In 2007 Enshassi, et al - in their study about the factors affecting labour productivity in building projects - have said:

    "The analysis of 45 factors considered in a survey indicates that the main factors negatively affecting labour productivity are: material shortage, lack of labour experience, lack of labour surveillance, misunderstandings between labour and superintendent, and drawings and specification alteration during execution" (Enshassi, 2007, p. 245).

11. Inability to work collaboratively within a group, because of a lack of communication skills. (FRW): As discussed elsewhere [Chapter 5], this result has been corroborated by Alarabi and Alakechlan (2009) where they are writing about working relations in Yemen, Guznov (2009) has also stressed the importance of cooperation between teamwork members. Furthermore, Elmograbi (2006, p. 169) stressed suggested:

> *"... The content of HE must be based on an environment of political, social and economic development through training programmes that facilitate improved human relations and effective communication".*

In contrast, in 2006 Glio and Abulifa have talked about a new standard needed to measure the efficiency of Libyan graduates professional skills, which require them to possess efficacy and technical competence.

On the basis of the researcher's personal experience and direct observations during the work in one Libyan university for six years - from 2000 to 2006 -, unfortunately, in Libya there is no standard to measure the learning and skills acquired during the programme to know the abilities of students to successfully enter the LM. Consequently, new national standard is needed.

12. Confusion between the concepts of competition and teamwork among graduates (FRW): As Ettalhi (2002) has noted about Libya's LM:

> *Criteria for promotion and improvement of financial conditions ... often entice new entrants to the labour market more than diligence to acquire the ability to practice the profession. In fact, will remain a tendency for private initiative in the context of the individual nature or family or limited community is the dominant feature of economic activity in our country, and we saw that this did not represent an obstacle to economic development but it needs to reflect and take into account the current policies.*

Tarricone and Luca (2002) have confirmed that: the teamwork help to promote deep learning that occurs through interaction, problem solving, dialogue, cooperation and collaboration. Moreover, it is a "healthy thing" to discuss problems or difficult issues and try to offer constructive help/criticism in trying to resolve these problems. Also, team members should be aware of the importance of everyone's role within the team and the process used by the team to plan and track the timing and quality of required tasks. (See Chapter 2/ Section 2)

In contrast, competition is an inevitable part of relationships among graduates/workers. Whilst competition can helps graduates/workers to learn and grow If they understand the meaning of competition and teamwork correctly, unhealthy levels can be harmful -for work and workers- if competition taken the form of conflict.

Unhealthy competition can lead to social, behavioural and technical problems for graduates/workers. As well as protecting organization from the downsides of conflict, the way organization manage any work can help teach graduates/workers important skills for teamwork, which can help the whole graduates/workers have more work together.

13. The absence of the concepts of career commitment, competition, and excellence in the LLM (FRA): This result has not been stated by any writer or researcher about Libya, but Maeh (1989, p. 5) says:

> *"In discussing employee commitment, the term personal investment comes to mind since it seems to suggest the kind of personal involvement needed in an effective organization. And essentially two things are meant by that term. First, the term implies a certain personal identification which involves loyalty-staying with the organization through thick and thin. Second, the term implies a willingness to put forth one's best efforts in making the organization work".*

About the results (11, 12 and 13) it is possible to argue, that inability to work collaboratively within a group due to a lack of their communication skills may lead to confusion between the concepts of competition and teamwork among workers. Here the lack of clarity of concepts such as career commitment, competition, and excellence among workers.

14. Lack of clarity in the structure of the LM and the ways in which the flow of its work is controlled. (FRA): This result has not been stated by any writer or researcher about Libya.

Obviously, there is a lack of clarity in the structure of the Libyan economy generally and the LM in particular, because of the dependence on oil as the main source of income, this creates a problem in the distribution of employment and the characteristics of the employment between the different sectors. [Where the oil still constitutes the main source of income denominated in foreign currencies, where the income from oil exports is greater than 95% of the total income in the Libyan economy. Even if we focused on non-oil GDP only, will find that the contribution of agriculture and industry together, exceed in the best cases 15% of the non-oil GDP (Abusnina, 2002)].

In the same context, there is no clear perception about the general trends and strategic objectives at any Libyan's institution. As Mirza (2002, p. 8) - in his study about the formation of the identity of the Libyan economy "Strategic options" - has stressed that:

"The issue of restructuring, economic regeneration and a commitment to WTO rules is not enough to create the economic structure can continue in the performance. Also, the continuation of the economic structure and employment structure Existing lead to increased dependence on oil".

15. Poor decision-making capacity of the administrators as well as personnel (CF): This result is consistent with the findings of the a report by the Libyan Council of General Planning [the body responsible for drawing up the plans and policies] - In their report about prospects for development and administrative development- they suggested that there is:

"A need to focus on development of the administrative leaders. On the grounds that they are a tool to develop the administrative apparatus, they are also responsible for implementing decisions and strategies. Therefore, it is necessary to focus on training them and developing their behavioural skills and development of the ethical and behavioural standards of the occupants of leadership positions". (Council of General Planning, 2004, p: 5)

Actually, that the weakness of the ability to make decisions among administrators and workers maybe due to used the highly centralized to public sector management.

By the early 1970s Libyan's resource allocation and personnel administration systems were highly centralized and rule-oriented. In fact, the proliferation of controls actually sowed the seeds of its own malfunctioning. Consequently, the system was failing to control the use of publicly of Libyan financial and human resources yet.

For example: one of the general characteristics of HE is: Highly centralized management of university education in both the Supreme Council of Universities, or at the level of university administration, where the scientific and management faculties cannot even conduct their own affairs, only through these channels, which may delay and hinder the educational process [See Chapter 3].

In contrast, one interviewee (IN.1) has said: Employees do not have an ability to take decisions especially with some cases, which require direct action to resolve it. And this may be due to laws and regulations governing the work, which characterized by highly centralized, or lack of training and experience. [See Chapter 5]

However, Libya is now - since the revolution of 17th February 2011 - in the process of undoing many of the centralized controls and moving towards a more delegation oriented institutional framework. But, movement is slow because of the resistance that is typically encountered in moving from centralized power to decentralized power.

Apart from this, the LM opportunities identified by the expert panel in the DT phase of the study include some elements, which can be discussed as follows:

1. There is large private capital and free to work in the LLM (EF).

2. The laws and regulations prevailing are more effective for convince investors and companies to invest in Libya (PF).

    Evidently, these results (1 and 2) from the DT process are not consistent with the findings of the El-Juhaimi, (2002) - in his study about the identity of the Libyan economy and the task of planning -, where he stressed that:

    With the exception of the oil sector, there is no significant investment although Libya has developed laws that support foreign investment. In addition, the weak Libyan private sector is a result of its weak financial possibilities and laws regulating it, the outcome so far is very modest and apparently it will not help to diversify the national economy.

    In contrast, these results have not agreed with the recommendation made by Al-Maqury (2006, p. 118) when he said:

    "We need to lift administrative constraints and modify legislation that restricts the ability of local capital to move functional and geographical to invest in the labour market in Libya".

3. Low level of use of foreign labour (CF): Although this result was not supported by any Libyan researcher or writer, but it is consistent with the demographic changes (see Table 1-3), where the available statistics suggest that the country has gone through periods of growth and stagnation in the foreign labour population, most recently the data suggest a stagnation.

In contrast, according to El-Ziny (2002) during the period from 1981 to 1985 the employment opportunities for Libyans amounted to 167,200 jobs, while declined opportunities to non-Libyans to reach about 85800 jobs. In fact, the sharp fall in the non-Libyan growth rate maybe due to the education, agriculture and health sectors have decided to dispense with non-Libyan employment where most of them were working.

In the same context, the DT panel surveys resulted in a number of the LM threats being identified. These include following elements:

1. Linking the wages and bonuses with position functional rather than linked to performance (EF).

2. Incentives and rewards are low within different business sectors (EF).

About these results (1 and 2), as discussed elsewhere - Chapter 5 -, the BTI (2010) has noted: ...,although at the beginning of 2007 some public sector salaries were increased by 110% and petroleum sector salaries to 275% ..., civil servants are forced to take second jobs or find other ways of earning money.

This suggests that there have been recent improvements in the incentives offered to employees. However, Ismail and Halim (2008, p. 20) have confirmed:

"The majority of the employees perceive that their pay structures and levels are appropriately allocated based on the pay distribution rules, and this may increase their feelings of distributive justice. As a result, it may lead to increased job commitment within the organization".

In the same context, they said:

"In terms of pay allocation rules, the type, level and/or amount of pay for high performers need to be revised according to current market and organizational changes. This adjustment will help employees to meet their expectations, standard of living and status in society, thus leading them to be more proactive and productive in the workplace". (Ismail and Halim, 2008, p. 20)

The wages and bonuses are linked to functional position rather than to performance. This means that all the workers who work at the same job level are paid the same wages and bonuses. This is because they are subject to the same laws on this, with the exception of oil companies and large industrial projects.

3. Scarcity of research centres dealing with the development of human resources (EF): In Libya until 2002 there were 20 research centres and within these centres there was not centre to deal with the development of human resources, as shown in Appendix 28. There is therefore no Libyan based substantial body of research on human resources issues in the Libyan economy.

4. The imbalance in the distribution of public spending between economic sectors (EF): this result has not been supported by available research on the Libyan economy.

However, this seems clear from the distribution of general budget expenditure where disparities can be observed in the distribution of public expenditure between economic sectors, as Central Bank of Libya (2007) pointed:

In 2007, the size of the overall public budget 322446 million Libyan dinars [Libyan Pound], allocated towards 2.5% to defence sector and 3.3% to the project of the Manmade River, whereas 67.4% to the General People's Committee, taking into account that the General People's Committee is made up of about 30 ministry and general authority.

5. Weakness of labour unions (PF).

6. The absence of laws regulating the relationship between workers and employers (PF).

Immediately after the military coup in 01/09/1969 led by the Gaddafi against King Idris - the king of Libyan Kingdom 1951/1969 -, the role that labour unions, professional syndicates, and other organized interest groups would play in the new society was in doubt. For example: in 4/11/1969 Gaddafi - in his speech in Tripoli - stated: "There will be no labour unions ..., there may be certain labour organizations, but only for ordinary administrative duties" (Libyan TV, 1969). In the same context, since 1972 the strikes have been prohibited (The Revolutionary Command Council, 1972). So, there is no Libyan researcher or writer has been supported the results 5 and 6.

Since 2nd March 1977 the General People's Congress emphasized that political activity was to be solely within the purview of popular congresses - units of local government - after that labour and other associations performed only administrative duties pertaining to the occupations or non-political activities of their members (General People's Congress, 1977).

Although Libyan labour unions did not have a real political role similar to that such unions play in the Western countries, but in the mid-1980s, there were some separate syndicates existed for labour, teachers, engineers, physicians, lawyers, and other professionals.

Consequently, some Libyan researchers have recommended the need to review and amend laws that govern the work of trade unions such as Al-Shakshwky (2006a). What is more, the ILO (2008, p. 10) has confirmed on:

"Making labour law and institutions effective, including in respect of the recognition of the employment relationship, the promotion of good industrial relations and the building of effective labour inspection systems".

In the same way the ILO (2008, p. 11) has stressed that:

"Respecting, promoting and realizing the fundamental principles and rights at work, which are of particular significance. Also, that freedom of association and the effective recognition of the right to collective bargaining are particularly important to enable the attainment of the strategic objectives".

7. The absence of clear strategies to develop the LM (PF): From this result it seems there are not clear strategies in Libya for investment in human resource development, employment creation. As Mirza (2002, p. 3) has supported this result - in his study about the formation of the identity of the Libyan economy "Strategic options" - when he reminded:

"The economic policy-makers have stressed on the need for withdrawal of the state of many economic activities, and give opportunity to the private sector to work. But, the frames that were found were not enough, or not applied correctly".

Under those circumstances, the key aims of such strategies should be to improved working conditions, encouraging geographical mobility and forecasting of future occupational requirements.

8. There is no stability at the Libyan LM institutions (PF): this result has been supported by Mniena (2001) - in her study about the effect of structural and administrative changes on higher education policies in Libya -, Theeb (2009) - in his study about development of a model for implementation of strategic change management in Libyan higher education - and El-Atrash (2002) when he stressed that variety of reasons and factors have contributed to deepening the structural imbalances and instability of the Libyan economy such as the inefficiency of many institutions, companies and public service units, and frequent interventions in their work, also lack of administrative stability due to mergers and cancellation.

In the same context the frequent and incoherent structural and administrative changes have affected adversely the stability of the Libyan LM institutions and their ability to design and implement policies.

In contrast, from the perspective of improving the stability at the LLM institutions, knowing what are the factors causing instability and develop the stability index as a measure of LM activity -because instability drives the economy towards no equilibrium and unemployment-, the independent studies needed to verify all of these factors.

9. Inability of the LM of rapid change in order to follow global changes (CF): In fact, this result has not been supported by any Libyan researcher or writer, but Arpaia and Mourre (2005) have stressed that:

   Among both policy makers and academics, there is a growing consensus on the need to adapt labour market institutions to the changing structure of markets and to the more rapid path of technological progress. Because of the complexity of labour market problems, one-size-fits all approach appear as unrealistic. Nevertheless, as underlined by the selective review of the literature in this paper, some elements are common to most of the successful reform strategies.

   More recently, trends in economic development patterns in both industrialized and developing countries are bringing profound changes in labour markets. Such trends reflect the complex inter-play of a wide range of economic, social and demographic factors alongside developments technology that the successful reform strategies must be taken into account to provide the needed infrastructure for developing of the human resources.

10. There is no diversification of the structure of the Libyan economy in order to ensure sustainability in the development process (CF): This result has agreed with the Salem (2006, p. 199) result's when he pointed:

    "55% of the economic activity of the labour force is concentrated in the area of public services, social, cultural and personal".

    Fundamentally, the diversification of the structure of the Libyan economy holds great potential to increase Libyan's economy resilience and would contribute to achieving and sustaining long term economic growth. As the OECD and United Nations (2010, p. 3) [in their study about: *Economic diversification in Africa: a review of selected countries*] have confirmed that:

    "Broadly-based economies, active in a wide range of sectors, and firmly integrated into their regions, are better able to generate robust growth and sustainable growth. However, the expansion of activities in underdeveloped sectors, or indeed the development of new activities, is a significant challenge and requires a combined effort by African governments, the private sector and the international community".

11. Lack of attention to changes that occur in the work environment (CF): In fact, this result has not been supported by any Libyan researcher or writer, but the WAG (2007, p. 1) has confirmed on:

"The modern economy will increasingly depend on improving and updating individuals' skills so that they can remain and compete in the LM. It is therefore essential that we build a society and workforce that are adaptable, motivated and highly skilled".

In indeed, this seems obvious because the companies and institutions in Libya are still using old methods and techniques in the conduct of work. Where it was noted, the Libyan companies or institutions did not use capital-intensive technology.

12. Increasing influence of social values on the values of work, which limit of the accountability functional. (SCF): As have said above Al-Maqury (2006, p. 119) has confirmed on: "Reduce the impact of negative social factors on the relationship between the outputs of higher education and the labour market such as: the restrictions imposed on women and the negatives caused by tribal affiliation or family". Moreover, the tribal affiliations or family in Libya are adversely affecting the accountability functional and weaken the possibilities of control and evaluation.

To conclude, as discussed elsewhere (In Chapter 6), there were eight factors of strength and nine factors of weakness in the internal environment of HE. On the other hand, there were four opportunities and thirteen threats related to the external environment of HE. In the same context, there were four factors of strength and fifteen factors of weakness in the internal environment of LM. Also, three opportunities and twelve threats related to the external environment of LM.

The administration is more weakness side in the internal environment of HE, because it did not possess any of the possible elements that supported while suffering where it has many weakness factors. On the other hand, the side the most powerful of the internal environment is students, because it do not has any weakness factors and has three strength factors.

Furthermore, there are two aspects are considered the more weakness in the external environment of HE are: the economic side and the political side because they do not have any factors related opportunities and the economic side has four factors related threats while the political side has five factors related threats. Apart from this, the competitive side is most powerful of external environment because it has two factors related to opportunities, and has only one factor related to threats.

In the same way, the internal environment of the LM is very weak because it has just four factors of strength [two factors related to workers and two factors related to the administration] where there are fifteen factors of weakness. So can be say it needs to support for addressing its weaknesses.

Moreover, the external environment of the LM is very weak because it has just three factors of opportunities where there are twelve factors of threats. However, the social side is considered the most weakness because it does not have any factors related opportunities, so it also needs to support for addressing its threats.

Section three: Building LHE and LLM strategies and scenarios

On the whole, an analyst of the performance of the Libyan economy over recent years can observe the emergence of job seekers' problem especially among graduates of HE. This has been illustrated above by many of the points made as a result of the limited literature available, the secondary data discussed above and the outcomes from the primary data collected for this study. This section aims to build and discuss the LHE and LLM strategies.

The graduate employment market in Libya can only be explained due to a mismatch between the outputs of higher education and the true needs of labour market. If appropriate measures are not taken to solve this problem, it will become more acute in the coming years and subsequently the universities will be educational institutions that graduate job seekers where jobs are not available to them. Thus, there should be a link between the higher education outputs with the requirements of the labour market and higher education planning to meet the exact needs of the labour market. In other words, procedures must be set out to link the planning of higher education to the manpower planning (Keibah, 1998).

Hence, the development and implementation of strategies and scenarios for change in the Libyan HE has become an urgent necessity due to the importance of this sector. For this reason and according to results of the initial SWOT matrix - where internal factors (S/W) of LHE intersect with the external factors (O/T) as they are received from the experts (Appendix 23 shows an example of how this matrix should look) - the confrontation SWOT matrix has built for LHE - where the main strengths, weaknesses, opportunities and threats are then used to create a SWOT Confrontation Matrix (as Appendix 25 shows an example of how this matrix should look), which is in turn used to identify the key strategies-.

Based on an analysis of confrontation SWOT matrix four strategies have been built for the Libyan HE. These strategies are intended to address the issues raised in these SWOT analyses and to offer alternative foci in order to throw into sharp relief the pivots of each, as Table 4-6 shows.

Table (4-6)
HE Strategies and strategies pivots

Strategy	*Strategy pivot*	*Strategy*	*Strategy pivots*
Survival strategy: To support strategy development and promote strategic thinking in the LHE sector.	1. Determine the ministry responsible for HE. 2. Increased spending. 3. Provide new technologies. 4. Develop the information system at universities. 5. Develop continuing education programmes for lecturers. 6. To establish small universities.	Reorientation strategy: To address the weaknesses in the LHE.	1. Increase the hours of practical training. 2. Develop criteria for admission of students at the university. 3. Modify of curriculum. 4. Focus on the local community development and scientific research. 5. Increase the rate of integration of technology.
Defensive strategy: To purposes of maintaining or improving education quality.	1. The financial and administrative autonomy of universities. 2. Promote decentralization. 3. Encourage and extend the existing relationship between universities and others. 4. Encourage research oriented towards the business community. 5. Setting up research institutes in universities.	Radical strategy: To address the strengths of the LHE system.	1. Increase the measures and develop action on primary-level research. 2. Increase coordination of the Libyan universities. 3. Provide an education that point towards entrepreneurial, creative and cooperative attitudes.

Source: *Author's Survey.*

Through the data contained in Table 4-6 can discuss the LHE strategies as following:

1. *HE survival strategy*: aimed to support strategy development and promote strategic thinking in the LHE sector through reducing the negative effects of external threats on the HE weaknesses, in addition to a framework setting out strategic direction.

   Therefore, this strategy can be implemented by the development of the human resources and capital assets available at the universities by determining the ministry responsible for HE clearly and providing new technologies for university education. Also, by developing the information system at universities to provide adequate information for decision-makers and curriculum designers; and not to establish small universities that do not have large human resources and capital assets and therefore high running costs relative to their outputs.

Indeed, Theeb (2009, p. 93) emphasized that the basic elements of the modernization of the university administration:

"A successful university administration pursues scientific methods in the conduct of its affairs and a strategic planning approach; the pre-selection of the best academic, administrative and financial policies and trade-offs between access to the most appropriate. These must depend on how the university participates in the planning process, which contributes to the development plans of each interested party or beneficiary (external and internal) of the university's activities or outputs".

In contrast, the Egyptian National Specialized Councils - in its report (1996) on the national board of education and scientific research in Egypt - has confirmed for the following principle for designing of communication appropriate regulation which could be applied to the Libyan case:

Design effective systems of communication between the university administration and faculties affiliated to it, and continuous improvement of laws, instructions and regulations consistent with the evolving goals of universities (National Specialized Councils, 1996).

2. *HE defensive strategy*: Strategies can be developed at all levels of the targeted HE institutions for the purposes of maintaining or improving education quality. This is called reactive strategy as it is oriented to face the Libyan HE threats as by supporting the strengths of the existing system rather than making radical changes.

This strategy can be implemented by reshaping and strengthening the role of the university through the delegation of administrative and financial powers to promote decentralization. Also, encourage and extend the existing relationship between universities and other stakeholders in national development and innovation by encourage research oriented towards the business community.

To be more precise, the development of administrative and financial situations at Libyan universities is an essential part within the development and implementation of the defensive strategy. As Theeb (2009) has emphasized in the case of Libya:

There is no doubt that one of the most important duties of the management of university education is to create the appropriate atmosphere, providing the infrastructure needed to achieve all the objectives of university education and scientific aspects of research and the cultural and social aspects as well as the development of

their resources to serve the community and the environment. To that end we must develop a group of university management systems, plans and methods which contribute to the proper use of the human and material resources and advance the development of scientific, cultural, social and economic contexts we are living in today and look forward to the future.

3. *HE reorientation strategy*: This approach is described as adaptation strategies and this strategic approach tries to take advantage of opportunities to decrease weaknesses in the system. Specifically, this strategy can address the weaknesses in the Libyan HE by bridging the gap between skills required and available through increasing the hours of practical training and modify the aims of curriculum to become more suited to the needs of the LM; focus on the local community development and scientific research.

So, the HE sector should be closely linked with the general education stages and should complement them through in-depth specialized courses/programmes and scientific research to ensure the development of the society in various fields (El-Hawat, 1996, p. 184).

4. *HE Radical strategy*: this strategy intends to benefit from the opportunities by exploiting strengths in the system, this strategy must be improving the coordination and governance of HE policies to support development and innovation through increasing the measures and develop action on primary-level research.

The number of HE institutions has increased significantly, but the focus of the expansion has been on the quantitative aspects rather than the qualitative ones. Gannous and Aljoroushi (2004, p. 4) - in their report on private universities and high colleges in the eastern region of Libya - have said about this context:

"The quantitative increase in higher education institutions at the expense of quality, which may have so many negative damage consequences namely: graduates of lower attainment level, who do not qualify for any actions of positive impact. Nevertheless, they are employment seekers and will earn salary for their work. As a consequence, the society will suffer two defeats: spending on weak education and recruitment of large number of graduates, who se low production does not fulfil society's ambitious plans".

The qualitative scenario is a process of analyzing possible future events by considering alternative possible qualitative outcomes. So, it presents consciously several alternative future qualitative developments. In contrast to a quantitative scenario, which try to show a quantitative

picture of the future. In fact, the qualitative scenario is not using extrapolation of the past, but it try to consider possible qualitative developments because the qualitative scenario does not expect past quantitative picture to be still valid in the future.

Based on the evidence collected in the DT and examining the HE factors related to the internal and external environment, also in light of all that has been said about the strategies for LHE, three scenarios have been built for LHE for development the human and physical resources, as shown in the points below. As will be seen in each case there are important roles for the Universities and Ministry of Education.

A. *The optimistic scenario (1) of the LHE*: In this scenario, it is possible to the human and physical resources available at the universities - with assumption neutralize the effect of the external environment - by taking advantage of the actions and events. Where it is possible to take advantage of strengths elements (S) as actions in order to minimize the impact of elements weaknesses (W), because they the intended changes in internal phenomena of the scenario and therefore they are subject to the decision or perceptions - the researcher- scenario writer. These actions (S) are:

1. Ability of students to absorb information and turn it into usable knowledge.

2. Ability to adapt and learn quickly and possess the skills necessary to do it.

3. Ability to work collaboratively within a group.

4. Interest in foreign languages.

5. There are multiple domains at the Libyan universities to meet the LM needs.

6. There are criteria for the selection of lecturers for the work at universities.

7. The actual study during the academic year is sufficient (between 22 and 25 weeks).

8. There are enough conferences and scientific symposia.

In contrast, it is possible to take advantage of opportunities (O) as events in order to minimize the impact of threats (T). It is important to not forget that the events are proceedings of the unintended and cannot be controlled during the time period covered by the scenario - the event is foreign variable of the process of building scenarios - and therefore they are not subject to the decision or perceptions scenario writer. These events (O) are:

1. There are specific criteria for measuring the quality of universities.
2. Harmony of the geographical distribution of universities.

3. High cultural level and low rate of illiteracy among parents.

4. Decline in family size.

Fundamentally, human resources development encompasses an array of activities that enhances the ability of all human beings to reach their highest potential; attention to this human factor has always been a key element in its development agenda, as the former Secretary-General of UN Dag Hammarskjöld stated in the mid-1990s:

"Fundamentally man is the key to all problems, not money. Funds are valuable only when used by trained, experienced, and devoted men and women. Such people, on the other hand, can work miracles even with small resources and draw wealth out of a barren land." (UN, 1995, p. 3)

Precisely, this scenario is based to bridging the gap between skills required and available through an attempt reshape and strengthens the role of the university. So, the HE institutions must rethink in their policy and procedures to improve the quality of output of HE by try to change the way that HE institutions do educational process including redefining universities structures and put more power in the hands of the universities. In addition they can train their faculty members to understand the most effective methods to interact with students and to be aware of the best practices of the most successful universities.

The American Society for Training and Development (ASTD, 2009, p.4) "defines a skills gap as a significant gap between an organization's current capabilities and the skills it needs to achieve its goals. It is the point at which an organization can no longer grow or remain competitive because it cannot fill critical jobs with employees who have the right knowledge, skills, and abilities."

Consequently, the management systems, curricula and teaching methods, and funding etc are no longer considered to be adequate to guarantee that Libyan universities can keep up with development in education, research and innovation. Innovation and modernisation are also considered to be necessary with regard to the roles of a university, in addition to its social, cultural and political roles. As Biesta, et al (2009, p. 249) wrote about European universities, though the principles apply generally:

"Today's knowledge-intensive economies and societies are regarded as in need of up-to-date policies on equal opportunities, participation and access, and of strategies for knowledge-driven local and regional economic, social and cultural development. In

addition to this and based on a concern about European citizenship, democratic involvement and social cohesion, there is a requirement for the development of curricula, extra-curricular activities and participation structures that offer students opportunities to develop civic competencies".

In this scenario, can be development of human resources and physical resources available at the universities by take advantage of the actions and events. So, the Libyan universities change the proportion of their resources to fully invest in the development of their human resources and physical resources. Also the Ministry of Education must contribute a significant proportion because of limited financial resources of the universities. It is essential therefore to improve and develop those human resources and physical resources available at the universities through next four main pivots:

I.   Increased spending on the Libyan HE sector.

II.   Develop the information technology systems.

III.   Develop continuing professional development programmes for lecturers.

IV.   The adoption of programmes and mechanisms of academic accreditation and quality systems in the activation of universities and keep up with global changes to the requirements of quality in the educational process.

In the same context, in this scenario the relationships between the elements could take the trends that shown in the Figure 2-6.
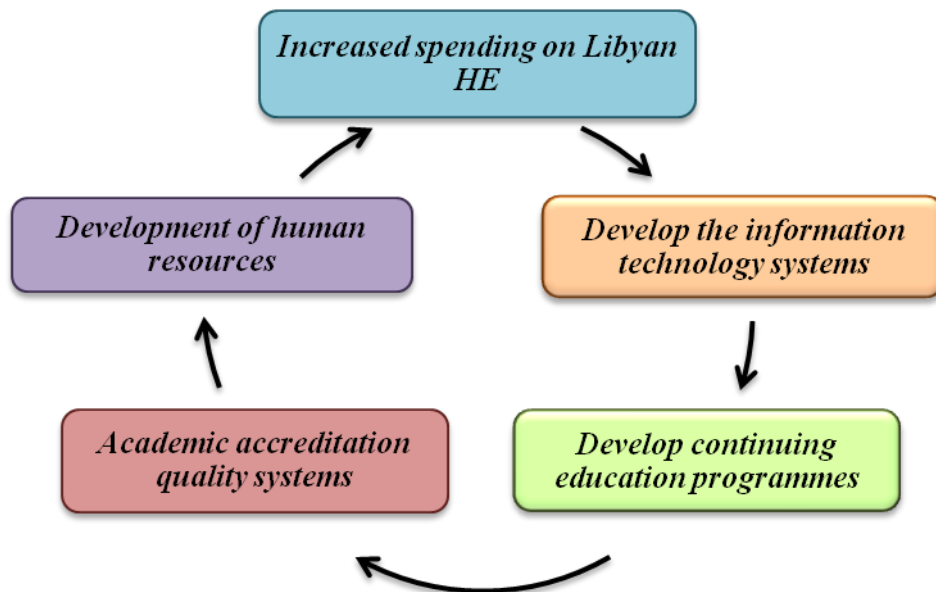
Figure 2-6: The relationships between the elements in Scenario 1

Through an examination of the relationships between the elements in Scenario 1 as shown in the Figure 2-6, can be note: The relationship between the elements of the scenario is a complementary relationship. This means, that the increased spending on Libyan HE will lead to the development of the information technology systems and thus to the development continuing professional development (CPD) programmes [CPD programme refers to in-employment professional training and education]. Through the adoption of such programmes, as well as mechanisms of academic accreditation and quality systems in the operation of universities this will help them keep up with global changes to the requirements of quality in the educational process. All this leads to the development of human resource and capital in the sector and also increased spending on LHE due to changes that will occur in the skills. However, the evidence from this research suggests that this will also lead to increased productivity, effectiveness and efficacy in regard to the links to the LM and impacts on the wider economy.

This scenario may come under pressure from events (O) that cannot be controlled during the time period covered by the scenario. So, the development process must be continuous. Therefore, this scenario could lead to some views, such as:

I. Increase the hours of practical training at the universities in order to acquire the mental and behavioural skills that would enable students to continue their study.

II. Increase the interest in foreign languages in order to help students to properly use foreign languages in all areas, in particular with regard to practical language usage to communicate with the world.

III. Increase disciplines at the Libyan universities such as engineering, medicine and IT, to address the human resources that LM needs.

IV. Increased ability of students/graduates to adapt and learn quickly and possess the skills necessary to do it, in particular with regard to predominance of the traditional character of curricula and educational programmes and the focus on conservation and memorization in Libyan universities, without much attention to building skills.

V. Develop the criteria of selection of lecturers for work at universities due to professional inability to recruit the modern educational progress in curriculum and teaching methods.

VI. Develop the criteria for measuring the universities quality in order to develop elements of the educational process, in particular with regard to evaluation standards and developing educational programmes at universities.

VII. Increase the rate of linking technical education with university education in particular with regard to increase the number of laboratories and updating of the university libraries.

Moreover, the basic to the UN perspectives is the need for an integrated approach. An integrated system supports a comprehensive inclusive policy by providing sustained and equal opportunities to all. This allows societal acquisition of knowledge, skills and competencies, society as a whole benefits. This approach puts primary emphasis on the enabling conditions that must exist to support human resources development in any country. (UN, 1995, p. 4)

B. *The possible scenario (2) of the LHE:* The scenario 1 was more optimistic scenario where the development of human and physical resources available at the universities can be achieved. In this scenario, a balanced process can be visualized for the development of human and physical resources available at the universities through bridging the gap between skills required and available and attempts to reshape and strengthens the role of the university by taking advantage of the strengths and opportunities to address the deficiencies caused by weaknesses and threats.

The scenario writer will therefore be able to take advantage of the strengths elements (S) in order to minimize the impact of weaknesses elements (W) on the actions of this scenario. As shown in following points:

1. Advantage of the ability of students to absorb information and turn it into usable knowledge (S) and interest in foreign languages (S) in order to minimize the impact of the weakness of low levels of practical training during the undergraduate (W).

Over time, the Libyan HE sector has proved unable to effectively deliver the skills required and have, hidden their inability by strict adherence to rules and regulations. This sense of incompetence is based on fact; as long as the perception exists it becomes difficult for the Libyan HE sector to be effective in bridging the gap between skills required and those available. In fact, responding to skills shortages with short-term fixes is not enough. For Libyan HE institutions and Libyan policy makers, the more critical challenge is to address skills gaps for developing a highly skilled workforce in the long-term.

2. The ability to adapt and learn quickly and possess the skills necessary (S) can help to minimize the impact on the focus amongst most of the lecturers in the educational aspect of their activities the expense of the advancement of community development and scientific research (W). the Libyan universities should be aware that innovation is an important component of economic development and productivity growth, the OECD (2009) has emphasized that:

> *Indeed, governments are aware that one of the ways they can begin to pull themselves out of the current financial and economic crisis is to invest in innovation. Several OECD countries have followed such a strategy in the past and come out ahead. Such investments in regional innovation systems and technology-transfer mechanisms can facilitate the transition to a knowledge economy and create job.*

3. To minimize the impact of lack of correlation between technical knowledge and learning and a failure to develop thinking in general and scientific thinking in particular (W), it may be possible to take advantage of identified ability to work collaboratively within a group (S) during the actual study in the academic year (S). As discussed elsewhere (in the Chapter 5), the LHE outputs are not able to meet changing LM needs. So the employability skills must be addressed in schools and in HE. As the Education Development International (EDI) (2010, p.11) - in its survey about Ready to grow: business priorities for education and skills - recounted:

> *"Employability also emerges as by far the single most important area in higher education. In all, four out of five employers (81%) want to see the government working with universities to ensure all graduates develop employability skills. Close to half of all respondents (42%) want action to raise the numbers and quality of science, technology, engineering and maths (STEM) graduates, with the issue particularly pressing among employers in sectors where STEM skills are directly applied on a day-to-day basis. Two thirds of employers in manufacturing (65%), science/hi-tech/IT (66%), and energy and water (67%) for example are calling on the government to act".*

4. The advantage of the multiple domains at university (S) may minimize the impact of the imbalance in the distribution of students between the scientific departments at universities (W). Beyond this, the Libyan universities have to invest significant resources in order to provide good educational to their students through and offer a variety of information and resources, encourage the exchange of ideas, and reward

students for acquire new skills and expand their choices. In return, make Libyan universities more accountable to students than ever before and innovation the key ingredient for competitiveness in most Libyan universities.

5. It may be possible to minimize the impact of the absence of continuing education programmes for lecturers, and the inability of lecturers in innovation and continuous learning (W) through development of the criteria of selection of lecturers for the work at universities (S).

Since the 1980s, the concept of the national innovation system (NIS) has been gaining popularity as a core conceptual framework for analyzing technological change, which is considered to be an indispensable foundation of the long-term economic development of a nation (Intarakumnerd, et al. 2002). Even though, in Libya there was not national innovation system (NIS) during all these years, so Libya - including Libyan universities - needs to build such a system to support the development and innovation.

6. The panel identified the lack of good information system at universities (W). It may be possible to advantage of the opportunities of conferences and scientific symposia (S) in order to provide adequate information for decision-makers and curriculum designers.

El-Hawat (2003) - in his study, which focused on harmonization between the policies of sciences-technology, and the policies of social-economic -, has discussed and commented on the lack of interrelationship between the HE system and economic activities:

The most important challenge facing Libya's system of education is its ability to adapt to the requirements of economic development in the relationship between the educational plan and the economy. For this reason, Libya has tried during the past few years to link higher education policies with those of development, the economy and the society. Policy makers have tried at least theoretically and render it part of the general development plan. Nevertheless, despite this theoretical commitment, there is still disparity in the points of views of the educational planner and the economic planner.

In contrast, there are two events (opportunities) related to competitive factors (CF), where can advantage of the specific criteria for measuring the quality of universities to minimize the impact of propagation of the establishment of small universities, which do not have human resources and capital assets. Also, can be advantage of the harmony of the

geographical distribution of universities to minimize the impact of lack of interest the cultural diversity between regions.

In the same context, there are two events (opportunities) related to social and cultural factors (SCF), high cultural level and low rate of illiteracy among parents and decline in family size, can be advantage of them to minimize the impact of absence of the concepts of career commitment, competition, and excellence in the Libyan society, and lack of attention of impact of the customs and traditions on the educational system.

Though the events are proceedings of the unintended cannot be controlled during the time period covered by the scenario, nevertheless, can be advantage of them to minimize the impact of threats. So, the Figure 3-6 shows nature of the relationship between actions and events in this scenario:

Figure 3-6: The relationship between actions and events in scenario 2

Through an examination of the nature of the relationship between actions and events in this scenario, as the Figure 3-6 shown that the internal environment composed of actions (strengths /weaknesses) whereas the external environment consists of events (opportunities /threats). More specifically, the actions are the intended changes in internal factors of the scenario therefore can be controlled them, which leads to take advantage of actions (S) in order to minimize the impact of actions (W).

The events are foreign factors of the process of building scenarios, which therefore cannot be controlled during the time period covered by the scenario. In this case the scenario is under the pressure of events (T) such pressure could be lead to an imbalance in the scenario results. But this scenario can take advantage of the events (O) to make

equilibrium process among all external factors in order to minimize the impact of events (T) on the actions (S). It must be noted that if there are not obstacles, this would lead to some of direct views, such as:

I. Develop precise criteria to the acceptance of students at Libyan universities in particular with regard to the providing educational opportunities for all and assist students to choose the specialization in order to meet the needs of the society and achieve sustainable human development.

II. Minimize the impact of imbalance in the distribution of students between the scientific departments at university through develop the practical training programs during the undergraduate by focus on development of scientific thinking, in particular with regard to the helping students to achieve growth in their integrated mental, psychological, emotional and social development.

III. Develop continuing education programmes for lecturers to increase the ability of lecturers in innovation, continuous learning, regulation, skills of creation and methods of thinking, in particular with regard to create relationship and access to knowledge in multiple ways within the framework of curriculum.

IV. Develop information system at universities to provision of sufficient information for decision-makers and curriculum designers.

What is more, after the revolution of 17th February 2011 reshaping role of the university is a timely, thorough, and original interrogation of academic practices to provide critique of the Gaddafi's era because in the past four decades, the role of the university has been under Gaddafi's narrow intellectual foundations. Here, Libyan HE can be based on the experience of economically developed countries for improving the coordination of HE policies to support development and innovation for economic development. But this depends on the volumes of state budget financing available for this purpose, and the investment in corresponding structural-legal forms in the sphere of science and the creation of a favourable legislative field.

Finally, the technology is a major factor contributing to the development of the new students skills in order to bridging the gap between skills required and available in this rapidly changing educational environment through encouraging competition and opening the HE institutions up to new educational providers. Also, the Libyan universities must take a range of measures in order to spur and diffusion of innovations.

C. _The pessimistic scenario (3) of the LHE:_ Scenario 1 has the advantage of strengths to impact on the weaknesses - with assumption neutralizing the effect of the external environment -; and scenario 2 has the advantage of strengths to impact on the weaknesses and advantages of opportunities to impact on the threats.

In this scenario the effect of the external environment cannot be neutralized. In fact, Libyan universities today do not have the cash reserves needed to generate new ideas and technologies in their own research laboratories. Under those circumstances, this scenario has some obstacles that come from events (threats), which cannot be controlled during the time period covered by the scenario. This would lead to views, such as:

I. The low level of spending on HE and imbalance in the salaries of employees within the University.

II. There are not sufficient laboratories, and the libraries do not contain the modern periodicals and books in particular with regard to the global changes and their implications on all dimensions of life including the life of the student as an individual and the life of the society as a whole.

III. Weakness of spending on research and studies in particular with regard to the change the concept of investment to be based on the investment of human capital to ensure the best return and increase the value of science and innovation.

IV. The absence of administrative and organizational stability of universities due to absence of a board is responsible for HE on an ongoing basis.

V. There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives in the absence of comprehensive philosophy are clear principles and requirements, targets and policies, in particular with regard to link the curriculum content with the environment and the Libyan society and the technology surrounding the student.

VI. Weakness of integration and coordination between HE planning and economy planning in particular with regard to the complementarily between the study courses and the LM.

Clearly, the management systems, curricula and teaching methods, and funding etc are no longer considered to be adequate to guarantee that Libyan universities can keep up with development in education, research and innovation. Innovation and modernisation are also considered to be necessary with regard to the roles of a university, in addition to its social,

cultural and political roles. As Biesta, et al (2009, p. 249) wrote about European universities, though the principles apply generally:

> *"Today's knowledge-intensive economies and societies are regarded as in need of up-to-date policies on equal opportunities, participation and access, and of strategies for knowledge-driven local and regional economic, social and cultural development. In addition to this and based on a concern about European citizenship, democratic involvement and social cohesion, there is a requirement for the development of curricula, extra-curricular activities and participation structures that offer students opportunities to develop civic competencies".*

In contrast, it is possible to note that the relationship among the elements - in this scenario - is under continuous pressure due to nature of the relationship between the actions and events, as Figure (4-6) shows:
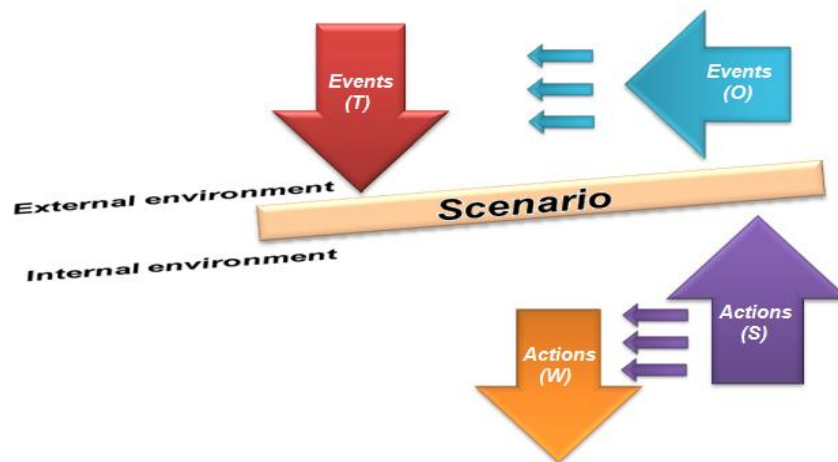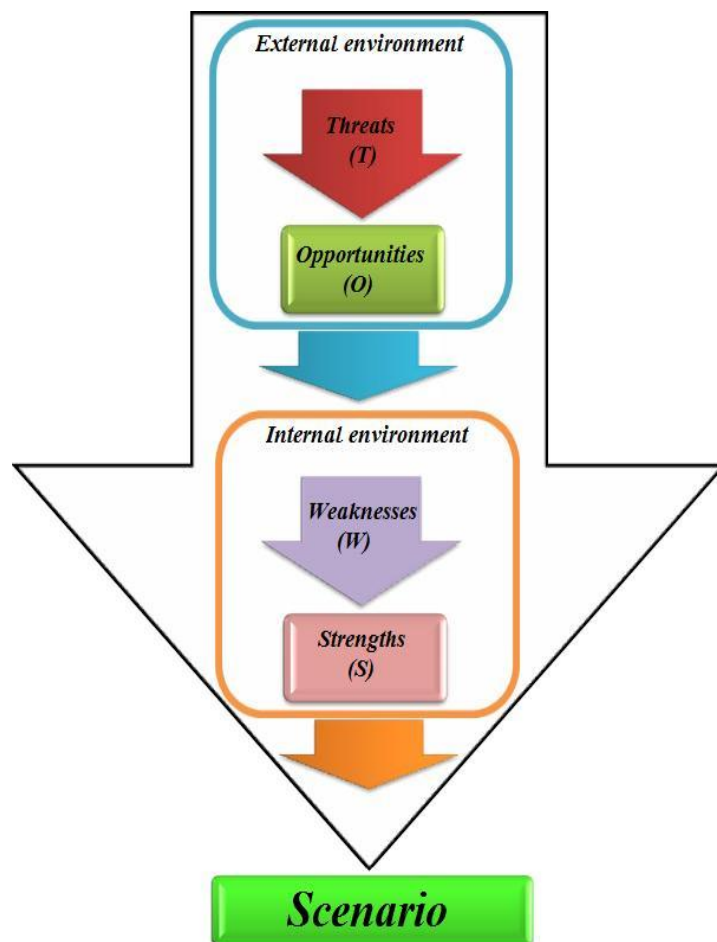

Figure 4-6: The relationships between the actions and events in scenario 3

Through an examination of the nature of the relationship between actions and events in this scenario as Figure 4-6 shows, could be noted:

    I.   The external environment - threats (T) /opportunities (O) - had been under pressure from the internal environment - weaknesses (W) /strengths (S) -, and;

    II.   threats (T) had constantly been under pressure opportunities (O), and;

    III.   weaknesses (W) had constantly been under pressure strengths (S), and;

    IV.   Both external environment (T/O) and events (W/S) impact on scenario.

Actually, this does not lead to the development of human resources and physical resources due to the weakness of the HE's institutions' ability to apprehend scientific progress - the growth and development of science, knowledge and informatics - and transfer it in the form of attitudes and behaviour to their students.

The Libyan universities are still mostly traditional institutions while the general educational and social systems are modern, and look forward to the era of modernity and inclusive change. So, this scenario does not lead to the encouragement and extension of the existing relationship between universities and other stakeholders in the development and innovation, and thus to do not encourage research oriented towards the business community through setting up research institutes in universities based on market principles.

Moreover, all this may not lead to reshape and strengthen the role of the university, because the Libyan universities did not work in collaboration with the many agencies and donors that are providing financial and other support for community development in Libya, and what apply to the Libyan universities applies the same way to all Libyan educational institutions.

In the same context, the development and implementing of strategies for change in the LLM has become an urgent necessity due to the importance of these sectors. For this reason and according to results of the LM initial SWOT matrix the confrontation SWOT matrix has been built for the LLM and based on an analysis of the LM confrontation SWOT matrix - as shown in the Appendix 26: Confrontation SWOT Matrix for LM - four strategies have been built for the LLM. These strategies are intended to address the issues raised in the SWOT analyses and to offer alternative foci in order to throw into sharp relief the benefits and consequences of each. The Table 5-6 show the LM strategies.

Table (5-6)

LM Strategies and strategies pivots

Strategy	Strategy pivots	Strategy	Strategy pivots
Survival strategy: To reduce negative effects of external threats on LLM weaknesses.	1. Develop specific criteria for measuring the performance. 2. Increase the wages, incentives and rewards. 3. Balance in the distribution of public spending. 4. Governing the relationship between workers and employers. 5. Governing the ways of work.	Reorientation strategy: To address the weaknesses in the LLM.	1. Develop the Libyan manpower skills. 2. Development the institutional environment. 3. Development level of leadership behaviours.
Defensive strategy: To face threats to the LLM by focusing on its existing strengths.	1. Develop human relations and reduce the impact of social values. 2. Make LM institutions more stable. 3. Increase of manpower productivity. 4. Give priority for conducting leading research in future. 5. Improvements in technological development in all economic sectors.	Radical strategy: Benefit from opportunities exploiting strengths in the LLM.	1. Develop flexible policies for information technology. 2. Develop the laws and regulations. 3. Simplification of bureaucratic procedures.

__Source__: Author's Survey.

Through the data contained in Table 5-6 the LLM strategies can be discussed as following:

1. *LM survival strategy*: aimed to reduce negative effects of external threats on LLM weaknesses. This strategy can be implemented by diversification of the structure of the Libyan economy in order to ensure sustainability in the development process through balance in the distribution of public spending between economic sectors. Also, establish laws governing the ways of work and the relationship between workers and employers.

But, it is important not to forget - as Rouble (2010, p. 6) said about Yukon Province in Canada - there are new challenges that will emerge in addressing labour market needs. Changing demographics, new technologies, and the emergence of new industries are among these challenges. Collective efforts will be needed in attracting, retaining and training workers for the decades to come. Key to these efforts is the need to provide timely

and relevant information. All participants in the economy, business, government, nongovernmental organisations, and especially those seeking employment will become increasingly dependent on information to make informed decisions.

2. *LM defensive strategy*: As in the case of the HE strategy, this is oriented to face threats to the Libyan LM by focusing on its existing strengths. This strategy can be implemented by upgraded domestic capabilities to enable all economic sectors to compete through develop human relations within the LM; and improvements in technological development in all economic sectors -such as management, marketing, quality, skills development, etc-, to increasing of manpower productivity.

"Libya is reviewing its institutions and structures to meet the requirements of the 21st century, as in a number of other developing countries. To ensure the capacity of Libya to achieve the desired objectives, in particular, these audits will serve Libya in their quest to become a modern society with an advanced economy. To achieve this, the Libyan government has worked to develop a number of national strategies in different areas, of great importance to society, such as: a basic education strategy; a strategy of technical education and vocational training, and strategic development of the institutions (the civil service and others)" (Theeb, 2009, p. 1).

3. *LM reorientation strategy*: This strategy can address the weaknesses in the Libyan LM by strongly supporting public and private actions to strengthen and development the human resources through developing the Libyan manpower skills to replace foreign labour and institutional environment within the public sector.

The country still depends heavily on foreign skills in the implementation of many development projects. Related to this context, Abusnina (1996, p. 6) examined the development issue in Libya and pointed out that:

"Until the mid 1990s Libya was placed among the medium human development countries, which include most of the Arab countries… the national manpower did not contribute a large share in the implementation of strategic projects, which was established in country. The lack of Libyan manpower contribution in the establishment of these projects was a missed opportunity for many Libyan workers to acquire the necessary skills and expertise when many giant foreign companies implemented these projects. This led to strengthening the policy of dependence on foreign workers to achieve socio-economic development".

4. *LM Radical strategy*: this strategy intends to benefit from opportunities exploiting strengths in the Libyan LM. To achieve this strategy, must promote and stimulate use of and demand for technological services from the existing infrastructure on the part of LM institutions through develop the laws and regulations to be more effective for convince investors and companies to invest in Libya. On the other hand, simplification of bureaucratic procedures involved in starting up new businesses with a legal, administrative and financial framework that facilitates innovative activity.

"Economists agree on the crucial role of the macro-economic context for the speed of labour market integration of a cohort of graduates and the duration of the transition period. Yet, they do not always agree on the role played by other factors such as the wage determination system, the stringency of employment protection legislation, the links between the education system and the labour market, and labour market policy (Karamessini, 2010, p. 4)". So, adopting this strategy, the Libyan LM institutions must work to develop short-term strategy against unemployment which obstructs access to permanent employment through last points above.

Based on the evidence collected in the DT and through the data contained in Table 5-6, and in light of all that has been said about the strategies for LLM, three scenarios have been built for LLM, as shown in the points below. As will be seen in each case there are important roles for the Libyan LM institutions.

A. *The optimistic scenario (4) of the LLM:* In this scenario it is possible to take advantage of actions "strengths" and events "opportunities" - with assumption that this neutralizes the effect of the weaknesses and threats - for diversification of the structure of the Libyan economy and strongly support both public and private sectors in order to ensure sustainability in the development process through strengthen and develop the human resources. These actions (S) are:

1. High level of human relations within the LM.

2. High cultural level of the workforce.

3. There is specialization and division of labour within the economic sectors.

4. Understanding delegation of authority by the director to his subordinate.

What is more, skills development also means enabling people of working age to acquire skills which are needed by economic sectors currently and in the future. On the other hand, Smith (1988, p. 200) has remarked: "that unemployment in a more diverse economy is more stable over business cycles than in a less diverse economy. Thus, it can be

concluded that, in general, economic diversification in small economies should lead to greater cyclical stability". With regard to relationships between the elements in this scenario could take the trends that shown in the Figure 5-6.
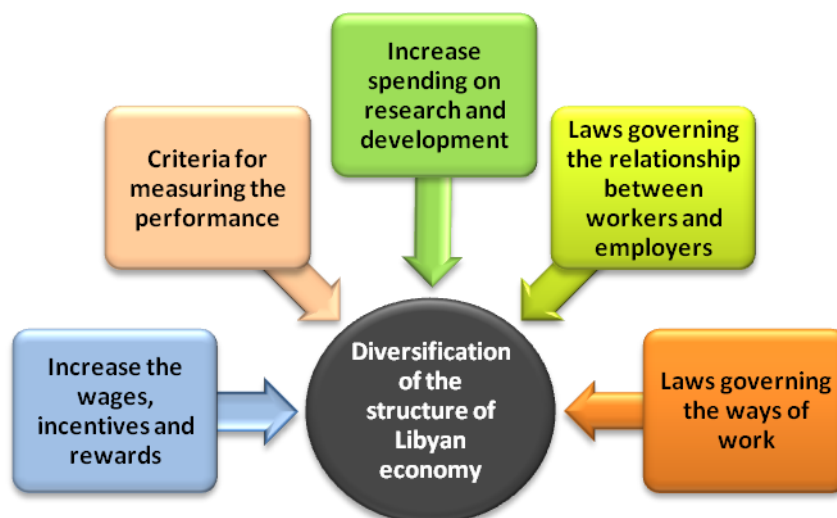
Figure 5-6: The relationships between the elements in scenario 4

Through an examination of the relationships between the elements in Scenario 4 as shown in Figure 5-6, there is a simple relationship between those elements. Beyond this, the availability of all these elements will lead to diversification of the structure of the Libyan economy in order to ensure sustainability in the development process, where it is possible to take advantage of events (O) in order to support actions (S). These events (O) are:

1. There is large private capital and free to work in the Libyan LM.

2. The laws and regulations prevailing are more effective for convince investors and companies to invest in Libya.

3. Low level of use of foreign labour.

Hence, this scenario consists of six main views for diversification of the structure of the Libyan economy and strongly supported public and private sectors in order to ensure sustainability through develop human resources:

I. Establish laws governing the ways of working for the development of programmes and the coordination of work within the institutions in order to improve the quality of operational performance, in particular with regard to increasing the manpower productivity.

II. Establish laws governing the relationship between workers and employers in particular with regard to develop the leadership behaviours among the managers.

III. Increase spending on research and development in the public sector through employment of modern techniques in the management and development of the Libyan LM institutions. In particular this increase should give regard to stimulating private capitals to increase the rate of investment in the Libya LM.

IV. Develop specific criteria for measuring the performance of workers or companies and factories in order to develop the Libyan labour force skills to replace foreign labour, in particular with regard to the training courses and programmes of continuing education.

V. Increase the wages, incentives and rewards and linking them with performance rather than functional position. In particular this should give due regard to the absence of diversity and differences between the LM institutions, where currently all LLM institutions use the same system for wages, incentives and rewards.

VI. Develop the laws and regulations prevailing to become more effective for convincing investors and companies to invest in Libya. In particular this should benefit from the experiences of other countries, especially those that have achieved tangible success in human development, while preserving the national identity and culture.

Naturally, transformation from centrally planned to market economies requires economic and social restructuring, where the diversification of the economic structure and sectoral restructuring, may contribute to employment, innovation, that the principal disadvantage faced by the economy is the shortage of resources.

"One of the most important lessons learned in the implementation of reforms in the developing world is that public consultation with various private sector stakeholders is one of the prerequisites for successful reforms of the business environment. There are a number of different mechanisms to bring private sector interests into the policy process. Some of them have proven to be more successful and some have not worked so well. In the region of Southeast Europe the experience shows that broad initiatives such as the creation of permanent forums between business and governments have not had a long life. However, when there is a very specific business environment reform such as the introduction of legislation that targets and can greatly affect a very specific industry, it is much easier to obtain private sector participation in the process.

This is in stark contrast to the broad coalition, broad issue groups that tend to collapse under free rider and incentive problems" (Vignjevic, 2005, p. 3).

Moreover, that successful diversification requires careful analysis of the market, for example through a feasibility study. After identifying the need for change, focused strategy for diversified development should be introduced. Deakins and Freel (2003) emphasise that a successful diversification strategy requires both planning and the education and training of entrepreneurs to foster needed change.

It is important to take into account the skill needs of economic sectors, where the pressures of unemployment and skill shortages are such that immediate action is required. Here the regulatory transparency in the economic sectors should be improved by increasing participation of these sectors in the process of creating new laws and regulations to impact on systemic reform. Any long-term impact on institutional capacity would be to get large numbers of people skilled and productive as quickly as possible.

B. *The possible scenario (5) of the LLM:* In this scenario, can be stimulate of the diversification of the economic structure and sectoral restructuring by take advantage of the strengths and opportunities to address the deficiencies caused by weaknesses and threats. To be more precise, here can be take advantage of strengths (S) in order to minimize the impact of weaknesses (W) on the actions of this scenario. As show in following points:

I. Advantage of the high level of human relations within the LM (S) in order to minimize the impact of the low level of behaviour of graduates at the LM due to lack of their job satisfaction (W); and also inability to work collaboratively within a group, because of lack of their communication skills (W). Where Dunbar (2010, p. 4) said: the term 'Skills development' indicates a shift in emphasis away from supply-led systems which dictate the mode of learning and the pathways to be followed.

Instead, "it places emphasis on the acquisition of skills in demand in the workplace, be these generic or technically specific, regardless of where, when or how they are acquired. This change of emphasis alters the relationship between training provision and the labour market, allowing for a greater range of types of learning environment, flexibility of content and engagement by stakeholders (Dunbar, 2010, p. 4)".

Additionally, accelerating skill-building and fostering entrepreneurship is very important to building the local economic capacity, which could be tapped to motivate local entrepreneurs. As the UN (2004), - in its Report about unleashing entrepreneurship to make business work for the poor - stressed that:

> *More investment is needed in local business-related skills, including foreign languages, information technology skills and basic finance, economics and project management. Public-private partnerships that combine more practical training on the job with basic education could be the basis for viable apprenticeship models. Also effective are recent efforts to conduct more leadership training by pre-eminent educational and leadership institutions for top decision makers from developing countries. Of particular importance is building local training capacity by "teaching the teachers", the only way to meet the large demand for local (and developing country to developing country) training.*

II. To minimize the impact of the inability to know how to deal with information technology and computers, and applied at the workplace (W), also a lack of knowledge of digital information systems (W), it may be possible to take advantage of the high cultural level - education level - of the workforce (S). The relevance of training as part of a set of technology transfer actions within the labour relations of the Libyan LM is today an indisputable fact. There are many local, regional and international organizations that have confirmed the relevance of training in this context. For example as the ILO (2000) - writing about the Latin American and the Caribbean region - has confirmed that:

> *The most innovative experiences at the regional level on the subject of training conceive the latter as part of a set of technology transfer actions, both of labour and of production, adaptation and innovation. This marks a turning point, both conceptual and methodological, in the action of institutions, training centres and technological education units.*

Of course, technology is the foundation for national economic recovery due to the fact that it encompasses all issues of production. As the ILO (2000) has emphasized:

> *Technology itself has exceeded today the purely technical dimensions of experimental development or laboratory research; it encompasses issues of production engineering, quality, management, marketing, technical assistance, purchases, sales, inter alia, which transform it into a fundamental vector of expression of the culture of societies.*

III. In order to tackle the weakness of the institutional environment within the public sector (W), it may be possible to take advantage of the specialization and division of labour

within the economic sectors (S) in order to provide continuous assessment and follow-up in order to achieve human development (W).

IV.   It may be possible to minimize the impact of the low level of leadership behaviours among the managers (W), through the advantage of the understanding the delegation of authority by the director to his subordinate (S).

The points 3 and 4 mean that the Libyan government should be developing flexible policies for information technology, which leads to a rise in the level of delegation of authority to include all levels of administration.

In that case, the methods of communication will be better, where the level of delegation of authority to include all levels of administrative lead to increase specialization and division of labour within the economic sectors.

In the same context, ICT is a dynamic driver for sustainable economic growth in Libya or other countries As the World Economic Forum (2009, p. 7) stated:

> *"The ICT sector is an ever-evolving constellation of players who interact to ensure balance, collaboration, interdependency and sustainability. Because the ICT sector thrives on rapid innovation and the introduction of new technologies, it encourages a collaborative spirit for all other sectors with which it interacts".*

In other words, promoting and stimulating use of and demand for technological services is becoming increasingly important in a fast moving LM by reappraising from the point of view of its contribution to industrialization and its importance for human development and economic stability in Libya. In contrast, technological services themselves have become a form of industry as other services because they have become increasingly responsive to market forces and increasingly integrated in the network of services such as marketing, sales and transportation etc.

In contrast to the response to the actions in this scenario planning exercise, the events cannot be controlled but may be taken advantage of in order to minimize the impact on each other. Thereon, there are three events (O) that may be applied to minimize the impact of events (T) on this scenario:

1.   There is large private capital and free to work in the Libyan LM (O) to impact on: Incentives and rewards are low within different business sectors; and the imbalance in the distribution of public spending between economic sectors (T).

2. The laws and regulations prevailing are more effective for convince investors and companies to invest in Libya (O) to impact on: weakness of labour unions, and absence of laws regulating the relationship between workers and employers, and absence of clear strategies to develop the LM, and instability at the LM institutions (T).

3. The low level of use of foreign labour (O) to impact on: linking the wages and bonuses with position functional rather than linked to performance (T).

In the same context, the Figure 6-6 shows nature of the relationship between actions (S-W) and events (O-T) in this scenario:
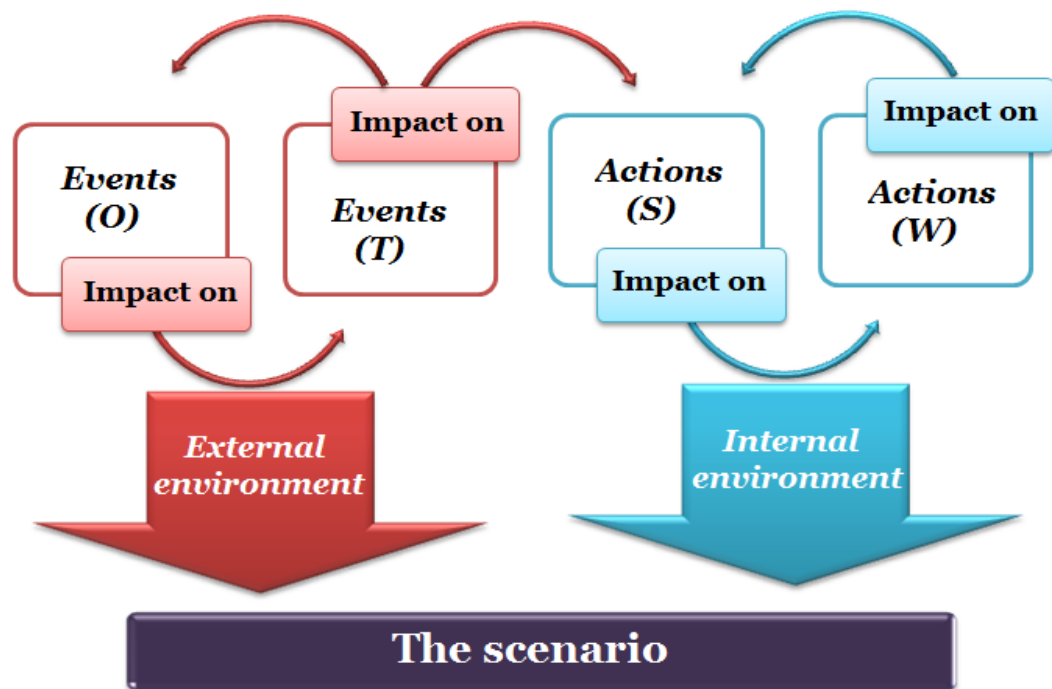
Figure 6-6: The relationship between actions and events in scenario 5

Through an examination of the relationships between actions and events in scenario 5 as shown in the Figure 6-6, it can be noted that:

I. There is reciprocal impact between the events "Opportunities" (O) and the events "Threats" (T) and both events impact on all actions.

II. There is reciprocal impact between the actions "Strengths" (S) and actions "Weakness" (W), whereas, both actions are not impact on all events.

III. Both actions - Strengths (S)/ Weakness (W) - and events - Opportunities (O)/ Threats (T) - impact on scenario.

That is to say, there is mutual influence between the elements of the external environment and same case in the internal environment. Furthermore, the external environments affect the internal environment, and both external and internal environment are impacting the scenario.

In many countries deep structural reforms were introduced, forcing domestic firms to rapidly undertake restructuring processes in order to adapt to the new economic and institutional environment - the skill transferability across occupations is crucial to adjustment to economic and structural shocks -.

For example, "in 1970, imports in Malaysia were divided as follows: capital goods were the least important accounting for 25 per cent of imports, with intermediate goods accounting for 35 percent and consumption goods 30 per cent. By the late 1980s, the pattern of imports changed dramatically, with capital goods enjoying almost 40 per cent of the total and intermediate goods accounting for almost as much." (Nambiar, 2010, p. 73)

In contrast, "the share of capital goods, understandably, increased significantly at this time due to the greater emphasis on heavy industrialisation, something that stretched well into 1990. At the same time, interest in economic diversification has increased in non-metropolitan areas, for domestic capabilities upgraded to enable all economic sectors to compete." (Nambiar, 2010, p. 73)

What is more, the changing structure of Malaysia's imports over the years provides evidence as to how both trade and industrial policy has been successful in achieving economic diversification through impact on the trade pattern, which has been given more amount of flexibility for firms and consumers to make adjustments.

In the same context, Nedelkoska and Neffke (2011, p. 2) - In their study on *Skill shortage and skill redundancy: Asymmetry in the transferability of skills* - have emphasized:

> *"Individuals and firms in dynamic economies continuously restructure and redefine their skill portfolios. This is to a large extent driven by product and process innovation. Changes in consumers' preferences, expansion of labour markets, and economic crises induce additional shifts in the workforce's skill sets. For instance, while the propagation of the assembly line throughout the first half of the 20th century complemented routine manual work, the rapid proliferation of code-based technologies*

since the 1960s substituted for rather routine skills and perhaps increased the demand
for cognitive ones. Moreover, offensive - radical - innovations often require adjustments
in the cognitive skill sets as well".

Fundamentally, due to the relatively low levels of competition and institutional instability in Libya at the moment mean that they are not in a position to survive without understanding that the different jobs require different types of skills, so the Ministry of Labour should trying to upgrade domestic capabilities to enable all economic sectors to compete. It must be noted that if there are not obstacles, this would lead to some of direct views, such as:

I. Increase of labour productivity by emphasis on the development of the labour skills that must be different from traditional skills requested for work routines. In particular with this should focus on to using higher levels of technology into the training courses and continuing education programmes.

II. Develop the specific criteria for measuring the performance of workers or companies and factories in particular with regard to making LM institutions more stable and reducing the impact of social values on the values of work.

III. Give priority to the concentration of existing resources to developing major infrastructure in particular with regard to the laboratories, research centres and information systems etc, for conducting leading research in future.

Efforts in the past which attempted to reverse this trend were unsuccessful primarily because Libya has an economic system which suffers from a plethora of deficiencies due to the fact that the Libyan government did not support either the public or the private sectors. But after the revolution of 17th February 2011 - According to statements of the Libyan Prime Minister, Dr. Mahmoud Jibril, in 2011 (Al Arabiya television, 2011) - it is expected that the new Libyan government will nurture economic growth and development through clearly defined human resources development strategies in order to evolve a competitive market-oriented economy. Also, in this scenario, the Libyan LM institutions will have to invest significant resources in order to provide educational services to their employees.

C. *The pessimistic scenario (6) of the LLM:* The primary research for this thesis provides evidence that in this scenario it is not possible to neutralize the effect of the internal and external environment because the Libyan government has not adequately addressed the core knowledge needs of the production sector by solving problems which relate to human capital management. Consequently, this scenario has some obstacles that come from

actions (W) and events (T), which cannot be controlled during the time period covered by the scenario, here some views, expressed include:

I.   Low level of labour productivity due to the fact that the labour does not have the skills different from traditional skills requested for work routine.

According to DEST, skills required not only to gain employment, but also to progress within an enterprise so as to achieve one's potential and contribute successfully to enterprise strategic directions (DEST, 2002).

II. The absence of the concepts of career commitment, competition, and excellence in the LLM in particular with regard to the confusion between the concepts of competition and teamwork among graduates.

III. There are no specific criteria for measuring the performance of workers or companies and factories.

IV. Weak training courses and inability to provide continuing education in particular with regard to the disparities in consider to the differences among skills of worker, and provide an opportunity for excellence and innovation, and employ skills in workplace.

V.   Scarcity of research centres dealing with the development of human resources. By their very nature, and as part of national economy, the centres of human resources development in Libya do not play an important role in contributing to the economic and social development.

In the same context, there are many challenges that remain in developing a fuller understanding of diversification of the structure economy in Libya, particularly in diversifying the industrial structure, and strategy of industrial firms. For the most part of the Libyan economy - like any developing country - has deficiencies that are obstacles for entrepreneurship in general. In literature for instance Dubini (1989) argues that:

Disadvantaged areas possess shortcomings that could be counted as market failure and thus there may be need for some kind of intervention. These deficiencies are: (1) lack of entrepreneurial culture and values, (2) lack of networks and support services, (3) lack of tradition of entrepreneurship and family businesses in the area, (4) absence of innovative industries, (5) weak infrastructure, (6) weak capital markets; and (7) few effective government incentives.

Evidently, Libya is endowed with abundant natural resources. It is expected that with such abundance of natural resources, Libya would have become a prominent figure among the most industrialized nations in the world. Sadly, the situation appears to be the reverse. In this scenario, with regard to relationships between actions (strengths /weaknesses) and events (opportunities /threats) be that the trends that are shown in the Figure 7-6 are what take place.
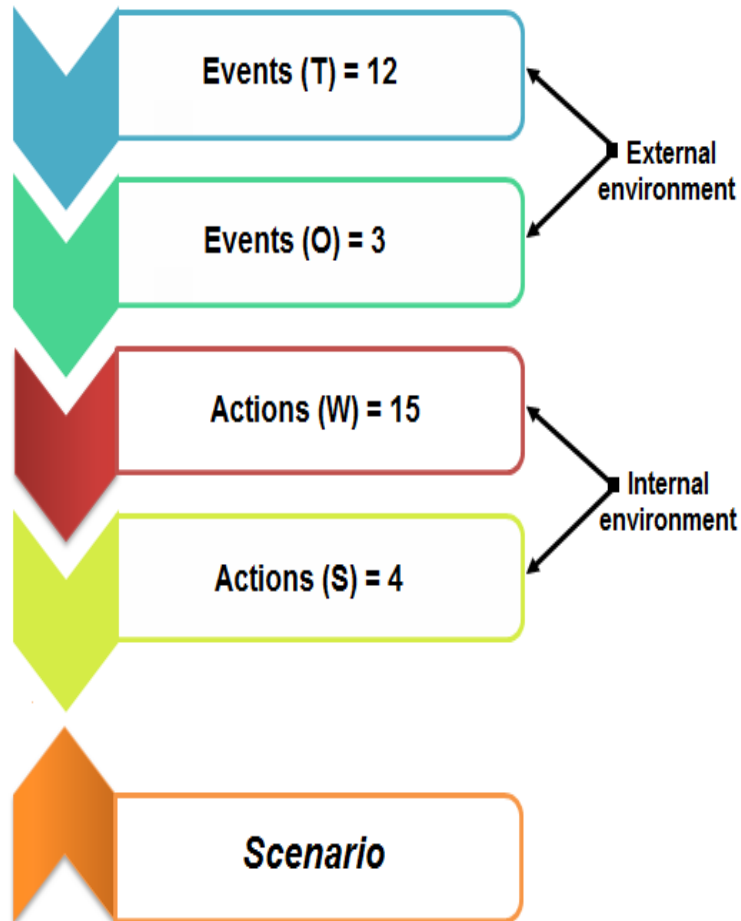
Figure 7-6: Relationships between actions and events in scenario 6

Through an examination of the relationships between actions and events in scenario 6 as shown in the Figure 7-6, the threats (T) are putting pressure on the opportunities (O), so the external factors do not help the development of scenario 6. In the same way, the weaknesses (W) are pressing the strengths (S) - internal factors - and also this affects the results of scenario 6. All these pressures do not lead to diversification of the structure of the Libyan economy.

As discussed elsewhere, the scale of the weakness that affect the LM in Libya is significant because of the large number of weakness factors and threats. Also, there are few of the strengths and opportunities - see Table 3-6 -, which can be shown in the next points:

- There are twelve threats comprising: Four threats related to economic factors (EF), four threats related to political factors (PF), three threats related to competitive factors (CF) and one threat related to social and cultural factors (SCF).

- There are three opportunities comprising: One opportunity related to economic factors (EF), one opportunity related to political factors (PF), one opportunity related to competitive factors (CF) and there is no opportunity related to social and cultural factors (SCF).

- There are fifteen factors of weakness in the internal environment of LM comprising: Seven factors related to workers (FRW) and eight factors related to the administration (FRA).

- There are four factors of strength in the internal environment of LM comprising: Two factors related to workers (FRW), and two factors related to the administration (FRA).

Unfortunately, Libya continues to wallow in economic under-development and technological backwardness. In fact, the last Libyan government appeared find it difficult to truly understand the necessity of knowledge based production, or how to carry out the changes required to upgrade domestic capabilities to enable all economic sectors to compete by use new technology, which leads to new companies and create new jobs. Perhaps among the most important barriers facing the development of the Libyan LM appear mainly from the advancement of knowledge, progress and development of production techniques and the weak capacity of scientific, technical and human resources to apprehend and integrate them into production process.

Section five: Conclusion

This chapter has presented the DT and discussed the process of the building and the application of the DT using a questionnaire as the core tool. Based on the responses from the DQ, this chapter has provided discussion of two (initial and construction) SWOT matrices. On the basis of the data analysis and the findings, and the results of the DT, four strategies have been built for the LHE sector and the LLM as follows:

I. <u>Survival strategy</u>: its aim is to reduce negative effects of external threats on weaknesses.

II. <u>Defensive strategy</u>: this is also called reactive strategy and is oriented to face threats by strengths as a support.

III. <u>Reorientation strategy</u>: sometimes it is called adapting strategy and try to take advantage of opportunities to decrease weaknesses.

IV. <u>Radical strategy</u>: this intends to benefit from opportunities exploiting strengths.

In light of all that has been said about the strategies for LHE and the LLM, three scenarios have been built for HE and other three for LM. These types of scenarios are:

- <u>The optimistic scenario:</u> This kind of scenario proposes taking advantage of strengths in the LHE and LLM to impact the weaknesses (actions) - with assumptions that neutralize the effect of the external environment - also these can take advantage of opportunities in the LHE and LLM to impact the threats (events).

- <u>The possible scenario "most likely scenario"</u>: Here a balanced process can be visualized if advantage is taken of the strengths (actions) and opportunities (events) in the LHE and LLM to address the deficiencies caused by weaknesses (actions) and threats (events) that both sectors have been faced.

- <u>The pessimistic scenario</u>: In this case, the elements of strength cannot overcome the elements of weaknesses in the LHE and LLM. Therefore, they cannot take advantage of the strengths to impact on the weaknesses or to take advantage of the opportunities to impact on the threats in both two sectors.

Chapter 7

Conclusions, Recommendations and Future Research

Introduction

This thesis presents research that has investigated the following research questions:

1. In what ways could HE skills and changing LM needs in Libya be better aligned?

2. How can the DT be adapted and applied to the understanding of the relationship between HE skills and LM needs in the context of Libya?

This thesis has demonstrated that research on education policy and the LM in Libya involves researching in a very challenging environment. As a result it has been necessary to address these research questions by the collection of research data comprising a number of different types. There is limited availability of government data on both education and employment trends, so the nature of this thesis has therefore had to be exploratory, where Chapter 3 provides a comprehensive discussion of what evidence is available from secondary sources and some of the data has been collected and presented together in this thesis for the first time. The primary data collection for this thesis represents a carefully designed research process using two main research methods that are explained and justified in Chapter 4 and then interpreted in the following two chapters. Chapter 5 discussed the findings of semi-structured interviews with individuals at management level in institutions that employ graduates and the in-depth analysis of these data focuses on the relationship between HE skills and LM needs. Chapter 6 presented the results of an application of DT process designed to address the future of the relationship between the LM and HE in Libya. The result is six scenarios built for both LHE and LLM. Chapter 6 also presented a critical evaluation of the DT as applied in this situation.

This final chapter presents the main conclusions, discusses limitations of the study, recommendations and suggestions for future research in four separate sections.

Section one: Conclusions

The results of this study have provided evidence that the HE outputs have not been able to meet changing LM needs and the LM has not been able to absorb the HE outputs. This conclusion has been reached on the basis of evidence that can be categorised in three different ways. Firstly, the research focused on collection of data relating to skills, where some

skills have been a key focus for the objectives of this study. Secondly, this conclusion is also supported with reference to the limited secondary data that has been collected and presented in some cases for the first time together. Finally, this thesis has collated the limited existing research on the HE and LM situation in Libya and the evidence in the literature of patterns found in similar societies. So, this section shows the results of this study as follows:

The results from secondary sources data: This study conducted a survey of the literature in order to come to a full understanding of the nature and characteristics of the HE and LM in Libya. So that, the findings - from literature - are in close agreement with results from several previous studies on HE and Labour in Libya, as follows:

- *First: the results of Chapter 2 (HE and LM)*

  1. There is no evidence in the literature of clear differences between Arab and developing countries in the aims of their HE sector. These countries are all facing similar troubles or challenges in their HE sector. While the nature of the aims and problems of HE in Arab and developing countries is different from the developed countries [such as the USA and UK], this is probably due to the nature of the states, as well as the degree of development.

  2. The evidence in the literature suggests that HE increases local economic development principally by increasing the quality of the local labour force, and secondarily by increasing local innovative ideas. So, that the role of university is not just imparting knowledge content but also developing good relationships in the learning environment and creating an atmosphere that promotes learning through enhancing motivation and accepting individual differences. In contrast, evidence suggests that it is important not to neglect the role of the family in education because the parenting approach also may affect students' university experiences.

  3. Teamwork gives students opportunities to work interactively with their peers and an ability to contribute to problem-solving through insights and understandings without denying the role of others. It also gives them the chance to take responsibility for their own work.

  4. The evidence in the literature suggests that factors of change in skills demanded by LM are seen as a key factor that merits consideration. For example changes such as: technological change, organizational change, globalization and trade, endogenous skill, LM institutions all require different combinations of skills, the development of new skills and the raising of the skills base. With regard to the factors that influence skills supply, explanations in the literature mostly focus on the following broad areas such as: kind of

education, social and psychological environment, local governance issues and role of employers.

- *Second: the results of Chapter 3 (HE and LM in Libya)*

1. The official statistics indicate a large increase in the number of HE institutions in Libya since independence, but the evidence in the literature suggests that this increase has considerably exceeded the actual needs and demands of the country. There is also evidence to suggest that this increase came at the expense of the quality of the HE provision. This may be partly explained by the evidence that Libyan HE institutions have suffered a lack of physical and human resources.

2. In line with the growth in the number of HE institutions in the country, the data shows that the numbers of students enrolled at universities have grown steadily up to 2011, these growths can be ascribed to high population growth rate as well as the closure of teacher training colleges prompting students to demand university education instead or higher social status for university graduates. Evidence gathered in this thesis suggests that these trends may also be due to the absence of a clear admissions policy at universities relating to the selection procedure for applicants to university learning programmes and employment policy.

3. The graduates of HE have not contributed a great deal to the human resource of the LM despite the increase in numbers of HE graduates. There is also evidence of a reduction in the share of females in the LM despite the high numbers of female students enrolled at the Libyan universities. This may be explained by social factors imposing expectations on young women to give up work once they get married and begin families (see Chapter 3).

4. The evidence also suggests that there is weakness in the economic structure, which relies on the public sector for the employment of most university graduates.

5. The general characteristics of LHE as described in the available literature are: Absence of scientific planning to satisfy the essential requirements or demands of society for qualified manpower and haphazard planning and improvisation of the establishment and distribution of universities. Moreover, evidence suggests that there is an imbalance in the distribution of students between the departments at universities, and a weakness of practical training during their undergraduate studies. Furthermore, the sector is characterised in the available literature as lacking a good information system at universities, having an absence of an effective role for faculty staff and a scarcity of scientific research activity. In contrast, the literature suggests that the general

characteristics of LLM are: a chronic mismatch between LHE outcomes and the skills required by the local LLM and lack of specialization and division of labour within the economic sectors. In addition, a lack of continuous assessment and follow-up in order to achieve human development and low contribution of the HE output in the LM, and concentration in the services sector.

6. That the lack diversity in the Libyan economic structure has led to the similarity of the situation of the economic sectors in Benghazi and at the national level, due the proportions of the labour force growing at a similar proportions rate the size and distribution of the labour force between economic sectors; and a low participation of women in the labour force.

Those findings above have been the basis on which the primary research selected the most common skills between writers and researchers - job commitment, competitiveness, desire for excellence and teamwork and problem-solving -, which helped to choose the best methods for studying those skills - as shown in Chapter 4 - through the use of semi-structured interviews. Furthermore these findings also fed into the planning and construction of the future scenarios for HE and LM consistent with the size of demand and supply skills based on known factors of change in skills demand and supply; and, finally, the size of the contribution of each sector in terms of economic activity.

The results of field study: This part presents the results of the field study through a review the results of semi-structured interviews and results of the DT - based on analysis of primary data - as follows:

- *First: the results of Chapter 5 (Semi-structured interviews):* The main results of the semi-structured interviews are:

    1. The LHE outputs were not able to meet changing LLM needs in relation to the four key skills identified for focus in this study. According to the evidence of interview testimony of representatives of graduate employing organisations, this failure appears to be due to some factors that relate to the LHE internal and external environment.

    2. The LLM has not been able to absorb the LHE outputs in relation to the four skills. In the view of the respondents, this appears to be due to some factors that relate the LLM internal and external environment.

In contrast, the analyses of the interviewee's responses have provided arguments to build strategies and scenarios for LHE and LLM. The important arguments associated with the

LHE and LLM internal environment are Chapter 5 shown: provide the student with the necessary skills of how to work in a team and the absorption of team aims, and scientific capabilities to develop working methods; and development of practical training during study, by increasing the hours of practical training to develop the skills of HE graduates to deal with information technology and computers, and applied these skills in the workplace. Furthermore, the development of training programmes in the workplace and raise the level of performance through the material and moral incentives, also develop ability of employees to pursue personal and institutional development.

Moreover, there are two arguments associated with the external environment - as respondents argued in the interviews - of LHE and LLM, which are: Develop the facilities of the Libyan universities; and develop the laws that regulate the relationship between workers and employers and develop the labour unions and the centres of human resources development.

- *Second: the results of Chapter 6 (DT).*

As discussed elsewhere [Chapter 6], the internal environment of HE includes all components of human and material - resources - within an HE institution such as buildings and laboratories and libraries, devices, equipment, aims, curriculum, strategies, conditions, entities, events, and factors, which influence its activities and choices. On the other hand, the external environment includes all conditions, entities, events, and factors surrounding an institution, which influence its activities and determine its policy such as economic factors, political factors, competitive factors and social and cultural factors. The primary research for this thesis collected data on the views of graduate employers in a number of sectors. The results of the analysis of this research indicate that there are some factors relating to the HE internal and external environment, are:

1. HE internal environment:

   - There are many factors related to students such as: Ability of students to absorb information and turn it into usable knowledge, and their ability to adapt and learn quickly and possess the skills necessary to do it. Also an ability to work collaboratively within a group. In fact, all these factors are elements of strength in the internal environment of HE.

   - In the HE curriculum there is no method to teach these skills, also there is no relationship between technical learning and another to develop of thinking in general and scientific thinking in particular. These two factors are elements of weakness in the internal environment of HE. Overall, there is one factor considered as an element of strength in the internal environment of HE, which is interest in foreign languages.

- There are three factors related to the faculty members and they represent the elements of weakness in the internal environment of HE: The first of these is the common use of the method of memorization in teaching. The second is the focus of most lecturers on the educational aspect without focusing on the community development and scientific research. Finally, the absence of continuing education programmes for lecturers, and the inability of lecturers to innovate and find opportunities for continuous learning and professional development.

- In relation to HE administration there are a number of factors that the research has identified as strengths: there are multiple domains at the Libyan universities which appear to meet the LM needs and there are criteria for the selection of lecturers for work at universities, also the actual study during the academic year was considered sufficient (between 22 and 25 weeks). There are enough conferences and scientific symposia; in fact, they represent the elements of strength in the internal environment of HE.

  However, the research has also identified, four elements of weakness related to internal environment of HE. These, are: Weakness of practical training in the undergraduate curriculum; the lack of good information system at universities and therefore the lack of adequate information for decision-makers and curriculum designers; absence of precise criteria to admit students at Libyan universities; and imbalance in the distribution of students between the departments at universities.

2. <u>HE external environment:</u>

- The research demonstrates that there are many economic factors which can be considered a threat to the external environment of HE, comprising: The low level of spending on LHE and an in sufficient number of laboratories; the libraries do not contain modern periodicals and books. Also, weakness in spending on research and studies and imbalance in the salaries of employees within the university.

- There are five political factors considered a threat to the external environment of HE: there are no strategies and implementation mechanisms that explain the universities beliefs and perspectives and there is no comprehensive philosophy with clear principles and requirements, targets and policies. Also, there is an absence of administrative and organizational stability of universities and absence of a board at a national level, which is responsible for planning and management of the HE sector on an ongoing basis. Even, there is no relationship between the central planning system and planning system for the HE sector.

- There are two factors related to competitive aspects of the HE sector that represent opportunities. These, are: specific criteria for measuring the quality of universities and the harmony of the geographical distribution of universities with distribution of Libyan population.

 Whereas, there is also a key factor identified by the respondents as a threat from the external environment of HE in relation to the competitive aspects of the sector, is: the propagation of the establishment of small universities that do not have physical or human resources.

- The research covered the social and cultural factors affecting the sectors and this elicited responses from the DT panel participants suggesting two opportunities related to the external environment of HE. These, are: high cultural - education - level and low rate of illiteracy among parents; and a decline in family size.

However, the research also suggests three threats in relation to social and cultural factors, which are: The absence of the concept of career commitment, competition and excellence in Libyan society; the cultural diversity between regions in the country; and a lack of attention on the impact of the customs and traditions of the educational system.

In the same context, the research results suggest that the internal environment of the LM includes all components of human and material - resources - within an LM institution, particularly the behaviour of the employees and administration. The external environment of the LM includes all conditions, entities, events, and factors surrounding an institution like external environment of HE. There are some main findings relating to the internal and external environment of the LM, including:

1. LM internal environment:

- There are two strength factors related to workers in the LM system, which are: a high level of human relations between workforce in workplace and high cultural level among workforce. Overall, there are seven factors identified as elements of weakness in the LM system, which are: The labour does not have skills different from traditional skills requested for work routine and the HE graduates do not know how to deal with information technology and computers, or how to apply such knowledge and skills at the workplace. Moreover, there is a lack of knowledge about digital information systems and a low level of performance amongst graduates in the workplace due to their lack of job satisfaction. Also, there are low levels of labour productivity and inability to work

collaboratively within a group, because of a lack of communication skills; and confusion between the concepts of competition and teamwork among graduates.

- There are two factors related to the administration of LM institutions, which are identified as serving as a support for the internal environment of LM, which are: specialization and division of labour within the economic sectors and understanding delegation of authority by the director to his subordinate.

In contrast, there are eight weakness factors identified in the internal environment of the LM: The lack of continuous assessment and follow-up in order to achieve human development and not specific criteria for measuring the performance of workers or companies and factories, additionally weak training courses and inability to provide continuing education and weak institutional environment within the public sector. In addition, the panel identified a low level of leadership behaviours among the managers and an absence of the concepts of career commitment, competition and excellence in the LLM. In addition there is lack of clarity in the structure of the LM and the ways in which control the flow of its work and poor decision-making capacity of the administrators as well as personnel.

2. LM external environment:

- There is large private capital to work in the Libyan LM; this factor is opportunity relating to external environment of LM.

Apart from this there are four threats evident from the research related to external environment, which are: Linking the wages and bonuses with position functional rather than to performance, and incentives and rewards are low within different business sectors. Furthermore, the research centres dealing with the development of human resources are scarce and imbalance in the distribution of public spending between economic sectors.

- There are four threats of political factors related to the external environment of the LLM. These, are: Weakness of labour unions and absence of laws regulating the relationship between workers and employers. Also, the absence of clear strategies to develop the LM and instability at the LM institutions.

What is more, one opportunity of political factors related to external environment, is: The laws and regulations prevailing are more effective at convincing investors and companies to invest in Libya.

- The low level of use of foreign labour is one opportunity relating to competitive and supports the external environment of LM. On the other hand, the findings suggest that there are three factors threaten the external environment of LM. These are: Inability of the LM of rapid change in order to follow global changes and non-diversification of the structure of the Libyan economy in order to ensure sustainability in the development process, and also lack of attention to changes that occur in the work environment.

- There is no any opportunity relating social and cultural factors to support the external environment of LM. Whereas, there is evidence that the increasing influence of social values on the values of work can limit of the accountability functional, and this is characterised in the evidence collected in this study as a threat to the external environment of the Libyan LM.

On the basis of the researcher's personal experience and direct observations during the field study (presented in Chapters 4, 5 and 6), the results obtained from the relevant research literature (discussed in Chapters 2 and 3), as well as the results of semi-structured interviews and the results of the DT (discussed in Chapters 5 and 6), it is clear that most institutions of HE and LM in Libya have many strengths and opportunities that support the internal and external environment for both systems.

However, the evidence gathered for this thesis suggests that these institutions also have many factors of weakness and threats have been identified by the participants of the study that in turn constitutes an element of instability in both systems. Under those circumstances, the DT was used to build four strategies; and in light of all that has been said about the strategies for LHE and LLM in Chapter 6 three scenarios have been built for each of them. Beyond this, in the light of the changes that occurred in Libya since the revolution of 17th February 2011 - if there are not obstacles like those above - the relationship between these scenarios - optimistic, possible and pessimistic - could lead to some results such as the following:

I. Development of human resources and capital assets available at the universities will help to diversify of the structure of the Libyan economy in order to ensure sustainability in the development process through providing the national economic sectors with necessary skills by bridging the gap between skills required and available.

Evidently, the graduates skills, commitment and professionalism are key to improving the work outcomes of the Libyan LM. But to deliver high quality skills to Libyan LM institutions requires investment in the highest possible standards of education and training for developing the current and future professional workforce. Also, consultation on those

skills reinforced the framework what is important to employers and consistent with HE objectives.

II.   In particular, upgrade domestic capabilities to enable all economic sectors to compete. This will be necessary after the revolution of 17th February 2011 because it is expected that although many systems will remain in place, the approaches to development and economy will be very different from the past. It is therefore vital that the Libyan universities have an important role throughout the community in promoting high quality education and training, and developing new education programmes and innovative training practices in line with the objectives of new economic activity. One way of achieving this is through reshaping and strengthening the role of the university in order to provide the skills and flexibility to the LM that will be needed for the changes.

However, the results of this thesis strongly indicate that, there is still much to be done to foster the role of the Libyan universities in re-skilling for recovery. The role of LHE institutions is not only to reflect current employment needs which would be subject to constant change, but also to develop skills of critical thinking and analysis and others in line with the aspirations and aims of the new planning for LHE and LLM needs.

III.   Bridging the gap between skills required and available in Libyan universities in order to strongly support public and private actions to strengthen and develop the national human resource by providing a highly skilled workforce.

It is right that decisions about the workforce - such as labour policy - are made by those who are working in the Libyan LM. Because they are needed to ensure that Libya has a system that is brought up to date to reflect the wider national economic reforms that are needed, including giving employers greater independence to plan their own workforce and ensure greater quality of education and training.

Accordingly, HE institutions in Libya should be working closely with LM institutions and employers in Libya to provide work placements in order to address the gap between the skills required by the LM and those that are available amongst the graduate workforce. So, the results from this thesis, therefore suggest that HE institutions in Libya introduce more systematic learning and teaching methods, course content and other measures to promote employability, through working closely with LM institutions and employers in Libya.

IV.   Improving the coordination of HE policies to supporting develop and innovation will help to promote and stimulate use of and demand for technological services from the existing

infrastructure on the part of LM institutions. In contrast, the LM institutions will have a key role to play in working with Libyan HE institutions to plan and develop the right workforce. Employers will also need to work closely with Libyan HE and LM institutions to understand the longer term needs of those skills to do this effectively.

This will be more possible in a post-Gaddafi era and will be more necessary as reforms are brought to bear on the country. So, the results of this thesis suggest that LHE institutions should be working together to promote and sustain their policies, measures and other forms of collaboration, where they are moving towards a strategy based on their aims and roles rather than the previous situation where central policies drove strategies that did not support educational developments in the whole curriculum.

Section two: Limitations of the study

In spite of the findings discussed in the earlier chapters and summed up in this chapter, allowance must be made for the following inadequacies for which this study might be vulnerable to criticism:

1. The university students and graduates were excluded from the interviews conducted, so the findings might not be representative enough to provide an adequate view of the whole situation.

2. Interviews with conducted twelve people only. Therefore, the sample may not be representative enough to research community.

3. The methodology used in this study could have benefitted from further modifications. It would have been desirable to include a questionnaire survey to obtain more quantifiable data.

4. In Libya the legal system does not protect freedom of expression. This was particularly the case under the therefore the Internal Security Agency had unchecked powers to arrest, detain and interrogate individuals, resulting in censorship on publications research and the press.

   The strict control by Libyan government agencies - like Internal Security Agency - on research has probably restricted Libyan researchers' role in contributing to the economic, social and cultural development of the national level. Because of this and the fact that the researcher had to apply for permissions to conduct interviews with the respondents, it is likely that this has influenced the selection of respondents.

As is indicated in Chapter 4 where the methodology and research design are explained and justified, the data collection methods have been carefully selected to suit the purpose and context for this study. This decision making is set out earlier in the thesis and the success of this approach is indicated in the results that have emerged from the project. In order to respond to these possible criticisms, however, a little explanation may be required at this point.

I.   With regard to the methods applied to the study, the data collected involved combining a number of other data collection methods - including the DT, semi-structured interviews and the collation of the secondary data -. This suggests that the views and experiences of the students could be something that could be followed up on in a future project.

II.   With regard to the focus on 12 interview respondents, limits had to be set on the scale of the project in order to ensure it was manageable. Each interview was in depth and recorded and a summary of the testimony of the respondent was written up and translated from Arabic into English before being added to the analysis. The processing of this raw data, and the subsequent data analysis, was detailed and very time-consuming. This has yield substantial depth of information on the views of the LM employers.

III. The small size of the research community and some of the difficulties that were mentioned in the chapter 4 "Research Methodology", those respondents who were interviewed were given considerable time to fully express their views on the subject and considerable attention was given to ensuring that the range of views expressed were represented. These interviews were also combined with the other data sets to provide a good basis on a topic that has benefitted little from previous research attention. A large scale survey of agents in the HE and LM sectors in Libya may be a focus for future research.

IV.   Because of the need for a culturally sensitive approach to the respondents and in order to provide a rich qualitative basis from which to develop the Delphi model and the fact that that there is a limited baseline understanding of the relationship between LHE and LLM, it was decided that qualitative methods more appropriate and more powerful for an exploratory study of this nature.

Section three: Recommendations

In the light of the findings, but taking account of the limitations of the study and the difficulties encountered in the course of the research, the researcher proposes two sets of

recommendations. The first set of recommendations is for future LHE. The second set is directed to the LLM.

1. *Recommendations for LHE:*

I. The Libyan universities have until now focused their education on the transfer of information more than the practical training, which has led to the inability of students to apply and develop their skills and abilities, in order to develop of appropriate individuals in the right place, to optimize the exploitation of their skills. So, it is recommended that Libyan universities expand the practical training period from a few weeks in the final year to continuous participation throughout the years of study.

II. The curricula of Libyan universities do not help students to use methods of problem-solving or develop critical thinking skills and decision-making skills. Because of this it is recommended that Libyan universities should develop their curricula to bridge the gap between skills available and LM demands, through review, rethink and re-orient their policies to facilitate the university-to work transition and to give graduates a good head start in working life.

III. The faculty members do not contribute effectively to the research activity, so they do not attend conferences, seminars and workshops due to scarcity of sources of information that help to perform the works of educational and research. So, It is very important that Libyan universities create standards for the appointment of faculty members and that more attention be given to developing and improving the skills of the faculty members rather than standards that depend on the qualifications.

IV. In order to assure a minimum level of quality of HE and to promote decentralization, as well as support development and innovation at Libyan universities, it is recommended that Ministry of Education develop universities accreditation framework through stronger emphasis on performance outcomes, especially student-learning outcomes, in accreditation decisions. To produce a clear portrait of graduates' skills - or labour - of any assessment process must look beyond the quantifiable variables in the HE sector or the LM, because these indices and the criteria used to calculate them provide only a preliminary idea of these skills - the material foundations of skills -. Also, completed levels of HE do not necessarily reflect the true quality of an individual's skills.

V. This thesis has established that the literature has different views regarding the impact of technology on skill requirements and due to the low rate of introduction of new technology to the Libyan universities because of weakness of the possibilities, it is

recommended that the Ministry of Education increase spending on LHE in order to raise the level of laboratories and libraries development.

VI. Because of the total area of Libya is 1,759,540 Km2 and the number of population is 5,298,152 people, it is very important that the Ministry of Education considering the geographical distribution of universities to be more compatible with the size and distribution of the population in each region. Al-Badri (2006) has argued that the establishment of universities has not been appropriately planned to meet the actual needs of the different regions of the country (See Chapter 3). In addition, Elzalitni (2008, p. 45) believes:

> *"That this number of universities was excessive for a population as small as Libya's (about 5.5 million according to the census in 2006). And educational planners had suggested a ratio of 1 university to 1,000,000 people".*

VII. Develop clear policies for HE that would raise the economic value of output of HE through raising the level of interest in applied science to take stock of the LM orientation of HE in Libya by concentrating on some aspects such as: strengthening the links between scientific research and LM institutions; and insertion of graduates into the LM.

So, that integration of creation and innovation in institutions of HE and the LM is not best achieved in the acquisition of imported skills through - foreign labour - but in the creation of local skills that can secure development with deep roots in all economic sectors. Consequently, when assessing the role played by HE in preparing individuals to join the LM it is important to ask such questions as: What skills do we really want our graduates of HE to have acquired? Will these skills truly equip them to meet the demands of the knowledge economy?

2. *Recommendations for LLM:*

I. Because of the intensity of labour within the workplace public sector due to the recruitment policies - because of the recruitment policy is based on the absorption of all the graduates -, which may affect the proportion of labour in the total inputs to a productive process and therefore higher production costs. So, it is recommended that the new policy of the Libyan workforce that private sector should appoint Libyan employees, and takes the initiative of selecting their future employees from the HE graduates in order to ensure that graduates are absorbed by this sector, because the public sector cannot do this alone.

II. HE graduates do not know how to deal with information technology and computers, and how they are applied in the workplace, so, it is very important that LLM institutions develop training programmes in the workplace to raise the level of performance and productivity

III. It is clear from the evidence presented in this thesis that employers are increasingly demanding higher skills for many types of jobs. These jobs are potentially available to graduates, but the skills of many of them are inadequate to meet employer demands. So, it is very important the Libyan LM institutions should develop the laws that regulate the relationship between workers and employers to develop the ability of employees and initiate the pursuit of personal and institutional development.

IV. Finally, and linked to the previous recommendations, it would be very useful for LLM institutions to allocate part of their budgets for the purposes of research and development, in order to make an appreciable improvement to products or services through knowledge and application of appropriate scientific and technological changes.

Section four: Future Research

This research has by necessity been exploratory in nature due to the poorly understood nature of the link between the HE and the LM in Libya and the low level of previous research and understanding of this situation. This thesis has therefore addressed some key questions. Significant positive change in the LHE and LLM are possible as a result of the findings of this research. However, in order to maximize the benefits and minimize the risks, more research of this type is urgently needed. Such studies should cover a larger variety of Libyan universities and LLM institutions, and should certainly be conducted in different regions of Libya before any comprehensive conclusions may be reached.

In light of thesis results, limitations of the study and the difficulties encountered in the course of the research, the following recommendations are proposed for further research on LHE and LLM:

1. Blending quantitative and qualitative methods in educational research provides greater confidence in the validity and reliability of data deriving from its associated methods and the validity of the findings drawn from this data. So, the quantitative and qualitative methods are needed to study the relationship between the HE skills and LM needs in the future.

2. Conducting a larger scale study for examining differences in skills between males and females, because there may be a difference in the skill level between them. A future study should consider differing questions to determine whether the skill levels are different between the two groups, in order to optimize the exploitation of their skills.

3. Further research is needed to know reasons for disconnect between skills learned at the university and application in the workplace.

4. Further research is needed to determine impact of the socioeconomic status of graduates and employers on career choice, career commitment, maintained discipline, and their professional and work ethic.

5. Quantitative research is associated with a number of different approaches to data collection, and it is has the capacity for generating quantifiable data on large numbers of people who are known to be representative of a wider population in order to test wider theories or hypotheses. So, now that exploratory work of this thesis is complete and has provided some baseline knowledge about the relationship between the Libyan LM and HE sectors, quantitative research is now needed to study the impact of experience at work on the acquisition of skills; and examining impact of technological change on acquisition of skills at more Libyan universities and a wider range of employer organisations. This work could then evaluate the impact of the size of public spending on the performance of students and faculty members across all Libyan universities.

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Appendices

Appendix (1)

A personal letter to the participants in this research

(I): Arabic version:

**UNIVERSITY OF
GLOUCESTERSHIRE**
at Cheltenham and Gloucester

التاريخ: (................................)

الآخ/ الاخت:- ....

بعد التحية

أنا *زكريا عبد الله العوكلي* طالب دكتوراه في جامعة غلوسترشاير في المملكة المتحدة، وهذه المقابلة / الاستبيان هو أداة لجمع البيانات لمشروع بحثي كجزء من البرنامج الدراسي في جامعة غلوسترشاير (دكتوراه).

الهدف الأساسي من هذه المقابلة / الاستبيان هو معرفة العلاقة بين مهارات التعليم العالي واحتياجات سوق العمل.

وأنا أكتب لك لتأكيد ان المعلومات التي يتم الكشف عنها في سياق العلاقة المهنية سوف تكون سرية وهكذا سيجري البحث المقترح في إطار قانون أخلاقيات البحوث في الجامعة.

شاكرين لكم حُسن تعاونكم سلفاً

**الباحث
زكريا عبد الله العوكلي**

(II): English version:

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

Date: (…………………………………)

Dear: Sir/ Madam………………………………………………………………………………………

I am Zakarya Abdulla Elaokali, I am PhD student at University of Gloucestershire in the United Kingdom, and this interview/questionnaire is to data collection instrument for a research project as part of a course at the University of Gloucestershire (PhD).

The primary aim of this interview/questionnaire is know the relationship between higher education skills and labour market needs.

I am writing to confirm you the information that is disclosed in the context of a professional relationship will be held confidential, and so the research proposed will be conducted within the framework of the University's Research Ethics Code.

Thank you for your cooperation in advance

PhD Student
Zakarya A M Elaokali

Appendix (2)

Testimony of education sector about doing interviews

I.   Arabic version

الجماهيرية العربية الليبية الشعبية الاشتراكية العظمى

اللجنة الشعبية العامة للتعليم

المعرفة حق طبيعي

لكل إنسان

اللجنة الشعبية للتعليم ـ شعبية بنغازي

مكتب الخدمات التعليمية ــ فرع السلاوي

التاريخ :25/ 4 / 5 2010

الموافق: /   /

الرقم الإشاري : ـــــح 78/1/886

إلى جامعة قلو شيرشير ـ شلتينيهام ــ المملكة المتحدة

بعــد التحيــة

يفيدكـــم مكتب الخدمات التعليمية السلاوي بأن **الأخ/زكريا عبدالله العوكلي**

قد قام بأجراء مقابلات مع بعض العاملين في هذا القطاع وذلك كجزء من بحثه لدرجــة

الدكتوراه والتي عنوانهــا (*العلاقه بين مهارات التعليم العالي واحتياجات سوق العمــل*

الليبـــي)

أعطيت له هذه الإفادة لاستخدامها فيما يخوله القانون

والســـــلام عليكـــم

المراجع حامد العرفي

مدير مكتب الخدمات التعليمية السلاوي

: للدوري العام للحفظ

2228403 :   2229306 - 2226444:

II. English version

Translated by the researcher

The Great Socialist People's Libyan Arab Jamahiriya
General People's Committee for Education
Popular Benghazi/Office Services Slaoui

REF No: (886/1/78 و ر)   **Date: 25/04/2010**

To the University of Gloucestershire/UK

After greeting

We are writing to inform you that the Mr. Zakarya Abdullah Elaokali had interviewed with some of the workers in this sector, and this as part of his PhD study (The relationship between HE skills and Libyan LM needs)

Give him the testimony for use as authorized by law

Best wishes

Amradja Hamid Alaarafi
Director of the
Office of Educational
Services/Slaoui
Benghazi

Appendix (3)

Testimony of the health sector about doing interviews

I. **Arabic version**

الجماهيرية العربية الليبية الشعبية الإشتراكية العظمى

اللجنة الشعبية للصحة والبيئة

بنغــــازى

الصحة
للجميع
وبالجميع

لاديمقراطيــــة
بدون مؤتمرات شعبية

الرقم :

التاريخ :   /   /

الموافق : 20/ 4 / 2010

الأخوة / جامعة جلوسترشير – شلتينهام – المملكة المتحدة .

بـعد التحية ،،

نحــن أمانـــة اللجنـــة الــشعبية للــصحة والبيئـــة نــود أفـــادتكم بــأن **الأخ /زكريا عبدالله العوكلي** قد اجري مقابلات مع بعض العاملين بالمستشفيات كجزء من بحثـه لدرجـة الـدكتوراه ، وكـان عنـوان البحـث ((**العلاقــة بـــين مهــارات التعلـيم العـالي واحتياجات سوق العمل الليبي**)) خلال المدة من أكتوبر إلى ديسمبر " 2009 " .

أعطيت لـه هذه الإفادة لاستخدمها فيما يخوله القانون .

أ . د . مصباح رزق الله العوامى

أمين اللجنـة الشعبية للصحة والبيئـة

شعبية بنغازي

تعاد للمكتب
للحفـــظ
فائزة

II.   English version

Translated by the researcher

The Great Socialist People's Libyan Arab Jamahiriya
General People's Committee for Health and the Environment
Popular Benghazi

REF No: (2010/201/110/6 ل ش ص ن أ)   **Date: 20/04/2010**

To the University of Gloucestershire/UK

After greeting

We are writing to inform you that the Mr. Zakarya Abdullah Elaokali had interviewed with some of the workers in this sector, and this as part of his PhD study (The relationship between HE skills and Libyan LM needs). During the period from October to December 2009

Give him the testimony for use as authorized by law

Best wishes

Dr .Mosbah Rizkallah Awami
Secretary of General People's
Committee for Health and Environment
Popular
Benghazi

Appendix (4)

Testimony of the industry sector about doing interviews

I.   **Arabic version**

<div dir="rtl">

الجماهيريــة العربيــة الليبيــة
الشعبية الإشتراكية العظمى
اللجنة الشعبية
للصناعة والإقتصاد والتجارة
شعبية بنغازي

اللجان في كل مكان

التاريخ : ....
الإشاري : 2010/2206.19/4
الموافق : 2010.12.16

الأخ / جامعة كولشستر – شيئتنهام

المملكة المتحــدة

بعد التحية ،،،،

يشهد قطاع الصناعة والاقتصاد والتجارة بشعبية بنغازي بأن **الاخ/ زكريا عبدالله العوكلي** قد أجرى عدة مقابلات ومباحثات مع العديد من الجهات ذات العلاقة بقطاع الصناعة بالشعبية وذلك كجزء من بحثه لنيل درجة الدكتوراة وكان عنوان البحث

((العلاقة بين مهارات التعليم العالي واحتياجات سوق العمل الليبي)) خلال الفترة من اكتوبر حتي ديسمبر من عام 2009م .

أعطيت له هذه الإفادة لاستخدامها فيما يخوله القانون

والسلام عليكم

هشام أحمد بوودن
مدير مكتب الشؤون الإدارية والمالية للصناعة
والاقتصاد والتجارة / بنغازي

📠 للأخ /أمين اللجنة الشعبية للصناعة والاقتصاد والتجــارة بنـــغازي.
م / الدوري العـــــام للحـــظ .
بوودن   الشيخي

9091827: 📠 9091038 - 9094021: ☎

</div>

II. **English version**

Translated by the researcher

The Great Socialist People's Libyan Arab Jamahiriya
People's Committee for Industry, Economy and Trade
Popular of Benghazi

REF No: (2010/2206/9/4)   **Date: 16/12/2010**

To the University of Gloucestershire/UK

After greeting

We are writing to inform you that the Mr. Zakarya Abdullah Elaokali had interviewed and discussions with the feast of the relevant authorities within this sector, and this as part of his PhD study (The relationship between higher education skills and Libyan labour market needs).

Give him the testimony for use as authorized by law

Best wishes

Hisham Ahmed Bu-Wthen
Director of the Office of Administration and Finance
Economy and Trade
Benghazi

Appendix (5)

The open-ended questionnaire for standards measurement of skills

(I): Arabic version of the open-ended questionnaire for standards measurement of skills and its outcomes

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

الآخ/ الاخت:- ....

بعد التحية

انا الطالب زكريا عبدالله العوكلي اقوم بإجراء دراسة حول العلاقة بين مخرجات التعليم العالي واحتياجات سوق العمل في ليبيا (مجتمع الدراسة مدينة بنغازي) علية نأمل منكم التكرم بالمشاركة في هذه الدراسة من خلال بيان رأيكم في النقاط التالية عبر الاجابة عن الاسئلة الأتية:

السؤال الاول: ما هي المعايير التي يمكن من خلالها قياس الالتزام الوظيفي عند الخريجين (العاملين)؟

السؤال الثاني: ما هي المعايير التي يمكن من خلالها قياس القدرة على المنافسة عند الخريجين (العاملين)؟

السؤال الثالث: ما هي المعايير التي يمكن من خلالها قياس الرغبة في التفوق عند الخريجين (العاملين)؟

السؤال الرابع: ما هي المعايير التي يمكن من خلالها قياس قدرة الخريجين (العاملين) على العمل الجماعي وحل المشكلات؟

شاكرين لكم حُسن تعاونكم سلفاً

الباحث
زكريا عبد الله العوكلي

ملاحظة : ان كل المعلومات التي ستدلون بها تخضع للسرية التامة وفقا لمعايير اخلاقيات البحث التي تعتمدها الجامعة

تم تصنيف المعايير من قبل الباحث *		
(أ): الالنزام بالعمل واحترام انظمته وتعليماته.	**(I)**	
(ب): الالتزام بأوقات الدوام والدقة في المواعيد.	**الالتزام بأنظمة العمل و**	
(ج): مستوى التغيب والتمارض والمغادرات غير المبررة.	**الانتظام بالدوام**	
(د): الالتزام بإجراءات الامن والسلامة داخل المؤسسة.		
(أ): المحافظة على ممتلكات المؤسسة والاجهزة والمعدات المستخدمة في العمل.		
(ب): المحافظة على المعلومات السرية الخاصة بالمؤسسة والزملاء والعملاء.	**(II)**	**(1)**
(ج): المحافظة على سمعة المؤسسة (مع ذكر حالات ان وجدت).	**الاخلاص والانتماء**	**معايير قياس**
(د): حُسن استخدام السلطة دون استغلال للصلاحيات الممنوحة.		**الالتزام الوظيفي**
(هـ): تخفيض وقت تنفيذ العمل من خلال تطوير الاجراءات.		**لدى العاملين**
(أ): محافظة الموظف على مظهره العام.		
(ب): مساهمة الموظف في عكس صورة ايجابية عنهُ وعن مؤسسته من خلال حُسن و لباقة التجاوب مع الزملاء والعملاء.	**(III)**	
(ج): مدى المصداقية والموضوعية في أداء العمل.	**المظهر العام للموظف**	
(د): المحافظة على تنظيم ونظافة موقع العمل.	**واخلاقيات العمل**	
(هـ): المحافظة على الموجودات (ملفات, اجهزة ..الخ.) بحيث تكون عملية الحصول على المعلومات سهله وميسرة.		
(أ): المشاركة في النشاطات الرسمية و غير الرسمية.		
(ب): المشاركة في العمل التطوعي.		
(ج): المشاركة في المؤتمرات والندوات وتقديم البحوث و اوراق العمل.		
(د): المشاركة في الدورات التدريبية الاختيارية و مدى الالتزام بها.	**(I)**	**(2)**
(هـ): المجهود الذي يبذله الموظف للارتقاء بتحصيلة العلمي.	**المشاركة وتحمل المسؤولية**	**معايير قياس**
(و): المجهود الذي يبذله الموظف في مجال التنمية الذاتية.		**القدرة على**
(س): المرونة عند تأدية الاعمال.		**المنافسة لدى**
(ح): القدرة في مجال التنظيم والاستفادة القصوى من الموارد المتاحة (بشرية, مادية, مالية).		**العاملين**
(أ): قبول خطط التطوير التي تضعها المؤسسة.		
(ب): مدى استيعاب تلك الخطط.	**(II)**	
(ج):التعامل مع المخاطر الناجمة عن عملية التطوير.	**قبول عملية التطوير**	
(د): الاطلاع على التجارب المحلية و الدولية في مجال التطوير.		
(هـ): القدرة.		

(أ): البحث عن أساليب لتحسين نوعية وكمية الاداء.		
(ب): اطلاع العامل على التجارب الاخرى بهدف تحسين ادائه واداء مؤسسته.		
(ج): الاستفادة من بيئة العمل وتوظيف التجهيزات.	*(I)*	
(د): تقديم اقتراحات مثمرة لتطوير عمل المؤسسة.	*الابداع و التطوير واساليب*	**(3)**
(هـ): المنهجية المتبعة في تقديم الافكار والمبادرات الابداعية ومدى واقعيتها.	*العمل*	**معايير قياس**
(و): النتائج و التأثيرات التي تترتب على المبادرات الابداعية للموظف.		**الرغبة في التفوق**
(س): المبادرة وعدم انتظار التعليمات و الاوامر للقيام بالمهام والاعمال الضرورية.		**لدى العاملين**
(أ): المساهمة في تطوير و نشر رؤية و رسالة المؤسسة.		
(ب): المساهمة في وضع وتنفيذ الخطط والاستراتيجيات و سياسات العمل بالمؤسس.	*(II)*	
(ج): المساهمة في تطوير القسم او الوحدة من خلال تطوير انظمة و ادلة العمل.	*الرؤية و الرسالة والتخطيط* *الاستراتيجي*	
(أ): مساعدة و \ أو الدفاع عن اعضاء الجماعة.		
(ب): التعبير عن اتجاهات ايجابية نحو المؤسسة والادارة والعمل.		
(ج): التمتع بدافعية عالية للأداء الجيد.		
(د): تسهيل انجاز المهام.	*(I)*	
(هـ):تأكيد الاهداف.	*الولاء و فاعلية الاداء*	
(و):ممارسة الرقابة والتوجية الذاتي.		
(س): فهم الاهداف والقواعد و الاجراءات المنظمة للعمل.		**(4)**
(أ): قبول أهداف وقرارات الجماعة.		**معايير قياس العمل**
(ب): السعي للتأثير على هذه الاهداف و القرارات عن طريق المشاركة النشطة.		**الجماعي وحل**
(ج): الاتصال المفتوح و الكامل مع اعضاء الجماعة لغرض تبادل المعلومات.	*(II)* *التأثير على اعضاء الجماعة*	**المشكلات لدى** **العاملين:**
(د): السعي للحصول على التقدير والعون من اعضاء الجماعة الاخرين.		
(هـ): القدرة على الحوار وإدارة النقاش.		
(أ):استخلاص النتائج وتحديدها.		
(ب): تلخيص الرأي الشخصي.	*(III)*	
(ج): الموازنة بين الفعل التكيفي " لتهدئة الاثر" وبين الفعل التصحيحي " التوصل الى الحل".	*القدرة على الاستنتاج*	

(II): English version of the open-ended questionnaire for standards measurement of skills and its outcomes

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

Dear: Sir/ Madam..

I am Zakarya Abdulla Elaokali, I am PhD student at University of Gloucestershire in the United Kingdom, and this a questionnaire is to data collection instrument for a research project as part of a course at the University of Gloucestershire (PhD).

The primary aim of this questionnaire is know the criteria by which to measure some skills by answering the following questions:

- *Q1: What are the criteria that help to measure the job commitment skill?*
- *Q2: What are the criteria that help to measure the competitiveness skill?*
- *Q3: What are the criteria that help to measure the desire for excellence skill?*
- *Q4: What are the criteria that help to measure the teamwork and problem-solving skill?*

Thank you for your cooperation in advance

PhD Student
Zakarya Elaokali

Note: The information that is disclosed in the context of a professional relationship will be held confidential, and so the research proposed will be conducted within the framework of the University's Research Ethics Code.

*Standards were classified by the researcher		
(1) **Measurement Standards for Job commitment**	**(I)** *Commitment labour regulations and regular attendance*	**A.** Commitment work and respect for its rules and regulations.
		B. Commitment for working hours and punctuality.
		C. The level of absenteeism unjustified.
		D. The commitment to safety and security procedures within the institution.
	(II) *Loyalty and affiliation*	**A.** Maintain the property of the institution and equipment used in the work.
		B. Preservation of confidential information for organization, colleagues and clients.
		C. Maintain the reputation of the institution (with an indication of cases, if any).
		D. Proper use of authority without exploitation of the powers conferred on.
		E. Reducing the time work through the development of procedures.
	(III) *General appearance of the employee and work ethic*	**A.** General appearance of the employee.
		B. Contribution of the employee in reversing a positive image the institution through decency to respond to colleagues and clients.
		C. Credibility and objectivity in the performance of work.
		D. Maintaining a clean work site.
		E. Preservation of assets (files, devices, etc. ...) So that the process of obtaining information is easy and affordable.
(2) **Measurement Standards for Competitiveness**	**(I)** *Participation and holds responsibility*	**A.** Participation in the activities of official and unofficial.
		B. Participation in voluntary work.
		C. Participation in conferences and seminars and provide research and working papers.
		D. Participation in training courses voluntary.
		E. Employee's effort to improve his educational attainment.
		F. Employee's effort in the field of self-development.
		G. Flexibility in carrying out business.
		H. The ability of the management and maximum utilization of available resources (human, material, financial).
	(II) *Acceptance of development process*	**A.** Accept the plans development.
		B. Extent accommodates those plans.
		C. Dealing with the risks arising from the development process.
		D. Access to local and international experiences in the field of development.

(3) **Measurement Standards for Desire for excellence**	**(I)** ***Creativity and development methods of work***	**A.**	Looking for ways to improve the quality and quantity of performance.
		B.	Know on other experiments to improve his performance and the performance of organization.
		C.	Take advantage of the work environment and equipment.
		D.	Submit proposals for the development of the foundation work.
		E.	The methodology used to provide ideas and creative initiatives, and scope realism.
		F.	Results and effects on creative initiatives for employees.
		G.	Initiative and not wait for instructions and orders to carry out the tasks and necessary.
	(II) ***Acceptance of development process***	**A.**	To contribute to the development and dissemination of the vision and mission of the institution.
		B.	To contribute to the development and implementation of plans and strategies and work policies.
		C.	Contribute to the development section or unit through the development of systems and evidence of work.
(4) **Measurement Standards for teamwork and problem-solving**	**(I)** ***Loyalty and effectiveness of performance***	**A.**	Help or to defend members of the group.
		B.	Expression of positive attitudes towards the institution and work.
		C.	A high motivation to perform well.
		D.	Facilitate completion of tasks.
		E.	Confirmation of the group's objectives.
		F.	Censorship and self-direction.
		G.	Understanding the aims, rules and procedures, which governs the work.
	(II) ***Impact on members of the group***	**A.**	Accept the aims and decisions of the Group.
		B.	Seek to influence these goals and decisions through active participation.
		C.	Open communication with members of the group for the purpose of exchanging information.
		D.	Quest for recognition and support from other group members.
		E.	Ability to dialogue and discussion management.
	(III) ***The ability to conclusion***	**A.**	Draw conclusions and identify.
		B.	The ability to summarize personal opinion.
		C.	The balance between adaptive reaction "to calm the effect" and corrective action "to reach a solution".

Appendix (6)

The summary of first interview (IN.1)

(Sector of Industry) Director of Production Management

(I): Arabic version of the first interview:

<u>**قدرة التعليم العالي على تلبية احتياجات سوق العمل الليبي:**</u> بخصوص هذه النقطة قال الذي اجريت معه المقابلة: في الواقع ، لقد أصبح التعليم في الجامعة يعتمد على أسلوب التلقين فقط ، الاساتذة لا يهتمون بالجوانب المتعلقة باستخدام المعلومات في مكان العمل.

و اضاف ايضا: أن الطلاب الذين يأتون إلى التدريب العملي خلال الصيف لم يكن لديهم ما يكفي من الخبرة في التعامل مع الأجهزة والمعدات ، وهذا قد يكون بسبب ضعف الامكانيات في الجامعات الليبية.

وعلاوة على ذلك قال: اعتقد ، ليس هناك أية علاقة بين التقنية والتعلم في الجامعات الليبية بسبب الاعتماد على أسلوب التلقين وضعف الامكانيات ، وهذا يؤدي إلى الفشل في تطوير التفكير العلمي لدى الطلاب.

وبالإضافة إلى ذلك قال : أعتقد أن خريجي الجامعات لا يعرفون بعض المفاهيم مثل الالتزام الوظيفي ، والمنافسة ، والتفوق لأنهم يتعلموا هذه المفاهيم في مكان العمل عندما يعملون مع العاملين ذوي الخبرة.

<u>**قدرة سوق العمل على استيعاب مهارات التعليم العالي الليبي:**</u> حول هذه المسألة قال الذي اجريت معه المقابلة: كما قلت من قبل ، أن الخريجين يتعلمون هذه المهارات في مكان العمل ، وبالتالي نلاحظ ضعف القدرة التنافسية بين العاملين في هذه الشركة ، كذلك غياب مفهوم الالتزام الوظيفي ، وهذا قد يكون راجع لسببين هما: السبب الأول: مركزية التعيين في الوظائف والسبب الثاني : سياسات التوظيف ، والتي أدت إلى ارتفاع عدد الموظفين مما أدى إلى زيادة كثافة العمالة في مكان العمل "

<u>**وجهات النظر أرباب العمل حول مهارات الموظفين:**</u> بدراسة العلاقات بين التعليم العالي واحتياجات سوق العمل الليبي في ما يتعلق بالالتزام الوظيفي ، والقدرة على المنافسة ، والرغبة في التفوق والعمل الجماعي وحل المشكلات ، نجد:

1. الالتزام الوظيفي: عن هذه المهارة قال الذي اجريت معه المقابلة: لسوء الحظ ، فإن الموظفين لا يفرقون بين أسرار العمل والمعلومات الشخصية لذلك ، نجد انهم يتحدثون عن المعلومات المتعلقة بالإدارة الفنية دون مبالاه بالعواقب أيضا ، لا يهتمون بسمعة الشركة ؛. يمكننا ملاحظة ذلك من خلال محاولتهما لحصول على مكاسب شخصية في الاجتماعات الرسمية التي تعقد مع المديرين العامين ، وكذلك يتحدثون دائما عن مساوئ الشركة ولا يذكرون مزاياها.

و قال ايضا: انا اعمل في هذه الشركة منذ 25 عاما لذلك استطيع من معرفة الذين يعملون بجد أو لا ، على سبيل المثال بعض الموظفين الجدد يحاولون اطالة فترات تناول الطعام (الغداء والإفطار) من دون أي سبب ، وأيضا بعض منهم يغادر مكان العمل قبل نهاية الدوام الرسمي. من ناحية أخرى نجد أن الموظفين الذين لديهم مستوى عال من الالتزام لديهم خبرة طويلة ، والتي حصلوا عليها من خلال العمل الجاد والدورات التدريبية.

2. القدرة على المنافسة: حول قال الذي اجريت معه المقابلة: ومن المفارقات ، أن معظم العاملين في هذه الشركة هم من خريجي الجامعة ولكنهم لا يشاركوا بفعالية في الأنشطة الرسمية وغير الرسمية أو الأنشطة التطوعية وايضا لا يشاركوا في المؤتمرات والندوات العلمية أو الدورات التدريبية ، وهذا للأسف قد يكون بسبب ضعف التدريب العلمي وعدم معرفة طرق البحث ، وفي الحقيقة ، فإن هذا قد يضعف قدرتهم على التنمية الذاتية.

وقال ايضا: كما قلت من قبل أن معظم العاملين في هذه الشركة هم من خريجي الجامعة لكنهم لا يعرفون كيف يمكن التعامل مع نتائج عملية التنمية بصفة عامة و قد يكون هذا بسبب عدم وجود خطة واضحة لتطوير هذه الشركة وضعف تدريب الخريجين في الجامعة. ومن ناحية أخرى ، والموظفين ليسوا على دراية بالخبرات المحلية والدولية لأنهم لا يشاركوا بفعالية في الأنشطة الرسمية وغير الرسمية أو الأنشطة التطوعية و في الندوات أو المؤتمرات و الدورات التدريبية.

3. الرغبة في التفوق: حول هذه المهارة قال الضيف: وفي الواقع ، فإن الموظفين لا يبحثوا عن تطوير الاداء و هذا قد يكون بسبب الرغبة في الحصول على الترقيات أكثر من تطوير العمل . على سبيل المثال بعض منهم لا يسأل عن كيفية تنفيذ العمل لا اذا اخطأ في تنفيذة، وأنهم لا يحاولوا الاستفادة من العمال الأكثر خبرة. لنكون أكثر دقة انهم يحاولون الانتقال الى أعلى منصب أو وظيفة أكثر أهمية من دون الكثير من الجهد.

وبالإضافة إلى ذلك قال: وعلى أساس تجربتي الشخصية والملاحظات المباشرة خلال العمل مع الموظفين الجدد يمكنني أن أقول أنهم لا يملكون القدرة على اتخاذ القرارات وخصوصا مع بعض الحالات التي تتطلب اتخاذ إجراءات مباشرة لحلها ، وهذا قد يكون راجعا إلى القوانين و اللوائح التي تنظم العمل ، والتي تتميز بدرجة عالية من المركزية ، أو نقص التدريب والخبرة.

وقال أيضا : أعتقد أنه لا يوجد أي فلسفات اوأهداف محددة بوضوح داخل الشركة ، مما أدى إلى التخطيط العشوائي لمشاريع الشركة.

وعلاوة على ذلك قال : وكما قلت من قبل الموظفين لا يبحثوا عن تطوير الأداء ، وبالتالي لم يكن لديهم القدرة على التنمية الذاتية أو المؤسسية ، وفي الحقيقة هذا قد يكون بسبب عدم وجود القدرات العلمية.

وقال أخيرا : الموظفين لا يسهموا في تنفيذ الخطط الاستراتيجية وسياسات العمل لنفس الأسباب المذكورة أعلاه.

4. العمل الجماعي وحل المشكلات: حول هذه المهارة قال الضيف: كما قد يتوقع المرء أن العمل في هذه الشركة يتطلب الرغبة في العمل الجماعي ومهارة حل المشاكل ، ولكن يمكننا أن نلاحظ أن معظم الموظفين ليس لديهم هذه المهارة ، وذلك لأن العاملين لا يهتمون بسمعة الشركة وتحدثوا عن عيوب الشركة لا يذكروا مزاياها. بطبيعة الحال أنهم لا يعبروا عن اي أفكار واتجاهات إيجابية أو سلبية تجاه الشركة.

ويضيف ايضا: أعتقد أن هناك دافع لأداء العمل ، ولكنه منخفض هذا قد يكون راجعا إلى انخفاض الأجور أو ان الموظفين لا يتقبلوا طبيعة العمل ، كما أنهم ينفذون القرارات والأوامر من أجل تجنب العقوبة مثل الخصم من الراتب أو الحرمان من الأجر الإضافي ، على الرغم من أن العديد منهم لا يفهمون هذه الإجراءات.

وقال أيضا : من الواضح ، ان الموظفين لا يملكون القدرة الكافية للحوار والنقاش واستخلاص النتائج وهذا يؤدي إلى

عدم فهمهم للأوامر ، ويترتب على ذلك أن معظمهم لا يسعى للتأثير على قرارات الفريق ، وفي الحقيقة ، فإن معظم الموظفين لا تجد أي مصلحة في التفاعل مع الفريق في المسائل التي لا تنتمي إلى العمل.

وأخيرا ، كيف يمكن تقديم حجة قوية لبناء السيناريوهات الوطنية لتخطيط التعليم العالي وسوق العمل؟ حول هذه المسألة قال الذي اجريت معه المقابلة: "وضع خطط جديدة للتعليم العالي وسوق العمل في ليبيا تعتبر ضرورية ، وذلك لأن سياسات المؤسسة غير واضحة وعدم وجود القوانين والقرارات التي تنظم سوق العمل بشكل صحيح. ومن ناحية أخرى ، أعتقد أن العمال لا يملكون القدرة على التنمية الذاتية أو المؤسسية بسبب عدم وجود المهارات والقدرات العلمية ، التي تحد من قدرة الموظف على تطوير أساليب العمل. في الواقع ، العمال لا يسهموا في تنفيذ الخطط الاستراتيجية وسياسات العمل لنفس الأسباب المذكورة "

(II): English version of the first interview:

The ability of HE to meet the Libyan LM needs: the interviewee said: In fact, teaching at the university has become dependent on the method of memorization only, and the teachers (Lecturers) are not interested in aspects relating to the use of this information

And he said, that the students who come to the practical training over the summer do not have enough experience in dealing with the devices and equipment, and this may be because of the weakness of the possibilities at the Libyan universities.

Furthermore said, I think, there is no relationship between technical and learning at the Libyan universities because dependent on the method of memorization and weakness of the possibilities, this leads to failure to develop the scientific thinking among students.

In addition said, I think that the university graduates do not know some concepts such as career commitment, competition, and excellence because they are learning these concepts at the workplace when they are working with experienced workers.

The ability of the LM to absorb Libyan HE skills: the interviewee said: As I said before, that the graduates are learning these skills at workplace, therefore, we observed weakness of the competitiveness among employees in this company. Also, absence of the concept of career commitment, and this may be because of two reasons, the first reason is: that the employment has been centrally organised, the second reasons is: the recruitment policies, which led to the rise the number of employees led to raise intensity of labour at the workplace.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find.

➢ **Job commitment,** on this skill the interviewee said, Unfortunately, the employees do not differentiate between the mysteries of work and personal information. So, they are talking about information concerning the technical department without indifferent to the consequences. Also, they are not interested in the firm's reputation; we can note that through their trying to obtain personal gain in the formal meetings, which held with the Directors-General, and also they always talked about disadvantages of the company and do not remember its advantages.

 Also said, I have been in this company for 25 years so I can know whose working hard or do not, for example some of new employees prolonging of break time -Dinner, Lunch and Breakfast- without a cause, also some of them leaving the workplace before end of office hours.

On the other hand, that the employees who have a high level of commitment have long experience, which they obtained by working hard and training <u>courses</u>.

> **Competitiveness:** About this skill the interviewee said, <u>the</u> most of employees at this company are graduates of the university but they have not been effectively participating in the formal and informal activities, and they do not participate in the conferences and scientific symposia or training courses, and this unfortunately may because of weakness of the scientific training and lack of knowledge of research methods. And as I said before the employees do not look for the development of their performance, therefore they do not have the ability to self-development or to contribute to institutional development. In fact this because a lack of scientific <u>capabilities</u>.

And he said, <u>as</u> I said before most of the employees at this company were graduates of the university but they do not know how to deal with the results of the development process in general. This may be because there is not a clear development plan in this company and a weakness of the employees' training - graduates - at the university. On the other hand, employees are not familiar with the local experiences and the international because they do not effectively participate in the formal and informal activities or volunteer activities and do not participate in the conferences symposia or training <u>courses</u>."

> **Desire for excellence:** About this skill the interviewee said, <u>indeed</u>, the employees are not looking for the development of performance. This might be because of the desire to obtain preferment functional more than development of work. For example some of them do not ask about how to perform the work until making a mistake, and they do not try to take advantage of the most experienced workers. To be more precise they are trying a move to a higher position or more important job without too much <u>effort</u>.

In addition said, <u>on</u> the basis of my personal experience and direct observations during working with the new employees I can say they do not have an ability to take decisions especially with some cases, which require direct action to resolve it. And this may be due to laws and regulations governing the work, which characterized by highly centralized, or lack of training and <u>experience</u>.

Also said, <u>I think</u> there are not clearly defined philosophies and objectives within the company. This has led to haphazard planning of the company's <u>projects</u>.

Furthermore said, <u>the</u> employees do not looking for the development of performance, therefore they do not have an ability to self-development. In fact this may be because lack of scientific <u>capabilities</u>.

Finally said, <u>the</u> employees do not contribute to the implementation of strategic plans and policies work for the same reasons mentioned <u>above</u>.

➢ **Teamwork and problem-solving:** On this skill the interviewee said, <u>as</u> one might expect that the work in this company requires desire for teamwork and problem-solving skill, but we can note most of the employees do not have this skill, because the employees are not interested in the firm's reputation and they talked about disadvantages of the company and they do not remember its advantages. Naturally they do not express their ideas and trends of positive or negative towards the <u>company</u>.

And he said, <u>I think</u> there is motivation to perform the work, but it is low. This may be due to low wages or the employees do not accept nature of the <u>work</u>. Also, they are implementing the decisions and orders in order to avoid the punishment such as deduction of salary or deprive of overtime pay, although many of them do not understand these procedures.

Also said, evidently, that the employees do not have sufficient ability to debate, dialogue and draw conclusions and this leads to a lack of understanding of the orders. It follows that, most of them do not seek to influence the decisions of the group. In fact, most of employees do not find any interest in the interaction with the group in matters that do not belong to the work.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: "To develop new plans for higher education and the labour market in Libya is considered necessary. This is because the organization's policies are unclear and the absence of laws and decisions governing the Labour Market correctly. On the other hand, I think workers do not have ability to self-development or institutional because of absence of skills and scientific capabilities, which limit ability of an employee's on develop working methods. In fact, workers do not contribute to the implementation of strategic plans and policies work for the same reasons mentioned"

Appendix (7)
The summary of second interview (IN.2)
(Sector of Education) Schoolmaster

The ability of HE to meet the Libyan LM needs: the interviewee said, <u>due</u> to weakness of the facilities at the Libyan universities, there is focus on the theoretical aspects and transfer of information without the definition of how to use them at the workplace and use the method of memorization only, this leads to weakness of practical training during the study at the university. For example, the new teachers do not know how to prepare lessons well, and they do not know how to deal with the devices and equipment located in the school laboratories. This may be because the practical training time was a very short and it is limited to the final year students <u>only</u>."

And he said, <u>all</u> undergraduate degree programmes at Libyan universities are comprised of general education programme requirements. The length of a degree programme is measured in credit hours and all university degrees are at least 120 hours. Unfortunately, courses in the major field of study do not allow students to explore in depth an area of study and does not provide much of the preparation needed for their future careers. To be more precise, in these courses, students do not have an opportunity to develop their essential <u>skills</u>. In other words, in curriculum there is no method to teach concepts of career commitment, competition, and excellence at university"

The ability of the LM to absorb Libyan HE skills: the interviewee said, <u>unfortunately</u>, we cannot find any a useful framework for competitive analysis within school, because this competitive analysis may help us to understanding the behaviour of teachers. Evidently, because of a failure to involve teachers in the decisions regarding curriculum we can note weakness of competitiveness between them. Also, we can note that the General People's Committee for Education has provided laboratories and equipment but the teachers cannot use it well, because they have not been trained to <u>use it</u>.

Moreover, said, <u>in fact</u>, the computer and information systems play a vital role in the implementation and administration work at school. I think in the modern workplace, it is imperative that Information Technology works both effectively and reliably. So, teachers should have the knowledge of computer systems and how to manage information, but it seems to they do not know how can to deal with information technology and computers. This may because they did not study computer and information systems at the <u>university</u>"

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs - in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find.

- **Job commitment:** On this skill the interviewee said, unfortunately, the teachers and other employees at this school do not differentiate between the secrets of work and personal information. Also they are not interested in the school's reputation. What is more, they are looking to obtain personal gain. For instance, when setting the lessons agenda, we can note that each one is trying to get the timing of the lesson commensurate with his personal circumstances. This opinion is based on my long experience as schoolmaster, and this opinion should not be construed as expressing any opinion on the ethics of specific individuals.

  In addition said, thereon, we find those teachers and other employees at this school who have a high level of commitment that they have long experience. On the other hand some of the staff (teachers and administrators) is negligence using the devices and equipment in the laboratory.

  Finally said, in fact, hygiene is particularly important in schools. The children are particularly susceptible of exposure to disease because of there are large number of them at school, also they have immature immune systems and tend to have a higher degree of close contact with other children, but most of teachers and administrators are not interested the school hygiene and appearance, and they are justify that there are members of the health and hygiene specialists within the school.

- **Competitiveness:** About this skill the interviewee said, <u>the</u> teacher is a person who provides schooling for others and his role is often formal and ongoing. A teacher's role may vary between cultures. This role may be providing instruction in craftsmanship or vocational training, religion, or life skills etc. But this role requires a teacher to be able to participate in various activities within the school and outside, but teachers do not participate in the conferences and scientific symposia or training courses. Also, they use a lesson plan to facilitate student learning, providing a course of study which covers a standardized curriculum, all this pushes me to say they do not have any attitudes to <u>self-development</u>.

  Also said, <u>like</u> all Libyan economic sectors, there is no clear plan to develop the education sector or schools; therefore, teachers do not know how to deal with the results of this process. Although this operation is aimed primarily at developing the teacher's skills, in my opinion, due to poor scientific preparation of the teachers and unfamiliarity of the other local and international experiences, the teachers are not accepting the development <u>process</u>.

- **Desire for excellence:** About this skill the interviewee said, as I said before, because of teachers use a lesson plan to facilitate student learning, providing a course of study which covers a standardized curriculum. So, they do not looking for the development of performance. Also, some of them do not want to work as teachers, because they did not study at teacher training colleges. Some of them studied at the faculty of engineering, faculty of medicine, faculty of economics and college of agricultural sciences etc. In fact, that skills and scientific

capabilities are pivotal for the success of any teacher. So, all teachers should have been gained the skills and scientific capabilities when they are studying at the university.

Moreover, said, here we find that there is no spirit of initiative among the teachers and other employees at this school this may be because teachers use same a lesson plan to teach the curriculum Also, I think because of lack of clarity in the education policies and plans, the teachers and other employees do not contribute to development and dissemination of the vision and mission school.

➢ **Teamwork and problem-solving:** On this skill the interviewee said, the relationship between teachers and school is a formal relationship, because most of them do not express their ideas and trends of positive or negative towards the school, and this may be because of indifference or lack of interest in interaction with the team in matters that do not belong to the work. Where we note that the teachers do not interact with the school administration in matters that do not belong to the work.

Furthermore said, every decision making process produces a final choice for selection of a course of work among several alternatives. But in this school we find that the vast majority of teachers and other employees do not seek to influence the decisions of the group, and this may be because teachers and other employees have limited ability to debate and dialogue, and they have limited ability to draw conclusions that may result in a lack of understanding of orders. Also, they implemented decisions and orders in order to avoid the risks, which may result from the contravention.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: In fact, that the lack of clarity in the educational policies, inability of teachers to self-development or school, absence of skills and scientific capabilities and which limit ability of teacher's on develop teaching methods have been pushed teachers and other employees to do not contribute to the implementation of strategic plans and policies work at school, I think these are an important justification to development of plans and scenarios for.

Appendix (8)
The summary of third interview (IN.3)
(Sector of education) Assistant Director of School

The ability of HE to meet the Libyan LM needs: The interviewee said, In fact, there were a number of similarities across all Libyan universities with respect to perceived barriers to information transfer and the definition of how to use them depending on the position. I think we should be give most support to the knowledge transfer strategies, as well as the need to foster relationships between university and economic sectors

And said, in fact, the central concern in the education sector is how to bridge the deficit of teachers, without taking into account if they are educationally qualified or not. Unfortunately, the General People's Committee for Education has recruited the engineers and doctors and graduates of the faculty of economy and Law to work as teachers.

Also said, I think, one of the important benefits of the student status is practical training at the university, the practical training must be available to students both before and after completing a course of study at the university, Also, the objective of practical training is not financial rather, it is to provide the opportunity for the practical application of the academic studies. Unfortunately, universities do not care enough practical training. Where that the Libyan universities do not care enough practical training so I think there is no correlation between technical and learning at the university. Because students need to know how to use modern techniques, and this is not available due to poor of practical training, so the graduates have not been acquire the mental and behavioural skills. In fact, there is gap between the university's methods of education and the reality and the ambitions of the society in the present and future

The ability of the LM to absorb Libyan HE skills: The interviewee said, the teachers do not have the ability to have dialogue and discuss and this makes them unable to participate effectively in decision-making. For this reason we can note weakness of the competitiveness of teachers because the teachers have not been involved in decision-making regarding curriculum.

Also said, although the General People's Committee of Education (Ministry of Education) provides many of the laboratory and equipment, but the teachers do not use them effectively, and this because there is no training for teachers to use the new devices and equipment.

Finally said, because of that the teachers unable to participate effectively in decision-making, they do not have concepts such as; career commitment, competition, and excellence.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs - in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving we find:

➤ **Job commitment:** On this skill the interviewee said, unfortunately, there is no any interest of school reputation by some teachers. Furthermore, they do not differentiate between the mysteries of work and personal information, and consequently they are talking about their personal problems as problems of work-related, even though the work problems must be relevant to working.

And said, in all meetings at this school we can find most of teachers and other employees try to gain their vested interests such as: the lowest number of study courses, vacations, allowances and loans etc.

What is more, said, in fact, there is no work serious among teachers. More importantly, there is no work substantive among them. I think we can know this through negligence in the use of devices by teachers in the laboratory and classrooms. Indeed, the teachers do not understand that every aspect of work has to form a bridge between personal requirements and the requirements and interests of the school; the fact is that many teachers handled their work as a very routine job.

Also said, in fact, there is specific time-frame to implement the curriculum, so, most of teachers are trying to complete the curriculum in a timely manner, but we note that most of the new teachers cannot do so, because of lack of experience; and weakness of teaching methods due to weakness of the teachers and their scientific and educational qualifications.

Furthermore said, we can note that there is breach in the general appearance of the teachers in terms of dress, which must fit with the profession in terms of modesty and dignity. Also, it must fit with the teachings of the Islamic religion.

Moreover, said, in this school there are 388 students and all of these are children, they are particularly susceptible of exposure to disease because of there are large number of them. But most of the staff (teachers and administrators) is not interested the school hygiene, and they say there are workers for school hygiene.

In addition said, finally, I can say that the teachers whose have a high level of commitment they have more experience, which they gained from working for long time and training courses.

➤ **Competitiveness:** About this skill the interviewee said, the teachers are trying to complete the curriculum without the trouble. So, I think there is no any flexibility in their performance. In fact

that the absence of flexibility is particularly challenging for new teachers, because they are working under more stress.

And said, ironically, that the all teacher at this school are graduates of the university but they do not effectively participate in the activities or conferences and training courses. I think this may be because they do not know research methods or they have poor scientific preparation and unfamiliarity of the other experiences.

Also said, I think there is no clear plan to development the education sector, causing that the teachers do not know how can dealing with the results of development process. Also, that the lack of clarity in the policies of education sector limit the ability of teachers to self-development or contribute to school development, in light the lack of skills and scientific capabilities.

➢ **Desire for excellence:** about this skill the interviewee said, I think that the new teachers do not have spirit of initiative and Inability to solve problems, especially in some cases that require direct action to resolve such as problems for the teaching of subjects or use the laboratory etc.

Also said, because of, that many teachers studied at the faculty of engineering, faculty of medicine, faculty of economics and college of agricultural sciences etc, so they do not have unwillingness to work as teachers, and they do not try to develop their performance. Also, they do not benefit from the facilities available at school such as laboratories, equipment and equipment.

Moreover, said, in fact, we cannot find a clear plan to development the education system or any school in this city or other. Also, that the lack of clarity the policies of education sector limit the ability of teachers to self-development or school development, in light the lack of skills and scientific capabilities.

➢ **Teamwork and problem-solving:** On this skill the interviewee said, in fact, that the motivation to work in a school is low, and teachers do not express their ideas and trends of positive or negative towards the school, and this may be due to he does not work with the group down because of the nature of work, which require to work alone on the curriculum. I think we can increase motivation to work among teachers by raising the rewards and incentives, and modify the system of wages.

Also said, in fact, that the self-censorship is the act of censoring on work without an authority directly pressuring one to do so. But the teachers do not have self-censorship on their job at this school.

Finally said, I think one of the biggest problems that you may experience at work is unwillingness of teachers to work with the group, this is due to limited ability to debate and

dialogue among teachers, and this may lead to a limited ability to draw conclusions or understand orders and instructions. And therefore, the teachers implemented the decisions and orders only, because of fear of punishment.

Finally, said: Here we can provide a strong argument for build scenarios to national Higher Education planning and Libyan LM inasmuch to lack of material or moral incentives, which can help teachers to raise the level of performance and absence of skills and scientific capabilities, which limit ability of teacher's on develop teaching methods. Also, inability of teachers to self-development or school and lack of clarity in the educational policies.

Appendix (9)
The summary of fourth interview (IN.4)
(The Health Sector) Assistant Director of Hospital

The ability of HE to meet the Libyan LM needs: The interviewee said, as part of the university's commitment to provide the skilled labour for all economic sectors, so the Libyan universities should teach their students how to deal with the technology available in the workplace, because I noted there are a lot of new nurses, doctors and technicians do not know use appliances and equipment in this hospital.

And he said, unfortunately, there are a lot of new nurses, doctors and technicians do not know use appliances and equipment in this hospital, because weakness of the practical training due to weak of the facilities at the university.

Also said, in fact, effective education is critical to the success of any investment in the education sector. I think the educational aspect must be committed to meet ongoing education needs and the community development and scientific research, but the Libyan universities have not done so.

In addition said, I think it's the most important problems facing the Libyan universities are: there are no strategies and implementation mechanisms to explain the universities beliefs and perspectives, Also, I think that is the main reason for the lack of clarity in the policies of each economic sector.

Finally said, the curricula at the Libyan universities do not contain programmes that can help students acquire the skills and concepts such as career commitment, competition, and excellence. Under those circumstances, I think the Libyan universities unable to meet the needs of the health sector of the labour skilled.

The ability of the LM to absorb Libyan HE skills: The interviewee said, I have significant concerns about the institutes and colleges of nursing according to their current status, and we need to dialogue for address the compelling issues such as the research has been raised, because I cannot work with nurses (male/female) or any one do not have ability to dialogue and discussion because they do not understand me at the most cases, this may result in large errors in the work because they do not have the ability to make timely decisions.

Furthermore said, in this hospital we can note weak of the competitiveness of the new doctors and nurses (male/female). In fact, providing training is very important to guarantee the quality of the work, and the training must conform to the needs of the work at the hospital and the LM. But there is no law or regulation determines system of training.

 Also said, to work in the public or private hospitals, nurses and doctors must hold a bachelor degree in medicine or a degree/diploma in nursing, which leads to enabling them to practice as a doctors or a nurse. But I think this is not enough because they are need to training courses for development their skills to use modern devices and equipment.

Moreover, said, like I said earlier, the new nurses and doctors are need to training courses for development their skills to use modern devices and equipment, because they do not know how can be deal with information technology and computers, this is due to the trained to use outdated equipment is relatively when they were studying at the university or institute.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs - in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find.

➢ **Job commitment:** On this skill the interviewee said**,** of the most important features of the laws and regulations that govern the work in the hospital that it is characterized by strict, and there is commitment of the general appearance of the doctors and nurses (male/female) in terms of dress, which must fits with the profession in terms of modesty and dignity.

And he said, here we can talk about two important things are: hospital reputation and substantive in the work, about the hospital reputation we can say there is maintain the confidentiality of information concerning patients because of laws, but there is failure to maintain the confidentiality of management information, which work-related. On the other hand, there is a lack of interest of hospital reputation, I think that because of the staff do not feeling belonging to the workplace. With regard to substantive in the work we can note that there is substantive in the work among the medical staff and therefore they have a high degree of credibility, but the administrative officers do not have substantive in the work.

Also said, in fact, there is no abuse of authority because if there is any attempt to abuse authority that leads to the creation of significant problems. For example, if anyone tried to manipulate the tables of the distribution of work among staff, this will create confusion, because all of the staff know their hours of work. But maybe there is exploitation of the authorities in some procedures which do not affect the human element directly, such as manipulating the quantities of drugs or equipment, and this is also not high because of the difficulty of the procedure.

Finally said, modern jobs have an incredible number of time-saving devices. We seem to end up working more all the time, and we must be able to take advantage of the time. Also, we must be able to reduce the time-working through the development of procedures. However, in this hospital, we noted that there are delays in some tasks related to of administrative work, whilst

there are not delays in actions relation to medical work tasks. Because there is no specific time for completion of the work, because they are dealing with medical conditions that do not impose a specific time, they always try to deal with them by giving them the maximum possible degree of priority.

➢ **Competitiveness:** On this skill the interviewee said, I think flexibility is a critical ingredient to work effectiveness in the hospital also improve employee engagement and job satisfaction and reduce stress. But the new staff - doctors and nurses - do not have flexibility in their performance, because they do not have the ability to take initiative.

And said, I think this [referring to not to participate in the formal and informal activities] may be because of a lack of awareness of the importance those activities [volunteer activities, conferences and scientific symposia or training courses] or they do not know methods and techniques of scientific research. Also these conferences and courses have impacted on their financial return by depriving them of overtime. On the other hand, the doctors have been participating in conferences more than nurses and administrative staff; here we can exclude new graduates because they do not have sufficient experience and skills.

Also said, often there is objection to development process by the staff (nurses, doctors and administrative), whether development plans derived from the hospital or be centralized by the General People's Committee for Health and Environment (Ministry of Health and Environment), and this due to they do not understanding of the objectives of development plans and they do not know how can dealing with the results of development process, Furthermore, weak of practical training at university; therefore they do not have sufficient skills to deal with any plan for development their skills.

➢ **Desire for excellence:** about this question the interviewee said, In fact, there are a lot of laboratories and equipment at this hospital but the nurses and other employees do not benefit from them. This may be because most of them are working in other hospitals [private sector] or the social factors relating to marriage (this factor for females). And therefore they are not looking for the development their performance.

Furthermore said, I think because of there is not clear policy in the sector of health and lack of skills and scientific capabilities, most of nurses and other employees (male/female) do not contribute to the development and dissemination of the vision and mission of the hospital.

➢ **Teamwork and problem-solving:** On this question the interviewee said, the nurses and other employees do not express ideas or trends -positive and negative- towards the hospital, and this may be due to some reasons already mentioned, such as: working in other hospitals (private sector), social factors relating to marriage (this factor for females), they do not know how to deal with the results of the development process, lack of clarity in the policies of the sector of health

and lack of skills and scientific <u>capabilities</u>.

Also said, that the motivation to work is very important, but in this hospital that the motivation to work is low among nurses and other employees, and the performance is only a minimum required to complete the work and this may be because of they do not have self-censorship or the vast majority of them do not seek to influence the decisions of the group. On the other hand, they have limited ability to debate and dialogue between themselves, and this may lead to do not understanding of orders and instructions and limited ability to draw conclusions.

Appendix (10)
The summary of fifth interview (IN.5)
(Sector of Education) Schoolmaster

The ability of HE to meet the Libyan LM needs: The interviewee said, Libyan universities suffer from a lack of potential; this lack is in libraries and laboratories of different kinds. So, I think that universities are unable to provide students with the concepts of career commitment, competition, and excellence, because the Libyan universities do not have the ability to do that.

Moreover, said, through the use of advanced technology, learning can also be qualitatively different. The process of learning at the university can become significantly richer as students have access to new and different types of knowledge, but this process does not occur at the Libyan universities correctly.

The ability of the LM to absorb Libyan HE skills: The interviewee said, in my opinion, that new teachers are less effective than old teachers in a competitive environment. We can return this to the lack of experience and lack of training for new teachers to use the devices and equipment.

And said, in fact, that the issue of teachers' empowerment and their full participation in decision-making at school are very important for the development of some concepts such as career commitment and competition. Unfortunately, the teachers were unable to participate effectively in this process.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving we find:

➢ **Job commitment:** On this skill the interviewee said**,** we are talking here about the information related to the problems that result from the daily work inside the school and information relevant examinations. I think that teachers do not maintain this information well, because they do not care about the reputation of the school. Here we can give an example of this situation; in the formal or informal meetings most of teachers are trying to get some personal gains. This may be a legitimate right but if this conflict with the conditions of employment this becomes prejudice ethic of teaching profession.

And he said, in fact, there is negligence using devices in the laboratory and classrooms by some teachers. This indicates that there is no serious and objective to dealing with the devices and equipment of school. The fact is there is no training in the use of the devices and equipment but the teachers and other staff can also be use them without damaging it.

Also said, in this school, we are dealing with teenagers their ages between 12 and 17, and therefore they are exposed to disease more than adults. But, unfortunately, most of the teachers are not interested the school hygiene, this have a negative impact on teamwork within the school.

Finally said, in fact, work experience can be a great help if the teachers want to develop their performance. Also, it can help new teachers to chosen the kind of job they want. In this school, the teachers that have a high level of commitment they have long experience.

➢ **Competitiveness:** About this question the interviewee said**,** unfortunately, most teachers do not participate in activities inside or outside the school. Whether these activities were voluntary, such as awareness campaigns social and health or formal activities such as seminars and training courses, because of this there are no trends to self-development of teachers.

And said, the fact is the teachers do not know how can dealing with the results of development process, and this may be because there is not clear plan for the development in sector of education, also poor scientific preparation for teachers and unfamiliarity of the other experiences.

➢ **Desire for excellence:** On this question the interviewee said, in fact, for a process of performance development to be effective, it needs to have the commitment of the senior team and be aligned to strategic priorities and a working plan. The teachers also need to understand that they will be largely responsible for implementing the performance development plan and bringing about a culture of continuous improvement. But the teachers in this school are not looking for development of performance, because they possibly desire to complete the curriculum on time or they do not have the willingness to work as teachers because some of them are -trained as teachers- engineers and technicians.

Furthermore said, indeed, that the success of the spirit of initiative depends upon the willingness of teachers, officials and administrators at all levels to embrace the concept and apply it in their approach to every aspect of their work. But in this school we can note an absence of the spirit of initiative among the teachers and employees.

In addition said, actually, the relationship between the presence of scientific capabilities and teachers' performance is very important. We can see the low level of performance of teachers, inasmuch to lack of skills and scientific capabilities; and weakness of teaching methods.

Finally said, I believe that the vision and mission of the school revolves around providing students with an appropriate education, which emphasizes high academic and social expectations for all students. Unfortunately, most of teachers do not understand this vision and mission correctly, and this may be because of a lack of clarity in the education policies or

unwillingness to work as <u>teachers</u>.

➢ **Teamwork and problem-solving:** About this question the interviewee said**,** <u>that</u> the interaction with group in the workplace is sometimes difficult to manage, but it builds valuable skills and contributes to a successful work. But at this school, the teachers and other employees do not express their ideas and trends of positive or negative towards the school, owing to have limited ability to debate, dialogue and draw conclusions. This, unfortunately, leads to the absence of interaction within a group about matters that do not belong to work and the vast majority of teachers and other employees do not seek to influence the decisions of the group. For this we can say they have implemented the decisions and orders in order to avoid the risks, which may result from the <u>contravention</u>.

Also he said, in fact, the educational system needs to development in all its aspects owing to inability of teachers on develop teaching methods and they do not have ability to develop themselves. Apart from this, the educational policies are not clear.

Finally, said: "moreover, there are several points, which should be introduced when planning for higher education and the labour market in Libya, namely:

1. Connect the curriculum at each grade level with phase that followed.

2. Linking the objectives of the curriculum with needs of the labour market.

3. Increasing the number of hours of practical training at the university, especially in colleges that prepare teachers.

4. Re-examine the policy of higher education.

5. Re-examine the decisions of appointment non-educationally qualified, such as engineering and science graduates."

Appendix (11)
The summary of sixth interview (IN.6)
(Sector of Education) Assistant Director of School

The ability of HE to meet the Libyan LM needs: the interviewee said, the technological changes at workplace have made competencies of the HE so important for greater knowledge. Also, HE provides effective tools to develop the teacher's skills. But, unfortunately, the Libyan universities are just focusing on information transfer without the definition of how to use them at work.

And said, the fact is that of teachers with scientific disciplines (Engineering, Medicine, Economy and Science etc) have weak educational qualifications because most of them did not study the teaching methods at university.

Also said, precisely, the main aim of practical training is development the mental and behavioural skills of student through application theoretical studies. Unfortunately, there are a lot of university courses are still too theoretical at Libyan universities, because they do not care enough practical training.

What is more, said, in order to pass a certain level of education, the students must meet specific courses this can be slightly confusing, but at the university the diversity of a curriculum is an attractive point to students. In fact, the curriculum must be designed to improve student skills and develop some of concepts such as: career commitment, competition, and excellence etc, but there are no methods to teach these concepts and skills in the university curriculum.

Finally said, the method of memorization in teaching is the predominant method in the university. So, we find that the most of the lecturers at the Libyan universities have focused on the educational aspect without focusing on the community development and scientific research.

The ability of the LM to absorb Libyan HE skills: the interviewee said, that the process of decision making is an essential skill for success in teaching especially and career success generally, but this process needs an ability at dialogue and discussion. Unfortunately, most of teachers have not understood what they can do to make timely and well-considered decisions.

And he said, as I said in the past, the most of teachers have not been understood what they can do to make timely and well-considered decisions, so, the General People's Committee for Education (the Ministry of Education) has not been involved teachers in the decisions of regarding curriculum. I think this led to the weakness of the teachers' competitiveness.

Also said, actually, we are always talking with the Office of Education about need for a program to train the teachers on use of new devices and equipment, but I do not know why the Office of Education does not prepare of these programmes when appropriate.

Employers' views of the employees skills: To examine the relationships between higher education and Libyan labour market needs - in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find:

➤ **Job commitment: On this skill the interviewee said,** I think that there are three basic issues at this point we can talk about, are: confidentiality of information, school reputation and serious and substantive in the work. The truth is, that there are problems occurring within the school, supposed these problems are not seen by anyone outside the school, but I could hear most teachers talking about them as personal problems and most of the teachers have treated the data of examinations by the same way, this indicates a lack of teacher attention to reputation of the school. And regarding the seriousness and substantive in the work we can say, that there is no serious and substantive in the work, where we can know this through negligence using devices in the laboratory and classrooms by some teachers and lack of attention to preparing lessons before explained to the students.

And he said, as you know, we live in an Islamic society, and our religion is Islam [Libyan society is a conservative society and the Libyans adhere to Islamic clothing as much as possible], so the teachers (male and female) must abide by a minimum of the teachings of this religion. Also, there are customs and traditions that give to the teaching profession a special place, and therefore society is bound to consider teachers differently from the rest of the staff in other sectors. Finally, I think most teachers are breaching the general appearance.

Also said, I think that the school health is one of the key problems at this school, where we note most teachers and administrators have not been interested to the school hygiene and appearance.

Finally said, in fact, the teachers and administrators whose have a high level of commitment, they who have long experience or they obtained training courses.

➤ **Competitiveness:** On this skill the interviewee said, I think the clarity of any plan reflects a fundamental factor for its success but most teachers do not know how they can deal with the results of development process, because there are not clear plans to develop the teacher skills, for this reason most teachers do not accept the development process.

In addition said, in the present school environment, flexibility of performance has become one of the competitive tools. Flexibility refers to the teacher's ability to deal with all the factors that affect his work. But here we can note absence of flexibility in the performance of teachers because they are trying to complete the curriculum without the trouble, and weakness of the scientific training and unfamiliarity of the other experiences.

Also said, I think we must encourage strong interaction between school and community by involvement of teachers in the formal and informal activities or volunteer activities, also, the conferences and scientific symposia or training courses, The teachers do not participate in these activities because they do not understand objectives of these activities clearly, and they do not know methods and techniques of scientific research.

Finally said, as I said above, that there are problems occurring within the school, supposed these problems are not seen by anyone outside the school, but I could hear most teachers talking about them as personal problems and most of the teachers have treated the data of examinations by the same way, this indicates a lack of teacher attention to reputation of the school. And regarding the seriousness and substantive in the work we can say, that there is no serious and substantive in the work, where we can know this through negligence using devices in the laboratory and classrooms by some teachers and lack of attention to preparing lessons before explained to the students. Furthermore, most teachers try to obtain personal gain in the formal meetings through talk about their personal problems and some other demands such as loan and overtime costs.

➢ **Desire for excellence:** About this skill the interviewee said, I think that the new teachers and other employees do not have spirit of initiative, and they do not looking for the development of performance, because of, that a lot of teachers did not study at the faculty of education, so, they do not know the methods of teaching. Also, they do not have ability to solve problems among themselves.

Also said, unfortunately, most teachers have not been understood the school vision and mission correctly, so they do not contribute to the development and dissemination of this vision and mission. I think this may because there is no clear policy for education or lack of skills and scientific capabilities.

In addition said, in fact, the teachers do not have ability to self-development or school development, this might because of a lot of them unwillingness to work as teachers. Here we can note most teachers do not benefit from the possibilities available at school such as laboratory, equipment and devices.

Finally said, I think the teachers do not contribute to the implementation of education strategic plans for the same reasons mentioned above.

➢ **Teamwork and problem-solving:** On this skill the interviewee said, I think the teachers do not know the methods of communication and how can use it, and therefore they do not understand the orders and instructions they are implementing orders and instructions for avoid the risks. They do not express their ideas and trends of positive or negative towards the school.

And said, in fact, we engage in dialogue and debates to exchange opinions with one another for facilitate harmony with others. Actually, in this school we need to use the best methods of communication to influence the opinions and decisions of others, because the vast majority of teachers and other employees do not seek to influence the decisions of the group, there is a limited ability to debate and dialogue among teachers. This is because they do not know the methods of communication or they do not know how to use it. The result is that the teachers do not have ability to draw conclusions for them; this may result in a lack of understanding of orders and instructions. Finally, the teachers and other employees do not interact with the group in matters that do not belong to work because of the nature of work.

Also said, in actual fact, that the motivation to work plays role in a school's success and the performance of teachers, but we find that the motivation to work among teachers is low, and their performance is only a minimum required to complete the work, which are bound by regulations and decisions.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: In general, the higher education and school system are need to re-consideration on account of lack of clarity of policies and plans in both of them, in fact, this has resulted in inability to self-development or school among teachers and absence of skills and scientific capabilities, which limit ability of teacher's on develop teaching methods.

Appendix (12)
The summary of seventh interview (IN.7)
(The Health Sector) Assistant Director of Hospital

The ability of HE to meet the Libyan LM needs: the interviewee said, in fact, when the university are transfer information to the students, they must provide certain information about how to use them depending at the workplace, unfortunately, the Libyan universities have not done so.

And he said, I think the LHE needs to reforms, because its aims are not consistent with the needs of economic sectors especially with health sector.

The ability of the LM to absorb Libyan HE skills: the interviewee said, in fact, the interactions and responses can encourage nurses and other employees to understand the need for strong relationships. And we need to open dialogues and discussions about the way we relate to each other. But unfortunately, they do not have ability to dialogue and discussion, and this makes them unable to participate effectively in decision-making.

Furthermore said, I think that not to involve workers in decision-making lead to a decline in their ability to compete, because anyone who does not contribute to the development of plans and programmes, which define the work required, not is excited to implement it. And therefore is not has the spirit of competition.

Also said, in fact, provide training is a very important to guarantee the quality of the work, and the training must be conformity with the needs of the work at the hospital and the LM. But there is no act determines system of training.

Finally said, in quantitative terms, we find that there is intensity of labour within the hospital. But in terms of quality, we note that there is a shortage of doctors and technicians. For a long time the recruitment policy was based on the absorption of all the graduates this led to a rise in the intensity of manpower within the hospital.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs - in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving- find:

➢ **Job commitment:** On this skill the interviewee said, I think the new staff -whether they are doctors or nurses or administrators- make mistakes due to lack of experience and training.

Moreover, said, I think most of nurses and administrators are lack of interest to the hospital reputation, because of there is failure to maintain the confidentiality of management information, but they have managed to preserve all the information concerning patients.

And he said, we can consider that there are no attempts to exploit the powers in this hospital due to the strict laws, and if there is any powers exploitation it does not affect the human element. **Also said,** with respect to the time limit for the functions we noted that there is delay at time of the administrative work, because most employees do not look for the improvement of performance. About the medical staff work I can say that there is no specific time for completion of their work, because they are dealing with medical conditions that do not impose a specific time.

In addition said, because of the law we find that there is commitment of the general appearance of the doctors and nurses (male/female) in terms of dress [the Libyan society is a conservative society and the Libyans adhere to Islamic clothing as much as possible], which must fit with the profession in terms of modesty and dignity, and this may be because of laws and regulations.

Furthermore said, training is evident in the work done by same the medical staff, compared the covered to the rest of the employees and therefore they have a high degree of credibility, because of they have long years of work and many of them studied at foreign universities.

Finally said, I think there is no full commitment to working hours and punctuality, and this may be because most doctors, nurses and other employees are working in private hospitals or laboratories. Also, we do not forget the impact of customs and traditions to work especially with respect to the mother's labour.

➢ **Competitiveness:** About this skill the interviewee said, in fact, there is no certain way to measure the flexibility of performance, but we can know about it through the ability of nurses and other employees to adapt to changing work conditions and their ability to show initiative. Here we note that the new doctors, nurses and other employees [due to inexperience and the quality of HE in Libya] do not have flexibility and initiative in their performance, and they are performing their work without trying to develop performance.

And he said, I think nurses and other employees do not participate in the formal and informal activities or volunteer activities, such as the conferences and scientific symposia or training courses, because these conferences, symposia and seminars at times do not fit the conditions of work and it impacts on their financial yield by depriving them of overtime. In addition, lack of awareness of the importance those conferences and courses or they do not know research methods. Apart from this, doctors have been participating in the conferences more than other staff; because they need to conduct research and provide worksheets to preferment functional.

Also said, in fact, the development plan is unclear in the health sector, which pushed the doctors, nurses and other employees to object to this process, whether development plans derived from the hospital or centralized by the General People's Committee for Health and

Environment (Ministry of Health and Environment). Also, most of them do not know how to deal with the results of this <u>process</u>.

➢ **Desire for excellence:** On this skill the interviewee said, <u>as I said</u> before the new doctors, nurses and other employees do not have the flexibility and initiative in their performance, and they are performing their work without trying to develop a means of performance. Apart from this most of them do not benefit from the possibilities available at hospital such as laboratory and equipment, because they are working in other hospitals (private sector) or social factors relating to marriage where the mother's labour has been experienced or because of social pressure because of family <u>obligations</u>.

In addition said, obviously, the nurses and employees (male, female) do not contribute to the development and dissemination of the vision and mission of the hospital, because lack of clarity in the policies of the sector of health and lack of skills and scientific capabilities. Also, because of same reasons already mentioned they do not participate in the formal and informal activities or volunteer activities, such as the conferences and scientific symposia or training courses.

➢ **Teamwork and problem-solving:** About this skill the interviewee said, <u>in brief,</u> I say there are three key factors affecting the feelings of the workers about belonging or not belonging to this institution. These are: They do not know how to deal with the results of developing process, a lack of clarity in the policies of the sector of health, and lack of skills and scientific capabilities. I think all these factors pushed the employees and nurses to not express ideas or trends - positive and negative- towards the <u>hospital</u>.

And he said, <u>in fact</u>, there is low motivation to work and the performance is only a minimum required to complete the work among employees and nurses, this is because the lack of incentives and relatively low wages. Also, a vast majority of them do not seek to influence the decisions of the group. Also, they have limited ability to debate and dialogue, because they do not understanding of orders and instructions or have limited ability to draw conclusions. About the doctors, surgeons and general practitioner we can say: They know that there is good opportunity for advancement on their job if they have the right skills, but there are some of them (New graduates) do not have motivation to work and their skills are close to the skills of <u>nurses</u>.

Also said, I think the nurses and employees did not study the communication methods at the university or institute, hence they do not have the ability to do the process of communication effectively during the performance of their jobs because they do not know how to use methods of communication at workplace. Apart from this, we can put several points to future planning for the health sector, are:

1. Linking the objectives of the curriculum with needs of the labour market.

2. Re-examine the methods of appointment.

3. Development of practical training during the study, by increasing the hours of practical training.

4. Provide the student with the necessary skills of how to work with the group and the absorption of its aims.

5. Provide students with skills, whose they needed to communicate and how to use them.

6. To the development of medical services in hospitals.

7. To maintain the existing capabilities of hospitals and develop them.

8. Develop the skills of medical staff (doctors, surgeons and general practitioner), and medical staff assistants (nurses and paramedics).

Appendix (13)
The summary of eighth interview (IN.8)
(The Health Sector) Chairman of the Department of Surgery

The ability of HE to meet the Libyan LM needs: the interviewee said, <u>the</u> positive changes in the learning environment evolve over time and do not occur quickly, the Libyan universities were started in 1957 but they use same teaching and transfer information methods. In fact, they are using the method of memorization in the teaching, where they focus on the transfer of information without the definition of how to use them depending on the <u>position</u>.

And he said, absence of the concepts of career commitment, competition, and excellence at the Libyan universities, because of there is no method to teach these skills in curriculum. Unfortunately, the study at the Libyan universities do not give the student appropriate ways for the development of skills such as we are talking about.

Also said, <u>in</u> fact, we suffer from a major problem which is the lack of coordination between the aims of economic activity and policies, and the aims of the education sector in general and HE in particular. This applies to the relationship between the health sector and institutions of <u>HE</u>.

The ability of the LM to absorb Libyan HE skill: the interviewee said, unfortunately, the higher education graduates do not know how can be deal with information technology and computers at the hospital, so we noted new employees and nurses do not know how use computer programmes that they need to perform their jobs.

And he said, in fact, the issue of the ability or inability to do any work is considered important. Of course, that effective participation in decision-making needs to able to dialogue and debate. But unfortunately, nurses and other employees do not have this ability.

Moreover, said, <u>we</u> observed weakness in competitiveness - Competitiveness is concept of the ability and performance of staff at workplace to provide services in a given institution - among the new doctors, nurses and other employees, I think this is because of a failure to involve them in the decisions of regarding methods and techniques to work within the hospital the appointments policy, which led to a rise the number of employees led to raise intensity of <u>labour</u>.

What is more, said, <u>I think</u> the most important factor of poor performance within the hospital is the lack of training for all employees in order to provide them with the skills necessary to use devices and equipment, Also, the lack of training leads to a decreased rate of performance among <u>them</u>.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs - in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find:

- ➢ **Job commitment:** On this skill the interviewee said, there are errors at work but unintentional and this may be because of the lack experience or the employees do not looking for the development of performance this might because of the desire to obtain career centre more than development of work.

  And he said, in hospital there are two types of information, the first relating to the administrative work, the second related to medical matters -regard to patients- here we noted though maintain the confidentiality of information concerning patients, but there is failure to maintain the confidentiality of management information.

  Also said, medical staffs have long experience and obtained training courses they have a high level of commitment, because they know that there is good opportunity for advancement on their job if they have the right skills. So, we noted they have a high degree of credibility and substantive in their work.

  Furthermore said, if we are talking about the dress code allocated to work at the hospital, we consider that there is a commitment, but if we are talking about Libyan customs and traditions this is a different matter. Because I see that a lot of employees -especially women- do not maintain our customs and traditions.

  Finally said, in many cases, we note that there is delay in the proceedings relating to administrative work and this of course affects the actions of medical staff. For instance, when we demanded some medicine or equipment, this demand may be delayed for several weeks because of competent administrative unit does not complete the procedures.

- ➢ **Competitiveness:** About this skill the interviewee said, because of working conditions and low salaries, I think that nurses and other administrators do not participate in formal or informal activities such as volunteer work and conferences, this may be because that the conferences, symposia and seminars at times do not fit the conditions of work.

  Furthermore said, in fact, the main aim of development process is development the staff's skill, but they are unknown how can deal results this process, because of lack of clarity in this process or poor of their preparation scientific.

- ➢ **Desire for excellence:** On this skill the interviewee said: as I said before, they do not have adequate skills to do better job than they do or there were not flexibility in their performance, And unfortunately, they do not benefit from the possibilities available at hospital such as laboratory and equipment because most of them do not looking for development of their performance.

Also said, <u>in fact</u>, the vision and mission of the hospital revolves around providing medical services to citizens without exception, but unfortunately, most of the staff do not understand this correctly. I think there are several factors have led to a lack of understanding amongst the staff. These factors can be divided into three types: the first factor is a social factor relating to marriage (this factor for females) and working in other hospitals (private sector). The second factor is the education factor relating to lack of skills and scientific capabilities. The third factor is regulatory; relating to a lack of clarity of the policy of health <u>sector</u>.

➤ **Teamwork and problem-solving:** About this skill the interviewee said, as I said before unfortunately, most of staffs do not understand the vision and mission of the hospital correctly, so they do not express ideas or trends -positive and negative- towards the hospital.

And he said, I think there are two main reasons limiting the ability of staff to dialogue and discussion, are: The first reason is limited ability to draw conclusions, the second is a lack of understanding of the orders or instructions.

Furthermore said, as I said before, the nurses and administrative staff do not have ability to initiative. This, in my opinion due to the low motivation to work and vast majority of them do not seek to influence the decisions of the group or lack of skills and scientific capabilities.

In the end said, <u>I think</u> the limited ability to draw conclusions and a lack of understanding of the orders or instructions are two main reasons limiting the ability of staff to engage in dialogue and <u>discussion</u>.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: With regard to plan development of the health sector I think it stall with the plan of higher education development in order to:

1. Provide the student with the necessary skills of how to work with the group and the absorption of its aims.

2. Provide students with skills, whose they needed to communicate and how to use them.

3. To the development of medical services in hospitals.

4. To develop the skills of higher education graduates (doctors, surgeons, general practitioner, nurses and paramedics) for deal with information technology and computers, and applied in the workplace.

Appendix (14)
The summary of ninth interview (IN.9)
(Sector of Industry) Director of Marketing Management

The ability of HE to meet the Libyan LM needs: the interviewee said, <u>due to</u> weakness of the facilities at the Libyan universities, and focus on the theoretical aspects and transfer of information without the definition of how to use them at workplace, so that we can note the new graduates do not know how they can deal with the devices and <u>equipment</u>.

And he said, first of all, I want to say that the Libyan universities cannot given their students skills such as career commitment, competition, excellence and others, because of that these skills do not exist within their curriculum, so I think that the graduates do not know these concepts.

The ability of the LM to absorb Libyan HE skill: the interviewee said, I think that the recruitment policy have been led to the rise the number of workers at all technical divisions in the company. Therefore, we can note weakness of the competitiveness among workers. In fact that the raise intensity of labour at the workplace led to each of them depends on others.

And he said, <u>for</u> the most part of the new university graduates I think they do not know how can to deal with information technology and computers, this may be they did not study computer system or information technology adequately at university. For example, when I ask someone to run a particular system, he starts asking questions, which shows he/she did not know what I am talking <u>about</u>.

Also said, <u>unfortunately</u>, for the most part the new university graduates do not have the ability to work as a group; because of they do not have communication skills whether relating to the technical work or human <u>relations</u>.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find:

➢ **Job commitment:** On this skill the interviewee said, <u>it is</u> common, that the employees in this company do not differentiate between the secrets of work and personal information, leaking information about the work. For example: if I told one of them something about the decisions that could be generated by the administration regarding functional promotions and allowances Etc, he/she told most his/her colleagues. What is more, they are talking about information concerning the technical department, and lack of separation between the personal information and work-related, with indifference to the <u>consequences</u>.

And he said, <u>fundamentally</u>, the employees who have a high level of commitment, they have long experience. Whereas the new employees do not have commitment because they are not looking for the development of their performance and their competitiveness is low. What is more, most of them are looking to obtain personal gain in the formal meetings. For example, the old employees are coming to the workplace before new employees and leave after them, also in the formal or informal meetings most new employees talk about their personal problems whilst old employees do not do <u>that</u>.

In the end said, <u>in fact</u>, are many examples of a lack of dedication to work such as: coming to the workplace after the office hours started and leaving the workplace before the end of office hours. Also, some of them did not maintain their equipment. Whereas, we find that the employees that have long experience have a high level of commitment more than the new <u>employees</u>.

➤ **Competitiveness:** About this skill the interviewee said, in fact that the volunteer activities refers to all forms of voluntary activity, whether formal or informal, within the company or outside, and is without concern for financial gain for this reason the employees do not participate in the formal and informal volunteer activities.

And he said, unfortunately, most of employees do not participate in the conferences and scientific symposia or training courses, this because of weakness of the scientific training and lack of knowledge of research methods.

Also said, <u>in fact</u>, self-development is particularly challenging for new employees, this may be because they do not tend to spend more time reading and learning because they are working under more stress, so they have less time to learn by <u>themselves</u>.

Finally said, simply put, development process is an effort that enhances the employee's capacity to be better than what he or she was. This process often aim to develop the basic work skills such as: decision making, problem solving, planning and organizing teams, etc. but here we can note that the problem is; the employees do not know how can dealing with the results of development process, this may be because of insufficiency of the training new employees or maybe there is no conformance between personnel aims and company regulations.

➤ **Desire for excellence:** On this skill the interviewee said, <u>in today's</u> rapidly changing workplace, we mostly focus on performance of the employees. In fact, that performance is more important than ever before. But many employees do not understand how performance takes place and what can be done to make the performance process better than before. For these reasons we find most employees in this company do not look to develop their <u>performance</u>.

And he said, in the most cases that require direct action I think the new employees cannot decision making to resolve it, because they do not have ability to do that. This may be because of and lack of training or lack of experience and this company has centrally organised.

Also said, in general we can note that there is not a clear development plan in this company, because all the development plans have been made by the central administration in Tripoli. These plans are often general and non-specific targets. For this reason, the employees do not contribute to the implementation of plans and policies work.

➢ **Teamwork and problem-solving:** About this skill the interviewee said, we need to make the relationship between employees and those responsible for this company within trust and honesty. It is part of the support for new employees. So they can complement learning and training on the job. I think this may be encouraging the employees to express their positive ideas towards the company and focusing on future performance.

Also said, I think the new employees often feel alienated from other employees. They may be unsure how to relate to old co-workers who question their abilities. So, the new employees treat the old co-workers differently. Under those circumstances, the new employees do not seek to influence the decisions of the group, because of a weak interaction on issues that do not belong to the work,

In addition said, because lack of the communication skills I think the new employees may be reluctant to ask questions or admit they need help from their boss or other old co-workers. And they do not understand of orders because they have limited ability to debate and draw conclusions.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: I think the both industry and higher education sector are need to new plans and scenarios due to: **(1):** Weakness of labour unions. **(2):** Scarcity of research centres dealing with the development of human resources. **(3):** The absence of laws regulating the relationship between workers and employers. **(4)**: The absence of skills and scientific capabilities, which limit ability of an employee's on develop working methods. **(5):** Lack of clarity in the organization's policies.

Appendix (15)
The summary of tenth interview (IN.10)
(Sector of Industry) Director of Financial Management

The ability of HE to meet the Libyan LM needs: the interviewee said, I think the Libyan universities do not provide effective access to curriculum materials and this because the universities focus on the transfer of information without the definition of how to use them depending on the position because of the weakness of the university possibilities. To be more precise, the practical training at the university was low.

And he said, in fact, the Libyan universities have the same curriculum, books and teachers with similar academic background and with the same method of teaching and learning. Hence, the Libyan universities do not have an ability to develop thinking in general and scientific thinking in particular or to develop concepts such as career commitment, competition, and excellence.

Also said, the rate of introduction of new technology into the university is very low, so cannot find a relationship between technical knowledge and learning at most Libyan universities. A related finding is that the underdevelopment of technical knowledge all economic sectors is the main reason for the absence of the relationship between technology and learning. To be more precise, the wages of highly educated employees are higher than less educated employees. Therefore, companies are using less educated workers.

The ability of the LM to absorb Libyan HE skill: the interviewee said, I think that the raise intensity of labour at the workplace led to each of them depends on others and due to this recruitment policy we can note that there is weakness of the competitiveness between employees. For instance, when I ask one of the employees to do certain work, I discovered he/she asked someone else to do this work.

Also said, For the most part of the new university graduates I think they are learning the technology skills at workplace, in other words the new graduates do not know to deal with the electronic systems needed by the working.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find:

➢ **Job commitment:** On this skill the interviewee said, within the context of professional ethics, I think all employees must be observing the principle of confidentiality means keeping information given by or about an individual in the work. But unfortunately employees do not understand this fact.

And he said: <u>reputation</u> is a fundamental instrument of the work system. It affects many issues in everyday working inside or outside the firm. But the employees do not care about the reputation of the company. For example, some technical problems may occur, but employees are talking about these problems with customers <u>incessantly</u>.

In addition said, <u>the</u> employees who have a high level of commitment, they have long experience, whereas the new employees do not have commitment because they are not looking for the development of their performance and their competitiveness is low. What is more, most of them are looking to obtain personal gain in the formal meetings. For example, the old employees are coming to the workplace before new employees and leave after them, also in the formal or informal meetings most new employees talk about their personal problems whilst old employees do not do <u>that</u>.

- ➢ **Competitiveness:** About this skill the interviewee said, I think the job commitment a key source of support that may trigger greater involvement in formal and informal activities or volunteer activities, which are related to better with ability to self-development. In fact these activities also include the conferences and scientific symposia or training courses. But we note that the most of employees had not been effectively participate in these activities.

And he said, in fact, there is no flexibility of performance because employees are trying to complete their work without the trouble. I think employees do not understand that the flexibility of performance has become one of the competitive tools.

Also said, the development process is a structure imposed on the development of the employees skills. In fact, there are several models to describing tasks or activities that take place during the process. Unfortunately, most employees consider the development process as a more general model aimed to development of the physical aspects of the company, and they do not know how dealing with the results of development can process because of weak of their scientific preparation.

- ➢ **Desire for excellence:** On this skill the interviewee said, in fact, the employees are trying a move to a higher position without any effort. Unfortunately, the employees do not understand that the development their performance that will increase their ability to contribute to the success of our organization.

And he said, in fact, the new employees only working with stereotypes and they are not learning the resiliency from the old employees in the face of adversities. I think this due to laws and regulations governing the work and their scientific training is low. So, we can note that there is no spirit of initiative among workers, especially in some cases that require direct action to resolve it.

Also said, in fact, the employees do not contribute to the implementation of plans and policies work, because this plan is unclear, general and non-specific aims. Also, there is no clearly philosophy, for this reason, the employees do not looking for development their performance.

In the end said, the employees do not contribute to the implementation of strategic plans and policies work for the same reasons mentioned above.

➤ **Teamwork and problem-solving:** About this skill the interviewee said, in fact, that the degree of employees motivation, can be increases work motivation in this company through rewards provided to contribute to employee work motivation, here we note there is work motivation but it is low.

Also said, in fact, today the employees are working in operating environments contain a wide range of threats and the risks. I think, these challenges, plus new technologies, require company's managers to use creative measures to provide positive protection to employees and equipment, because many of them do not understand decisions and orders, but they implemented the decisions and orders in order to avoid the risks.

Moreover, said, the unfortunate fact is that most employees do not know how to communicate effectively within the workplace. In fact, how can we expect employees to execute strategies, meet expectations and achieve the company goals if they are not diligent in communicating these very things? Unfortunately, what we have got here is a failure to communicate.

Finally said, understanding the need for teamwork is the first step in creating new behaviours within company that will represent work values in the future. But, because of a failure to communicate, indifference and lack of interest in the interaction with the group in matters that do not belong to the work, I think most of employees do not seek to influence the decisions of the group.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: We can provide a strong argument for build scenarios to national HE planning and Libyan LM for:

1. Development the ability of employees to self-development or institutional in all specialties.
2. Formulate laws regulating the relationship between workers and employers.
3. Development the skills and scientific capabilities, which limit ability of an employee's to develop working methods.

Appendix (16)
The summary of eleventh interview (IN.11)
(The Health Sector) Head of Emergency Department

The ability of HE to meet the Libyan LM needs: the interviewee said, in most cases, that the aim of transfer information to the students is to give the students time to understand their obligations towards the their future job, but we note most the new employees and nurses (male/female) do not know how can use appliances and equipment in this hospital, This means that the universities have transfer information without the definition of how to use them depending on the position.

And he said, the practical training of university students is very important in order to provide them with the necessary expertise to use equipment and devices that are available in hospital laboratories. But, I think the practical training at the university is low because of weak the possibilities of material and human resources.

Also said, the most important obstacles that stand in the way of attention to community development and scientific research is that the focus of most of the faculty members on the educational aspect by using memorization as a method of teaching.

Furthermore said, specifically, I think there are no implementation mechanisms to explain the universities perspective about their aims and policies. So we noted there is ambiguity in these policies and goals, and therefore it is difficult for us to understand the policies of the HE institutions.

In the end said, where that the Libyan universities do not have clear aims, so it is natural to say they do not have method to teach these skills at their curriculum. This leads me to believe that there are not concepts such as career commitment, competition and excellence at the undergraduate.

The ability of the LM to absorb Libyan HE skill: the interviewee said, the important question is how staff can use their skills to be able to compete with each other; here we can find that the staff do not look for the development of their performance, due to failure to involve them in the decisions of regarding methods and techniques to work, so I think this makes them unable to compete.

Also said, in fact, that the failure to involve staff in the decisions of regarding methods and techniques to work due to their inability dialogue and discussion.

In addition said, indeed, many managers have not understood that training was the best way to improve performance of staff. In fact, I noticed that training for staff has become very low these days in all specialties.

Furthermore said, when computer and information technology are combined, I think the result is understanding how to perform tasks effectively. Today, the information technology has ballooned to

encompass many aspects of jobs. So, the staffs do not work effectively without knowing how to use a computer. Unfortunately, most nurses and other staff (male/female) do not know how to deal with information technology and computers, and apply it at the workplace <u>effectively</u>.

Finally said, for a long time the recruitment policy is based on the absorption of all the graduates this led to raise the intensity of manpower within the hospital.

<u>**Employers views of the employees skills:**</u> To examine the relationships between higher education and Libyan LM needs in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find:

➢ **Job commitment**: On this skill the interviewee said, <u>that</u> the use of devices and equipment properly leads to preservation of them. So we can note there is maintenance of the equipment, because of the laws governing the work at this <u>hospital</u>.

 Also said, in particular, doctors and nurses that have long experience, they have a high degree of credibility substantive in the work, because they want to advancement in their job by acquisition right skills.

 In addition said, the time is a critical factor when carrying out the tasks, but I noted that most of administrative staff have not interested in working time. About the works of medical can say that there is no specific time for completion of the work, because of medical staff are dealing with medical conditions do not impose a specific.

 Furthermore said, <u>first</u> of all, I want to say there is no full commitment to working hours and punctuality by most workers in this hospital, because most of them are working at other hospitals. In fact some of them are working in more than one place at the same time. I really do not know how they do so, but I guess they have manipulated the official working <u>hours</u>.

 In the end said, accordance with the laws and regulations governing the conduct of work there clothes for each job, where we find the clothes belong to nurses or doctors or professionals, so we can say that there is commitment of the general appearance of the doctors and nurses (male/female) in terms of dress.

➢ **Competitiveness:** About this skill the interviewee said, if we are talking about scientific activity I can assert that the nurses and administrative staff do not participate in any conferences or seminars, the volunteer activities are limited. And the doctors are involved in conferences and seminars more than the rest of staff because they need to conduct research and provide worksheets for impose access to promotions.

 And he said, I think because of unclear plans for the development in the health sector, so the nurses and administrative staff (male/female) do not know how can dealing with the results

development process. To be more visible the staffs do not understand the objectives of the development process because it does not derive from the reality of work.

> **Desire for excellence:** On this skill the interviewee said, in fact, the nurses and administrative staff (male/female) do not looking for the development of performance, also the do not benefit from the equipment, tools and laboratories, which available at workplace. I think because they are working in other workplace and social factors relating to marriage and this factor for females only.

And he said, <u>as</u> I say before, the nurses and administrative staff are not looking for the development of performance and therefore they do not have a spirit of initiative and creativity, especially in some cases that require direct action to reach a resolution. This may be due to the laws and regulations governing work or lack of experience, and because some of them are not fit to work in the hospital such as lab technicians who did not study in the faculties of medical <u>technology</u>.

Also said, apparently, the nurses and administrative staff (male/female) do not contribute to the development and dissemination of the vision and mission Institution, because of lack of clarity in the institution policies or lack of skills and scientific capabilities or the inability of workers to self-development or institutional, In fact, I think they do not feel belonging to the workplace.

> **Teamwork and problem-solving:** About this skill the interviewee said, as I said, if the nurses and administrative staff (male/female) do not contribute to the development and dissemination of the vision and mission hospital, therefore they do not express ideas and trends of positive or negative towards it, this may due to they do not feel belonging to the workplace.

And he said: as I said, the staffs do not have ability dialogue and discussion this led to failure to involve them in the decisions of regarding methods and techniques to work. And this may result in a lack of understanding of orders and instructions; consequently, they have not been able to draw conclusions.

Also said, <u>in fact</u>, the money is not the only motivator. There are other incentives which can also serve as motivators, because the motivation is a psychological process basically. In the absence of moral stimuli we noted that the motivation to work is low among nurses and administrative <u>staff</u>.

On the other hand he said, <u>unfortunately</u>, universities in Libya do not teach their students the techniques and methods of communication that are commensurate with their specialties, for this reason the employees and nurses do not have the ability to do the process of communication <u>effectively</u>.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: In fact, there are some points we can rely upon when planning for the health sector or higher education, are:

1. Develop the skills of employees (doctors, nurses and others) to deal with information technology and computers, and applied in the workplace.

2. Development of practical training during the study, by increasing the hours of practical training.

3. Development of medical services in hospitals. Also, to maintain the existing capabilities of hospitals and develop them.

4. Provide the student with the necessary skills of how to work with the group and the absorption of its aims.

Appendix (17)

The summary of twelfth interview (IN.12)

(Sector of Industry) Director of Technical Operations

The ability of HE to meet the Libyan LM needs: the interviewee said, in fact, that the fundamental purposes of a university are creation and dissemination of knowledge in the form of information, and provide framework for technology transfer. But the Libyan universities only dependent on the method of memorization for information transfer without the definition of how to use them depending on the position.

And he said, I think the students should place special emphasis on concepts such as career commitment, competition, and excellence within the company, because of these concepts do not exist within curriculum of the Libyan universities.

Also said, in fact, that the practical training of university students is one of the essential prerequisites to understand technical lectures and tutorials adequately. But due to weakness of the possibilities at the Libyan universities, and focus on the theoretical aspects I think the practical training at the university is very low.

In the end said, there are several factors that led to the lack of a relationship between use of technology and education at the university such as: dependent on the method of memorization, weakness of the possibilities, same curriculum and similar academic background, maybe all these factors have resulted in a failure to develop the scientific thinking [systematic thinking] among students.

The ability of the LM to absorb Libyan HE skill: the interviewee said, in fact, that the company's practices can have far-reaching effects on competitiveness of employees. For instance: that the high intensity of labour within the workplace due to the recruitment policies lead to increase labour costs greatly, and this is affect competitive advantage of employees because they represent a large portion of a company's operating budget. Because of this, the company cannot put program to develop the competitiveness of employees.

Employers views of the employees skills: To examine the relationships between higher education and Libyan labour market needs in relation to job commitment, competitiveness, desire for excellence and teamwork and problem-solving, find:

➢ **Job commitment:** On this skill the interviewee said, in fact, most of employees looking for obtain personal gain and they are not interested in the firm's reputation. For example, in the formal meetings most new employees talking about their personal problems and disadvantages of the company.

And he said, <u>the</u> question posed here relates to serious and substantive work, here we can talk about the serious and substantive work through defining rights and duties which are established by law. So, we can note, first, the employees do not carry out all provisions of laws and regulations, second, the laws and regulations do not change accordance to evolution of the company's business, and third, there is negligence using <u>devices</u>.

Also said, I thought that the most competitive employees in company are those with a university degree. But now I think that employees are not competitive. <u>They</u> are not looking for development of performance and they are routinely performing their work without any attempt to develop methods of <u>work</u>.

➢ **Competitiveness:** About this skill the interviewee said, <u>I think</u> because the voluntary activities do not give any financial gain, hence the employees do not participate in these <u>activities</u>.

And he said, <u>ironically</u>, the most of employees at this company are graduates of the university but they do not participate in the conferences and scientific symposia, and this is because they do not know the research <u>methods</u>.

Also said, I thought that the employees have trends to self-development in company are university graduates. But I find that other employees do not tend to spend more time to learning themselves.

Furthermore said, I think the employees are key stakeholders at the development process within the company, because the development process aimed to develop their skills. Also, it is responsible for regulating the safety and efficacy their job. Unfortunately, they do not know how can dealing with the results of this process, because they do not have sufficient experiences or to scientific poor preparation at the university.

In the end said, I think because weakness of the training employees and they are trying to complete their work without the trouble, we find there are absence of the performance flexibility and inability to initiative. In other words, that lack of training has pushed employees to complete their jobs by any means; this explains the absence of the performance flexibility and inability to initiative.

➢ **Desire for excellence,** on this skill the interviewee said, I think there is overlap between competitiveness skill and desire for excellence skill, so we can say same thing about both skills. But here we find that the employees do not contribute to the implementation of strategic plans and policies work because there are not obvious policies in this company.

➢ **Teamwork and problem-solving:** About this skill the interviewee said, <u>I think</u> there are many negative effects on the company, because the employee's motivation to perform work is low.

So, we must change the working climate prevailing in the company. The employees do not express their ideas and trends towards the company <u>clearly</u>.

Also said, <u>in fact</u>, we need new approaches to re-consideration of the decision making process and opportunities to improve decision making in the context of complex problems. It is common, that the employees implement decisions and orders in order to avoid the non-compliance <u>risks</u>.

Moreover, said, in fact, the making decisions within a group can often be challenging. When things go well, they can go very well. But some employees may fight for recognition and position, while others may sit quietly and not contribute anything do not belong to the work may be because of the low level of human relations within the LM. Because of this, groups can often spin out of control and make worse decisions than employees working on their own. So we find that the most of employees do not seek to influence the decisions of the group.

Finally said, <u>I think</u> debate would lead eventually to truth or at least to decision-making. But we can note that failures to reach a decision or settle a dispute about work within the company were caused by unskilled communication, poor debate technique, this is because the employees did not study the methods of communication at the university or they do not know how to use methods of communication at <u>work</u>.

Finally, about how can provide a strong case for build scenarios to national HE planning and LM? The interviewee said: I think that the most important reasons to develop new plans for the industry sector are:

1. To develop the skills of higher education graduates to deal with information technology and computers, and applied in the workplace.

2. Weakness of labour unions and scarcity of research centres dealing with the development of human resources.

3. Provide the student with the necessary skills of how to work with the group and the absorption of its aims.

Appendix (18)

First phase of the DT questionnaire

(I): Arabic version of the first phase of the DT questionnaire

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

بسم الله الرحمن الرحيم

الآخ/ الاخت:- ....

بعد التحية

أنا زكريا عبد الله العوكلي، طالب دكتوراه في جامعة *Gloucestershier* في المملكة المتحدة، وأقوم بإجراء دراسة حول العلاقة بين مهارات التعليم العالي واحتياجات سوق العمل في ليبيا، حيث تتركز أهداف البحث حول أربع مهارات أساسية، هي:

1. الالتزام الوظيفي.
2. القدرة على المنافسة.
3. الرغبة في التفوق.
4. العمل الجماعي وحل لمشكلات

وفي هذه المرحلة من البحث استخدم تقنية دالفي وذلك لغرض بناء سيناريوهات للتعليم العالي وسوق العمل في ليبيا، لهذا تم اختياركم للاشتراك في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان. كما أن أسئلة البحث الأساسية هي:

1. ماهي السبل التي تجعل مهارات التعليم العالي و احتياجات سوق العمل المتغيرة في ليبيا تتماشى بشكل افضل؟
2. كيف يمكن تكييف تقنية دلفي و تطبيقها لفهم العلاقة بين مهارات التعليم العالي و احتياجات سوق العمل في ليبيا؟

علية، أمل منكم التكرم بالمشاركة في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان، مع ملاحظة أن هذه الطريقة تتطلب عدة مراحل لإتمامها بحيث يتم إرسال الاستبيان إليكم واسترجاعه ما بين ثلاث إلى خمس مرات، كما أن المعلومات التي ستدلون بها تخضع لأخلاقيات البحث العلمي المعتمدة من قبل الجامعة والتي تنص على سرية المعلومات وعدم الإطلاع عليها إلا من قبل الباحث نفسه، وعدم الكشف عن الأشخاص المشتركين في البحث.

س 1 ما أهم العوامل التي تؤثر على اكتساب الطلاب للمهارات المذكورة؟
س 2 ما أهم العوامل التي تؤثر على استيعاب سوق العمل لهذه المهارات؟
س 3 إذا كان لديكم أي رؤية أو مقترحات ذات علاقة بالموضوع من فضلك أذكرها؟

شاكرين حسن تعاونكم سلفا

الباحث
زكريا عبد الله العوكلي

ملاحظة: ان كل المعلومات التي ستدلون بها تخضع للسرية التامة وفقا لمعايير اخلاقيات البحث التي تعتمدها الجامعة

(II): English version of the first phase of the DT questionnaire

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

In the name of God the Merciful

Dear: Sir/ Madam……

I am Zakarya Abdulla Elaokali, I am PhD student at *University of Gloucestershire* in the United Kingdom, and this a questionnaire is to data collection instrument for a research project as part of a course at the University of Gloucestershire (PhD). The primary aim of the research is to evaluate the relationship between higher education skills and Libyan labour market needs, where the objectives of the research focused on four basic skills, are:

1. Job commitment.
2. Competitiveness.
3. Desire for excellence.
4. Teamwork and problem-solving.

At this stage of research I use the Delphi Technique to build scenarios for higher education and the labour market in Libya. Accordingly to this, you will be my choice as expert to answering this questionnaire. In fact this research will investigate the following:

1. In what ways could higher education skills and changing labour market needs in Libya be better aligned?

2. How can the Delphi technique be adapted and applied to the understanding of the relationship between higher education skills and labour market needs in the context of Libya.

Evidently, this method requires several stages to complete the questionnaire. To achieve this, I am going to send this questionnaire to you between three and five times, and it would be greatly appreciated if you could take short time to provide me with some data by answering the questions.

- *Q1: What are the main factors that affect the students acquire the skills listed?*
- *Q2: What are the main factors that affect the labour market to absorb these skills?*
- *Q3: If you have any vision or proposals related to the topic, please mention them?*

Thank you

PhD. Student
Zakarya Abdulla Elaokali

Note: The information that is disclosed in the context of a professional relationship will be held confidential, and so the research proposed will be conducted within the framework of the University's Research Ethics Code.

Appendix (19)

Questionnaire of virtual test honesty

(I): Arabic version of the questionnaire of virtual test honesty

**UNIVERSITY OF
GLOUCESTERSHIRE**
at Cheltenham and Gloucester

بسم الله الرحمن الرحيم

الآخ/ الاخت:- ....

بعد التحية

أنا زكريا عبد الله العوكلي، طالب دكتوراه في جامعة *Gloucestershier* في المملكة المتحدة، وأقوم بإجراء دراسة حول العلاقة بين مهارات التعليم العالي واحتياجات سوق العمل في ليبيا، حيث تتركز أهداف البحث حول أربع مهارات أساسية، هي:

1. الالتزام الوظيفي.
2. القدرة على المنافسة.
3. الرغبة في التفوق.
4. العمل الجماعي وحل لمشكلات

وفي هذه المرحلة من البحث استخدم تقنية دالفي وذلك لغرض بناء سيناريوهات للتعليم العالي وسوق العمل في ليبيا ، لهذا تم اختياركم للاشتراك في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان, كما أن أسئلة البحث الأساسية هي:

1. ماهي السبل التي تجعل مهارات التعليم العالي و احتياجات سوق العمل المتغيرة في ليبيا تتماشى بشكل افضل؟
2. كيف يمكن تكييف تقنية دلفي و تطبيقها لفهم العلاقة بين مهارات التعليم العالي و احتياجات سوق العمل في ليبيا؟

علية ، أمل منكم التكرم بالمشاركة في هذا البحث عبر بيان درجة صلاحية الفقرات الواردة في الاستبيان من خلال الموافقة او عدم الموافقة عليها, وكذلك بيان درجة انتماء كل فقرة للبعد الذي كتبت فيه, واخيرا ذكر اي تعديلات ترى انها يجب ان تضاف او تحذف من الفقرة .

شاكرين حسن تعاونكم سلفا

الباحث
زكريا عبد الله العوكلي

ملاحظات
(1): الرجاء وضع علامة (X) امام العبارة مقابل الديل الذي سوف تقوم باختيارة
(2): ان كل المعلومات التي ستدلون بها تخضع للسرية التامة وفقا لمعايير اخلاقيات البحث التي تعتمدها الجامعة

م	الفقـــــــــــــــــــــــرات	موافق	غير موافق	درجة انتماء الفقرة للبعد		تحتاج الى تعديل
				تنتمي	لا تنتمي	

	التعليم العالي					
	(أ): البيئة الداخلية					
1	ضعف التدريب العملي في المرحلة الجامعية.					
2	لا توجد طريقة لتعليم هذه المهارات في المناهج الدراسية.					
3	غياب مفاهيم الالتزام الوظيفي و المنافسة و التفوق في الجامعات الليبية.					
4	عدم قدرة الطلاب على استيعاب المعلومات وتحويلها الى معرفة قابلة للاستخدام.					
5	عدم القدرة على التكيف و التعلم بسرعة و امتلاك المهارات اللازمة لذلك.					
6	عدم القدرة على التعاون في العمل ضمن مجموعة ، بسبب عدم امتلاك مهارات الاتصال اللفظية و الكتابية و غيرها.					
7	القوى العاملة لا تمتلك مهارات تختلف عن المهارات التقليدية المطلوبة للأعمال الروتينية.					
8	عدم وجود بدائل متعددة مطروحة أمام الطالب للاختيار بينها.					
9	عدم وجود أكثر من مجال في الجامعات الليبية لتغطية احتياجات سوق العمل.					
10	عدم وجود ربط التقنية بالتعلم و تشجيع الطلبة و تنمية التفكير بشكل عام والتفكير العلمي على وجه الخصوص.					
11	الاعتماد على اسلوب التلقين عند تدريس المقررات.					
12	عدم وجود برامج علمية حقيقية تطور قدرات الاداء لدى الطلبة.					
13	عدم وجود معايير دقيقة متعلقة بقبول الطلاب في الجامعات الليبية.					
14	قلة استخدام التقنيات الحديثة اللازمة للعملية التعليمية.					
15	جمود الخطط الدراسية و مقرراتها وعدم مواكبتها للتطور العلمي السريع.					
16	قلة الاهتمام باللغات الاجنبية مما يؤثر على قدرة الطالب على التعلم والتنمية الذاتية امهاراته.					
17	تدني مستوى التعليم قبل الجامعي.					
18	غياب برامج اعداد المعلم الجامعي.					
19	عدم تحري الدقة في اخيار اعضاء هيأة التدريس من الاجانب.					
20	عدم وجود معايير لانتقاء اعضاء هيأة التدريس من المعيدين.					
21	عدم التوازن في مرتبات العاملين داخل الجامعة.					
22	عدم التوازن في أعداد الطلاب بين الاقسام المختلفة.					
23	ارتفاع التكاليف الطلابية لبعض الاقسام.					
24	استمرار عمل بعض الاقسام العلمية رغم عزوف الطلاب عنها.					
25	كثرة الاختبارات الدراسية التي يخوضها الطالب.					
26	انخفاض مستوى دافعية الطلاب للدراسة.					
27	تركيز معظم اعضاء هيأة التدريس على الجانب التعليمي دون التركيز على على التنمية المجتمعية والبحث العلمي.					

					وجود الكثير من المحاضرات في الفترة المسائية.	28
					كثير من اسئلة الامتحانات اجبارية.	29
					عدم تدريب الطلاب على استخدام وسائل الاتصال المختلفة.	30
					عدم توافر وسائل الترفية و عدم وجود الهدوء بالاسكان الجامعي و ارتفاع كثافة الغرفة والواحدة.	31
					غياب الوعي الادراكي لدى الطلاب نحو العدالة التنظيمية.	32
					(II): البيئة الخارجية	
					العوامل الاقتصادية	
					عدم وجود بنية تحية لتكنولوجيا المعلومات والاتصالات.	33
					انخفاض مستوى الانفاق على التعليم العالي.	34
					نقص المعامل والمختبرات داخل الجامعات و عدم احتواء المكتبات على المصادر الحديثة.	35
					ضعف الانفاق على البحوث و الدراسات في الجامعات.	36
					ضعف الانفاق على نشر الكتاب الجامعي.	37
					تردي حالة المباني الجامعية.	38
					تردي مستوى الخدمات العامة داخل الجامعات كالرعاية الصحية.	39
					العوامل السياسية	
					عدم وجود كليات "التربية" التي تهدف أساسا لتخريج المدرسين حيث يتلقى الطالب المواد العلمية بجانب الإعداد المهني للتعليم.	40
					غياب الاستقرار الاداري و التنظيمي للجامعات.	41
					عدم وجود فلسفة شاملة واضحة المبادئ و المتطلبات و الاهداف و السياسات.	42
					غياب استراايجيات و اليات التنفيذ التي توضح معتقدات و منطلقات مؤسسات التعليم العالي.	43
					الاتفصام التام بين اجهزة التخطيط المركزية التابعة لمؤسسات الدولة وبين اجهزة التخطيط في قطاع التعليم العالي.	44
					عدم وجود هيأة مسؤولة عن التعليم العالي بشكل مستمر.	45
					الاكثار من انشاء الجامعات القزمية (جامعات الاقسام).	46
					العوامل التنافسية	
					غياب برامج التعليم المستمر لأعضاء هيأة التدريس و عجز اعضاء هيأة التدريس على الابتكار و التعلم المستمر.	47
					قصر العام الدراسي حيث يبلغ عدد اسابيع الدراسة الفعلية مالابين 22-25 اسبوع.	48
					غياب معايير محددة وواضحة لقياس جودة الجامعات بغرض تحسين التعليم العالي ومخرجاته.	49
					عدم وجود نظام معلومات جيد في الجامعات مما يؤدي إلى غياب المعلومات الكافية لصانعي القرار وواضعي المناهج.	50
					ندرة و ضعف عقد المؤتمرات و الندوات العلمية.	51
					عدم مراعات التوزيع الديموغافي عند انشاء الجامعات.	52
					التوزيع الجغرافي غير السوي للجامعات.	53
					عدم التوازن في توزيع المخصصات المالية بين الجامعات.	54

					العوامل الاجتماعية والثقافية	
					عدم وجود مفاهيم الالتزام الوظيفي، و المنافسة، و التفوق في المجتمع الليبي.	55
					عدم مراعات التنوع الثقافي بين المناطق.	56
					عدم الاخذ في الاعتبار اثر العادات والتقاليد عند التخطيط للتعليم العالي.	57
					ضعف المستوى الثقافي وارتفاع معدل الامية بين اولياء الامور.	58
					كبر حجم الاسرة كنوع من الضمان للوالدين بسبب التأثر بالعادات والتقاليد.	59
					تدني المستوى الثقافي للمجتمع ككل.	60
					سوق العمل	
					(I): البيئة الداخلية	
					عدم وجود سوق عمل بالمعني الحقيقي في ليبيا.	61
					عدم إجراء التقييم المستمر والمتابعة من أجل تحقيق التنمية البشرية وفقا للمعايير الدولية والخصوصيات الوطنية.	62
					عدم اتقان الخريجين لكيفية التعامل مع تقنية المعلومات و الحواسيب و تطبقها في مجال العمل.	63
					ضعف الدورات التدريبية و عدم القدرة على توفير التعليم المستمر وبرامج تأهيل القوى العاملة.	64
					استخدام العمالة الوافدة مما يقلص فرص العمل للخريجين من الوطنيين	65
					لا يوجد دراسات مبنية على التخطيط العلمي لمعرفة احتياجات البلد الحديثة.	66
					عدم التخصص وتقسيم العمل داخل دوائر الدولة.	67
					غياب مفهوم الكفاءة والتفوق كاساس للحصول على العمل.	68
					لا توجد معايير محددة لقياس اداء العاملين او مواقع العمل من شركات و مصانع وغيرها.	69
					ضعف المناخ المؤسسي داخل القاع العام.	70
					تدني مستوى السلوكيات القيادية للمدير الاداري.	71
					تدني سلوك الخريجين في سوق العمل لعدم رضاهم الوظيفي.	72
					ضعف مستوى العلاقات الانسانية داخل سوق العمل.	73
					انخفاض انتاجية القوى العاملة الليبية.	74
					(II): البيئة الخارجية	
					العوامل الاقتصادية	
					ربط الاجور والمكافآت بالدرجة الوظيفية بدل من ربطها بالاداء.	75
					ضعف القطاع الخاص بسبب الاعتماد على القطاع العام لامتصاص مخرجات التعليم.	76
					عدم وجود رأسمال خاص و كبير للعمل في السوق الليبية.	77
					انخفاض الحوافز والمكافآت داخل قطاعت العمل المختلفة.	78
					ضعف الميزانيات المخصصة لتنمية الموارد البشرية.	79
					ندرة المراكز البحثية التي تهتم بتنمية الموارد البشرية.	80
					عدم التوازن في توزيع الانفاق العام بين القطاعات الاقتصادية المختلفة.	81
					عدم مراعات التوزيع الديموغافي عند توزيع الاستثمارات.	82

						العوامل السياسية	
						غياب القوانين و القرارات التي تنظم سوق العمل بشكل صحيح.	83
						عدم تطوير القوانينة و الانظمة السائدة لتصبح اكثر فاعلية تجاة اقناع المستثمرين و الشركات الخاصة بأهمية استثماراتها.	84
						ضعف النقابات العمالية يؤدي إلى جعلها عرضة للتدخلات الخارجية.	85
						غياب القوانين التي تنظم العلاقة بين العاملين و الاباب العمل بشكل صحيح.	86
						عدم وجود استقرار اداري في المؤسسات التي تهتم بسوق العمل.	87
						غياب الاستراتيجيات الواضحة لتطوير سوق العمل.	88
						انخفاض معدلات العدالة التنظيمية للعاملين من قبل المديرين في سوق العمل.	89
						العوامل التنافسية	
						عدم قدرة سوق العمل على التغير السريع و الاحساس بضرورة متابعة التغيرات العالمية.	90
						عدم تنوع هيكل الاقتصاد الوطني من أجل ضمان عنصر الاستدامة في عملية التنمية.	91
						عدم وضوح هيكل سوق العمل و الطرق التي تحكم اساليب تدفق عمله.	92
						ضعف روابط المعرفة بنظم المعلومات الرقمية التي تتولى عملية التطوير في هياكل الانتاج.	93
						الخلط بين مفاهيم المنافسة والعمل الجماعي عند الخريجين.	94
						ضعف القدرة على اتخاذ القرارات لدى القادة الاداريين و كذلك العاملين.	95
						تفشي ظاهرة البطالة المقنعة في المناطق الزراعية ذات الطابع القبلي.	96
						العوامل الاجتماعية والثقافية	
						عدم الاهتمام بالتغيرات التي تحدث في بيئة العمل والتي تعد نتيجة طبيعية لظهور اقتصاد المعرفة.	97
						عدم تعزيز قيم العمل الامر الذي ادى الى ازدياد تأثير القيم الاجتماعية على فرص العمل.	98
						وجود بعض العادات الاجتماعية التي تحد من المسألة الوظيفية وتعزيز قيم العمل.	99
						غياب المفهوم الصحيح للتفوض الاداري من قبل المدير للمرؤسين.	100
						عدم وجود مفاهيم الالتزام الوظيفي، و المنافسة، و التفوق في سوق العمل.	101
						ضعف المستوى الثقافي لافراد القوى العاملة.	102

(II): English version of the Questionnaire of virtual test honesty

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

Dear: Sir/ Madam...

I am Zakarya Abdulla Elaokali, I am PhD student at *University of Gloucestershire* in the United Kingdom, and I conduct a study on the relationship between higher education skills and Libyan labour market needs, where the objectives of the research focused on four basic skills, are:

1. Job commitment.
2. Competitiveness.
3. Desire for excellence.
4. Teamwork and problem-solving.

At this stage of research I use the Delphi Technique to building scenarios for higher education and the labour market in Libya. Accordingly to this, you would be my choice as expert to answering this questionnaire. In fact this research will investigate the following:

(1) In what ways could higher education skills and changing labour market needs in Libya be better aligned?

(2) How can the Delphi technique be adapted and applied to the understanding of the relationship between higher education skills and labour market needs in the context of Libya.

The researcher is using this questionnaire to determine the appropriate paragraphs to achieve the objectives of the research.

Thank you

PhD. Student
Zakarya Elaokali

Notes:
1   Please put a cross (x) in the relevant box.
2   The information that is disclosed in the context of a professional relationship will be held confidential, and so the research proposed will be conducted within the framework of the University's Research Ethics Code.
3   If you select the alternative (Need to amended) that is means you agree to the paragraph, provided modified.

No	Questionnaire Paragraphs	Answer choices		Level of affiliation		Need to amended
		Agree	Disagree	Belong	Non-belong	
The higher education						
(I): Internal environment						
1	Weakness of practical training during the undergraduate.					
2	In curriculum there is no method to teach these skills.					
3	The absence of the concepts of career commitment, competition, and excellence at the Libyan universities.					
4	The inability of students to absorb information and turn it into usable knowledge.					
5	Inability to adapt and learn quickly and possess the skills necessary to do it.					
6	Inability to work collaboratively within a group, because of non-possession of skills of verbal and written communication and others.					
7	The manpower does not have the skills different from traditional skills requested for work routine.					
8	The absence of multiple alternatives in front of the student to choose between them.					
9	The absence of multiple domains at the Libyan universities to meet the labour market needs.					
10	There is no correlation between technical and learning, and failure to develop of thinking in general and scientific thinking in particular.					
11	Using the method of memorization in teaching.					
12	There are no real scientific programmes evolving capacities of the performance of the students.					
13	The absence of precise criteria to admission students at Libyan universities.					
14	Low use of modern technologies for the educational process.					

15	Rigidity of the study plans and decisions, and failure to keep pace with the rapid evolution of science.					
16	Lack of interest in foreign languages, which affects the student's ability to learn and develop his skills.					
17	The low level of pre-university education.					
18	There are not programmes to preparation of university teacher.					
19	Lack of accuracy when choice the non-Libyan faculty members.					
20	The absence of criteria for the selection of assistant lecturer for the work at universities.					
21	The imbalance in the salaries of employees within the university.					
22	There is no balance in the distribution of students between the departments at universities.					
23	Higher costs for some scientific departments.					
24	The continuation of some of the scientific departments, despite low turnout of students.					
25	The large number of examinations that being fought by student.					
26	Low level of motivation among students to study.					
27	Focus most of the lecturers in the educational aspect without focusing on the community development and scientific research.					
28	There are a lot of lectures in the evening.					
29	Many exam questions are mandatory.					
30	Lack of training students to use different communication methods.					
31	The lack of entertainment and there is no quiet campus housing and high density for the room.					
32	Lack of awareness among students toward organizational justice.					

(II): External environment					
Economic factors					
33	The absence the structure of information and communication technology.				
34	The low level of spending on higher education.				
35	There are no sufficient laboratories at the universities, and the libraries do not contain the modern periodicals and books.				
36	Weakness spending of research and studies at universities.				
37	Double the spending on the publication of the university books.				
38	The poor state of university buildings				
39	Deterioration of the level of public services within universities such as health care.				
Political factors					
40	The lack of colleges of education whose primary purpose is to preparation of teachers, where the student receives the scientific side and professional preparation for teaching.				
41	The absence of administrative and organizational stability of universities.				
42	There is no comprehensive philosophy are clear principles and requirements, targets and policies.				
43	There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives.				
44	There is no relationship between the central planning system and planning system on the higher education sector.				
45	Absence of a board is responsible for higher education on an ongoing basis.				
46	Propagation of the establishment of small universities that does not have human resources and capital assets.				
Competitive factors					
47	The absence of continuing education programmes for lecturers, and the inability of lecturer on innovation and continuous learning.				

48	The actual study during the academic year is not sufficient (between 22 and 25 weeks).				
49	There are no specific criteria for measuring the quality of universities in order to improve higher education and its outputs.				
50	The lack of good information system at universities leads to lack of adequate information for decision-makers and curriculum designers.				
51	Scarcity and poor conduct conferences and scientific symposia.				
52	Not to mind the demographic distribution when creation of universities.				
53	The uneven geographical distribution of universities.				
54	Imbalance in the distribution of financial allocations between universities.				
Social and cultural factors					
55	The absence of the concepts of career commitment, competition, and excellence in the Libyan society.				
56	Not to mind the cultural diversity between regions.				
57	Lack of attention of impact of the customs and traditions on the educational system when planning for higher education.				
58	Weakness of the cultural level and the high rate of illiteracy among parents.				
59	Large family size as a guarantee for parents, because of the effect of the customs and traditions.				
60	Low cultural level of society as a whole.				
The labour market					
(I): Internal environment					
61	The absence of a labour market in real terms in Libya.				
62	The lack of continuous assessment and follow-up in order to achieve human development in accordance with international standards and national particularities.				

63	The higher education graduates do not know how can be deal with information technology and computers, and applied at the workplace.					
64	Weak training courses and inability to provide continuing education.					
65	Use of foreign labour, which will reduce job opportunities for Libyans graduates.					
66	No studies that are based on scientific planning to know the country needs.					
67	Lack of specialization and division of labour within the economic sectors.					
68	The absence of the concept of efficiency and excellence as a basis to get to jobs.					
69	There are no specific criteria for measuring the performance of workers or companies and factories.					
70	Weak institutional environment within the public sector.					
71	The low level of leadership behaviours among the managers.					
72	Low the behaviour of graduates at the labour market due to lack of their job satisfaction.					
73	The low level of human relations within the labour market.					
74	Low of Libyan manpower productivity.					
(II): External environment						
Economic factors						
75	Linking the wages and bonuses with position functional rather than linked to performance.					
76	Weak private sector because of reliance on the public sector to absorb the output of the education system.					
77	The absence of large private capital to work in the Libyan labour market.					
78	Low incentives and rewards within different business sectors.					
79	Low budgets allocated to development of human resources.					
80	Scarcity of research centres dealing with the development of human resources.					

81	The imbalance in the distribution of public spending between different economic sectors.					
82	Not taking into account the population distribution when distribution of investments.					
Political factors						
83	Absence of laws and decisions governing the labour market correctly.					
84	Not to develop laws and regulations prevailing to become more effective for convince investors and companies to invest in Libya.					
85	Weakness of labour union that lead to make it vulnerable to external interventions.					
86	The absence of laws regulating the relationship between workers and employers.					
87	There is no stability at the labour market institutions.					
88	The absence of clear strategies to develop the labour market.					
89	Low rates of organizational justice for workers by managers in the labour market.					
Competitive factors						
90	Inability of the labour market of rapid change in order to follow global changes.					
91	There is no diversification of the structure of the Libyan economy in order to ensure sustainability in the development process.					
92	Lack of clarity in the structure of the labour market and the ways in which control the flow of its work.					
93	Lack of knowledge of digital information systems, which holds the development process in the production structures.					
94	Confusion between the concepts of competition and teamwork among graduates.					
95	Poor decision-making capacity of the administrators as well as personnel.					

96	Prevalence of disguised unemployment in the agricultural areas of tribal character.					
Social and cultural factors						
97	Lack of attention to changes that occur in the work environment that is a natural result of the emergence of the knowledge economy.					
98	Failure to promote the values of work, which led to the increasing influence of social values on the opportunities of employment.					
99	There are some social customs, which limit of the accountability functional and promote the values of work.					
100	The absence of the correct concept of delegation of authority by the Director to his subordinate.					
101	The absence of the concepts of career commitment, competition, and excellence in the Libyan labour market.					
102	Weakness of the cultural level of the workforce.					

Appendix (20)
Correlation Coefficient of Questionnaire

(I): Paragraphs of the HE

Environments	Internal environment		External environment							
			Economic factors		*Political factors*		*Competitive factors*		*Social and cultural factors*	
	F.N	C.C	F.N	C.C	F.N	C.C	F.N	C.C	F.N	C.C
Factors	1	0.73	19	0.71	20	0.59	21	0.57	22	0.89
	2	0.76	25	0.80	23	0.55	30	0.89	24	0.59
	3	0.65	28	0.88	26	0.89	34	0.82	27	0.54
	4	0.64	32	0.61	29	0.82	36	0.63	31	0.64
	5	0.53			33	0.63			34	0.81
	6	0.86								
	7	0.75								
	8	0.61								
	9	0.59								
	10	0.82								
	11	0.67								
	12	0.63								
	13	0.72								
	14	0.54								
	15	0.84								
	16	0.69								
	17	0.59								
	18	0.65								
C.C for factor	0.66		0.73		0.68		0.70		0.67	

(II): Paragraphs of the LM

Environments	Internal environment		External environment							
			Economic factors		*Political factors*		*Competitive factors*		*Social and cultural factors*	
	F.N	C.C	F.N	C.C	F.N	C.C	F.N	C.C	F.N	C.C
Factors	37	0.55	51	0.77	55	0.81	52	0.66	53	0.59
	38	0.77	54	0.75	59	0.51	56	0.61	57	0.64
	39	0.69	58	0.63	63	0.87	60	0.63	62	0.81
	40	0.81	62	0.51	66	0.64	64	0.84		
	41	0.52	65	0.89	68	0.56	67	0.56		
	42	0.64					69	0.63		
	43	0.55					70	0.59		
	44	0.61					71	0.52		
	45	0.84								
	46	0.88								
	47	0.81								
	48	0.64								
	49	0.71								
	50	0.84								
C.C for factor	0.63		0.69		0.66		0.61		0.66	

Notes: All values were statistically significant at level 0.01
F.N= Factors Number
C.C= Correlation Coefficient.

Appendix (21)

Second phase of the DT questionnaire

(I): Arabic version of the second phase of the DT questionnaire

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at Cheltenham and Gloucester

بسم الله الرحمن الرحيم

الآخ/ الاخت:- ....

بعد التحية

أنا زكريا عبد الله العوكلي ، طالب دكتوراه في جامعة *Gloucestershier* في المملكة المتحدة ، وأقوم بإجراء دراسة حول العلاقة بين مهارات التعليم العالي واحتياجات سوق العمل في ليبيا ، حيث تتركز أهداف البحث حول أربع مهارات أساسية ، هي :

1. الالتزام الوظيفي.
2. القدرة على المنافسة.
3. الرغبة في التفوق.
4. العمل الجماعي وحل لمشكلات

وفي هذه المرحلة من البحث استخدم تقنية دالفي وذلك لغرض بناء سيناريوهات للتعليم العالي وسوق العمل في ليبيا، لهذا تم اختياركم للاشتراك في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان. كما أن أسئلة البحث الأساسية هي:

1. ماهي السبل التي تجعل مهارات التعليم العالي و احتياجات سوق العمل المتغيرة في ليبيا تتماشى بشكل افضل؟
2. كيف يمكن تكييف تقنية دلفي و تطبيقها لفهم العلاقة بين مهارات التعليم العالي و احتياجات سوق العمل في ليبيا؟

علية، أمل منكم التكرم بالمشاركة في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان، مع ملاحظة أن هذه الطريقة تتطلب عدة مراحل لإتمامها بحيث يتم إرسال الاستبيان إليكم واسترجاعه ما بين ثلاث إلى خمس مرات (**علما ان هذه هي النسخة الثانية من الاستبيان**)، كما أن المعلومات التي ستدلون بها تخضع لأخلاقيات البحث العلمي المعتمدة من قبل الجامعة والتي تنص على سرية المعلومات وعدم الإطلاع عليها إلا من قبل الباحث نفسه، وعدم الكشف عن الأشخاص المشتركين في البحث.

شاكرين حسن تعاونكم سلفا

الباحث
زكريا عبد الله العوكلي

ملاحظات
(1): الرجاء وضع علامة (**X**) امام العبارة مقابل الدليل الذي سوف تقوم باختيارة
(2): ان كل المعلومات التي ستدلون بها تخضع للسرية التامة وفقا لمعايير اخلاقيات البحث التي تعتمدها الجامعة

م	الفقــرات	بدائل الاجابة		نسبة الموافقين %
		موافق	غير موافق	
1	ضعف الدراسة الميدانية اوالتدريب العملي في المرحلة الجامعية.			100
2	لا توجد طريقة لتعليم هذه المهارات في المناهج الدراسية.			100
3	غياب مفاهيم الالتزام الوظيفي ، و المنافسة ، و التفوق في الجامعات الليبية.			80
4	عدم قدرة الطلاب على استيعاب المعلومات وتحويلها الى معرفة قابلة للاستخدام.			40
5	عدم القدرة على التكيف و التعلم بسرعة و امتلاك المهارات اللازمة لذلك.			30
6	عدم القدرة على التعاون في العمل ضمن مجموعة ، بسبب عدم امتلاك مهارت الاتصال اللفظية و الكتابية و غيرها.			60
7	القوى العاملة لا تمتلك مهارات تختلف عن المهارت التقليدية المطلوبة للأعمال الروتينية.			50
8	عدم ربط التقنية بالتعلم و تشجيع الطلبة و تنمية التفكير بشكل عام والتفكير العلمي على وجه الخصوص.			80
9	الاعتماد على اسلوب التلقين عند تدريس المقررات.			100
10	عدم وجود معايير دقيقة متعلقة بقبول الطلاب في الجامعات الليبية.			90
11	قلة الاهتمام باللغات الاجنبية مما يؤثر على قدرة الطالب على التعلم والتنمية الذاتية امهاراته.			50
12	عدم وجود معايير لانتقاء اعضاء هيأة التدريس.			60
13	تركيز معظم اعضاء هيأة التدريس على الجانب التعليمي دون التركيز على على التنمية المجتمعية والبحث العلمي.			90
14	غياب برامج التعليم المستمر لأعضاء هيأة التدريس و عجزهم عن الابتكار.			100
15	قصر العام الدراسي حيث يبلغ عدد اسابيع الدراسة الفعلية ما بين 22-25 اسبوع.			20
16	ليس هناك توازن في توزيع الطلاب بين الاقسام المختلفة.			90
17	عدم توفر نظام جيد للمعلومات بالجامعات و بالتالي عدم توفر المعلومات الكافية لصانعي القرار و واضعي المناهج الدراسية.			90
18	ندرة و ضعف عقد المؤتمرات و الندوات العلمية.			40
19	عدم التوازن في مرتبات العاملين داخل الجامعة.			20
20	غياب استراايجيات و اليات التنفيذ التي توضح معتقدات و منطلقات مؤسسات التعليم العالي.			100
21	غياب معايير محددة و واضحة لقياس جودة الجامعات بغرض تحسين التعليم العالي ومخرجاته.			50
22	عدم وجود مفاهيم الالتزام الوظيفي، و المنافسة، و التفوق في المجتمع الليبي.			80
23	غياب الاستقرار الاداري و التنظيمي للجامعات.			100
24	عدم مراعات التنوع الثقافي بين المناطق.			90
25	انخفاض مستوى الانفاق على التعليم العالي.			100
26	عدم وجود فلسفة شاملة واضحة المبادئ و المتطلبات و الاهداف و السياسات.			100
27	عدم الاخذ في الاعتبار اثر العادات والتقاليد عند التخطيط للتعليم العالي.			80
28	نقص المعامل والمختبرات داخل الجامعات و عدم احتواء المكتبات على المصادر الحديثة.			90

100			الاتفصام التام بين اجهزة التخيطط المركزية التابعة لمؤسسات الدولة وبين اجهزة التخطيط في قطاع التعليم العالي.	29
10			عدم مراعات التوزيع الديموغرافي عند انشاء الجامعات.	30
30			ضعف المستوى الثقافي وارتفاع معدل الامية بين اولياء الامور.	31
90			ضعف الانفاق على البحوث و الدراسات.	32
100			عدم وجود هيأة مسؤولة عن التعليم العالي بشكل مستمر.	33
40			التوزيع الجغرافي غير السوي للجامعات.	34
30			كبر حجم الاسرة كنوع من الضمان للوالدين بسبب التأثر بالعادات والتقاليد.	35
100			الاكثار من انشاء الجامعات القزمية (جامعات الاقسام).	36
90			عدم امتلاك مهارت تختلف عن المهارت التقليدية المطلوبة للأعمال الروتينية.	37
100			عدم إجراء التقييم المستمر والمتابعة من أجل تحقيق التنمية البشرية وفقا للمعايير الدولية والخصوصيات الوطنية.	38
90			عدم اتقان الخريجين لكيفية التعامل مع تقنية المعلومات و الحواسيب و تطبقها في مجال العمل.	39
90			ضعف الدورات التدريبة و عدم القدرة على توفير التعليم المستمر وبرامج تأهيل القوى العاملة.	40
10			عدم التخصص وتقسيم العمل داخل دوائر القطاعات الاقتصادية.	41
80			ضعف المناخ المؤسسي داخل القاع العام.	42
80			تدني مستوى السلوكيات القيادية للمدير الاداري.	43
100			تدني سلوك الخريجين في سوق العمل لعدم رضاهم الوظيفي.	44
20			ضعف مستوى العلاقات الانسانية داخل سوق العمل.	45
80			انخفاض انتاجية القوى العاملة الليبية.	46
100			عدم القدرة على التعاون في العمل ضمن مجموعة ، بسبب عدم امتلاك مهارت الاتصال.	47
40			غياب المفهوم الصحيح للتفويض الاداري من قبل المدير للمرؤسين.	48
90			عدم وجود مفاهيم الالتزام الوظيفي، و المنافسة، و التفوق في سوق العمل.	49
100			عدم وضوح هيكل سوق العمل و الطرق التي تحكم اساليب تدفق عمله.	50
80			ربط الاجور والمكافآت بالدرجة الوظيفية بدل من ربطها بالاداء.	51
100			عدم قدرة سوق العمل على التغير السريع و الاحساس بضرورة متابعة التغيرات العالمية.	52
100			عدم تعزيز قيم العمل الامر الذي ادى الى ازدياد تأثير القيم الاجتماعية على فرص العمل.	53
80			عدم وجود رأسمال كبير للعمل في السوق الليبية.	54
40			عدم تطوير القوانين و الانظمة السائدة لتصبح اكثر فاعلية تجاة اقناع المستثمرين و الشركات الخاصة بأهمية استثماراته.	55
100			عدم تنوع هيكل الاقتصاد الوطني من أجل ضمان عنصر الاستدامة في عملية التنمية.	56
90			وجود بعض العادات الاجتماعية التي تحد من المسألة الوظيفية وتعزيز قيم العمل.	57
90			انخفاض الحوافز والمكافآت داخل قطاعت العمل المختلفة.	58
100			ضعف النقابات العمالية يؤدي إلى جعلها عرضة للتدخلات الخارجية.	59
100			ضعف المعرفة بنظم المعلومات الرقمية التي تتولى عملية التطوير في هياكل الانتاج.	60
20			ضعف المستوى الثقافي لافراد القوى العاملة.	61

90			ندرة المراكز البحثية التي تهتم بتنمية الموارد البشرية بسبب ضعف الميزانيات المخصصة لتطويرها.	62
80			غياب القوانين التي تنظم العلاقة بين العاملين و ارباب العمل بشكل صحيح.	63
90			الخلط بين مفاهيم المنافسة والعمل الجماعي عند الخريجين.	64
80			عدم التوازن في توزيع الانفاق العام بين القطاعات الاقتصادية المختلفة.	65
80			غياب الاستراتيجيات الواضحة لتطوير سوق العمل.	66
100			ضعف القدرة على اتخاذ القرارات لدى القادة الاداريين و كذلك العاملين.	67
90			عدم وجود استقرار اداري في المؤسسات التي تهتم بسوق العمل.	68
80			عدم الاهتمام بالتغيرات التي تحدث في بيئة العمل والتي تعد نتيجة طبيعية لظهور اقتصاد المعرفة.	69
50			استخدام العمالة الوافدة مما يقلص فرص العمل للخريجين من الوطنيين.	70
100			لا توجد معايير محددة لقياس اداء العاملين او مواقع العمل من شركات و مصانع وغيرها.	71

(II): English version of the second phase of the DT questionnaire

UNIVERSITY OF GLOUCESTERSHIRE
at Cheltenham and Gloucester

In the name of God the Merciful

Dear: Sir/ Madam...

I am Zakarya Abdulla Elaokali, I am PhD student at *University of Gloucestershire* in the United Kingdom, and this a questionnaire is to data collection instrument for a research project as part of a course at the University of Gloucestershire (PhD). The primary aim of the research is to evaluate the relationship between higher education skills and Libyan labour market needs, where the objectives of the research focused on four basic skills, are:

1. Job commitment.
2. Competitiveness.
3. Desire for excellence.
4. Teamwork and problem-solving.

At this stage of research I use the Delphi Technique to build scenarios for higher education and the labour market in Libya. Accordingly to this, you will be my choice as expert to answering this questionnaire. In fact this research will investigate the following:

(1) In what ways could higher education skills and changing labour market needs in Libya be better aligned?

(2) How can the Delphi technique be adapted and applied to the understanding of the relationship between higher education skills and labour market needs in the context of Libya.

Evidently, this method requires several stages to complete the questionnaire. To achieve this, I am going to send this questionnaire to you between three and five times, and it would be greatly appreciated if you could take short time to provide me with some data by answering the questions.

Thank you

PhD. Student
Zakarya Abdulla Elaokali

Notes:
1 Please put a cross (x) in the relevant box.
2 The information that is disclosed in the context of a professional relationship will be held confidential, and so the research proposed will be conducted within the framework of the University's Research Ethics Code.

No	Questionnaire Paragraphs	Answer choices		Rate of Approving %
		Agree	Disagree	
1	Weakness of practical training during the undergraduate.			100
2	In curriculum there is no method to teach these skills.			100
3	The absence of the concepts of career commitment, competition, and excellence at the Libyan universities.			80
4	The inability of students to absorb information and turn it into usable knowledge.			40
5	Inability to adapt and learn quickly and possess the skills necessary to do it.			30
6	Inability to work collaboratively within a group, because of non-possession of skills of verbal and written communication and others.			60
7	The absence of multiple domains at the Libyan universities to meet the labour market needs.			50
8	There is no correlation between technical and learning, and failure to develop of thinking in general and scientific thinking in particular.			80
9	Using the method of memorization in teaching.			100
10	The absence of precise criteria to admission students at Libyan universities.			90
11	Lack of interest in foreign languages, which affects the student's ability to learn and develop his skills.			50
12	The absence of criteria for the selection of lecturers for the work at universities.			60
13	Focus most of the lecturers in the educational aspect without focusing on the community development and scientific research.			90
14	The absence of continuing education programmes for lecturers, and the inability of lecturer on innovation and continuous learning.			100
15	The actual study during the academic year is not sufficient (between 22 and 25 weeks).			20
16	There is no balance in the distribution of students between the departments at universities.			90
17	The lack of good information system at universities and therefore the lack of adequate information for decision-makers and curriculum designers.			90
18	Scarcity and poor conduct conferences and scientific symposia.			40
19	The imbalance in the salaries of employees within the University.			20
20	There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives.			100

21	There are no specific criteria for measuring the quality of universities in order to improve higher education and its outputs.			50
22	The absence of the concepts of career commitment, competition, and excellence in the Libyan society.			80
23	The absence of administrative and organizational stability of universities.			100
24	Not to mind the cultural diversity between regions.			90
25	The low level of spending on higher education.			100
26	There is no comprehensive philosophy are clear principles and requirements, targets and policies.			100
27	Lack of attention of impact of the customs and traditions on the educational system when planning for higher education.			80
28	There are no sufficient laboratories at the universities, and the libraries do not contain the modern periodicals and books.			90
29	There is no relationship between the central planning system and planning system on the higher education sector.			100
30	Not to mind the demographic distribution when creation of universities.			10
31	Weakness of the cultural level and the high rate of illiteracy among parents.			30
32	Weakness spending of research and studies at universities.			90
33	Absence of a board is responsible for higher education on an ongoing basis.			100
34	The uneven geographical distribution of universities.			40
35	Large family size as a guarantee for parents, because of the effect of the customs and traditions.			30
36	Propagation of the establishment of small universities, Which does not have human resources and capital assets.			100
37	The manpower does not have the skills different from traditional skills requested for work routine.			90
38	The lack of continuous assessment and follow-up in order to achieve human development in accordance with international standards and national particularities.			100
39	The higher education graduates do not know how can be deal with information technology and computers, and applied at the workplace.			90
40	Weak training courses and inability to provide continuing education.			90
41	Lack of specialization and division of labour within the economic sectors.			10
42	Weak institutional environment within the public sector.			80

43	The low level of leadership behaviours among the managers.			80
44	Low the behaviour of graduates at the labour market due to lack of their job satisfaction.			100
45	The low level of human relations within the labour market.			20
46	Low of Libyan manpower productivity.			80
47	Inability to work collaboratively within a group, because of lack of their communication skills.			100
48	The absence of the correct concept of delegation of authority by the Director to his subordinate.			40
49	The absence of the concepts of career commitment, competition, and excellence in the Libyan labour market.			90
50	Lack of clarity in the structure of the labour market and the ways in which control the flow of its work.			100
51	Linking the wages and bonuses with position functional rather than linked to performance.			80
52	Inability of the labour market of rapid change in order to follow global changes.			100
53	Failure to promote the values of work, which led to the increasing influence of social values on the opportunities of employment.			100
54	The absence of large private capital to work in the Libyan labour market.			80
55	Not to develop laws and regulations prevailing to become more effective for convince investors and companies to invest in Libya.			40
56	There is no diversification of the structure of the Libyan economy in order to ensure sustainability in the development process.			100
57	There are some social customs, which limit of the accountability functional and promote the values of work.			90
58	Low incentives and rewards within different business sectors.			90
59	Weakness of labour union that lead to make it vulnerable to external interventions.			100
60	Lack of knowledge of digital information systems, which holds the development process in the production structures.			100
61	Weakness of the cultural level of the workforce.			20
62	Scarcity of research centres dealing with the development of human resources.			90
63	The absence of laws regulating the relationship between workers and employers.			80
64	Confusion between the concepts of competition and teamwork among graduates.			90
65	The imbalance in the distribution of public spending between different economic sectors.			80

66	The absence of clear strategies to develop the labour market.			80
67	Poor decision-making capacity of the administrators as well as personnel.			100
68	There is no stability at the labour market institutions.			90
69	Lack of attention to changes that occur in the work environment that is a natural result of the emergence of the knowledge economy.			80
70	Use of foreign labour, which will reduce job opportunities for Libyans graduates.			50
71	There are no specific criteria for measuring the performance of workers or companies and factories.			100

Appendix (22)

Third phase of the DT questionnaire

(I): Arabic version of the third phase of the DT questionnaire

**UNIVERSITY OF
GLOUCESTERSHIRE**
at Cheltenham and Gloucester

بسم الله الرحمن الرحيم

الآخ/ الاخت:- ....

بعد التحية

أنا زكريا عبد الله العوكلي، طالب دكتوراه في جامعة في *Gloucestershire* المملكة المتحدة، وأقوم بإجراء دراسة حول العلاقة بين مهارات التعليم العالي واحتياجات سوق العمل في ليبيا، حيث تتركز أهداف البحث حول أربع مهارات أساسية، هي:

1. الالتزام الوظيفي.
2. القدرة على المنافسة.
3. الرغبة في التفوق.
4. العمل الجماعي وحل لمشكلات

وفي هذه المرحلة من البحث استخدم تقنية دالفي وذلك لغرض بناء سيناريوهات للتعليم العالي وسوق العمل في ليبيا، لهذا تم اختياركم للاشتراك في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان. كما أن أسئلة البحث الأساسية هي:

1. ماهي السبل التي تجعل مهارات التعليم العالي و احتياجات سوق العمل المتغيرة في ليبيا تتماشى بشكل افضل؟
2. كيف يمكن تكييف تقنية دلفي و تطبيقها لفهم العلاقة بين مهارات التعليم العالي و احتياجات سوق العمل في ليبيا؟

علية ، أمل منكم التكرم بالمشاركة في هذا البحث عبر الإجابة عن أسئلة هذا الاستبيان ، مع ملاحظة أن هذه الطريقة تتطلب عدة مراحل لإتمامها بحيث يتم إرسال الاستبيان إليكم واسترجاعه ما بين ثلاث إلى خمس مرات **(علما ان هذه هي النسخة الثالثة من الاستبيان)،** كما أن المعلومات التي ستدلون بها تخضع لأخلاقيات البحث العلمي المعتمدة من قبل الجامعة والتي تنص على سرية المعلومات وعدم الإطلاع عليها إلا من قبل الباحث نفسه ، وعدم الكشف عن الأشخاص المشتركين في البحث.

شاكرين حسن تعاونكم سلفا

**الباحث
زكريا عبد الله العوكلي**

ملاحظات
(1): الرجاء وضع علامة (X) امام العبارة مقابل الدليل الذي سوف تقوم باختيارة
(2): ان كل المعلومات التي ستدلون بها تخضع للسرية التامة وفقا لمعايير اخلاقيات البحث التي تعتمدها الجامعة

نسبة الموافقين %	بدائل الاجابة		الفقــــــــــــــــــــــــــــــــــرات	م
	غير موافق	موافق		
100			ضعف الدراسة الميدانية اوالتدريب العملي في المرحلة الجامعية.	1
100			لا توجد طريقة لتعليم هذه المهارات في المناهج الدراسية.	2
90			غياب مفاهيم الالتزام الوظيفي ، و المنافسة ، و التفوق في الجامعات الليبية.	3
60			عدم قدرة الطلاب على استيعاب المعلومات وتحويلها الى معرفة قابلة للاستخدام.	4
50			عدم القدرة على التكيف و التعلم بسرعة و امتلاك المهارات اللازمة لذلك.	5
60			عدم القدرة على التعاون في العمل ضمن مجموعة ، بسبب عدم امتلاك مهارت الاتصال اللفظية و الكتابية و غيرها.	6
80			القوى العاملة لا تمتلك مهارات تختلف عن المهارت التقليدية المطلوبة للأعمال الروتينية.	7
100			عدم ربط التقنية بالتعلم و تشجيع الطلبة و تنمية التفكير بشكل عام والتفكير العلمي على وجه الخصوص.	8
100			الاعتماد على اسلوب التلقين عند تدريس المقررات.	9
90			عدم وجود معايير دقيقة متعلقة بقبول الطلاب في الجامعات الليبية.	10
40			قلة الاهتمام باللغات الاجنبية مما يؤثر على قدرة الطالب على التعلم والتنمية الذاية امهاراته.	11
20			عدم وجود معايير لانتقاء اعضاء هيأة التدريس.	12
100			تركيز معظم اعضاء هيأة التدريس على الجانب التعليمي دون التركيز على على التنمية المجتمعية والبحث العلمي.	13
100			غياب برامج التعليم المستمر لأعضاء هيأة التدريس و عجزهم عن الابتكار.	14
30			قصر العام الدراسي حيث يبلغ عدد اسابيع الدراسة الفعلية ما بين 22-25 اسبوع.	15
90			ليس هناك توازن في توزيع الطلاب بين الاقسام المختلفة.	16
90			عدم توفر نظام جيد للمعلومات بالجامعات و بالتالي عدم توفر المعلومات الكافية لصانعي القرار و واضعي المناهج الدراسية.	17
40			ندرة و ضعف عقد المؤتمرات و الندوات العلمية.	18
10			عدم التوازن في مرتبات العاملين داخل الجامعة.	19
100			غياب استرايجيات و اليات التنفيذ التي توضح معتقدات و منطلقات مؤسسات التعليم العالي.	20
40			غياب معايير محددة و واضحة لقياس جودة الجامعات بغرض تحسين التعليم العالي ومخرجاته.	21
100			عدم وجود مفاهيم الالتزام الوظيفي، و المنافسة، و التفوق في المجتمع الليبي.	22
100			غياب الاستقرار الاداري و التنظيمي للجامعات.	23
100			عدم مراعات التنوع الثقافي بين المناطق.	24
100			انخفاض مستوى الانفاق على التعليم العالي.	25
100			عدم وجود فلسفة شاملة واضحة المبادئ و المتطلبات و الاهداف و السياسات.	26
90			عدم الاخذ في الاعتبار اثر العادات والتقاليد عند التخطيط للتعليم العالي.	27
90			نقص المعامل والمختبرات داخل الجامعات و عدم احتواء المكتبات على المصادر الحديثة.	28

				#
100			الاتفصام التام بين اجهزة التخيطط المركزية التابعة لمؤسسات الدولة وبين اجهزة التخطيط في قطاع التعليم العالي.	29
10			عدم مراعات التوزيع الديموغافي عند انشاء الجامعات.	30
10			ضعف المستوى الثقافي وارتفاع معدل الامية بين اولياء الامور.	31
100			ضعف الانفاق على البحوث و الدراسات.	32
100			عدم وجود هيأة مسؤولة عن التعليم العالي بشكل مستمر.	33
30			التوزيع الجغرافي غير السوي للجامعات.	34
30			كبر حجم الاسرة كنوع من الضمان للوالدين بسبب التأثر بالعادات والتقاليد.	35
100			الاكثار من انشاء الجامعات القزمية (جامعات الاقسام).	36
90			عدم امتلاك مهارات تختلف عن المهارت التقليدية المطلوبة للأعمال الروتينية.	37
100			عدم إجراء التقييم المستمر والمتابعة من أجل تحقيق التنمية البشرية وفقا للمعايير الدولية والخصوصيات الوطنية.	38
100			عدم اتقان الخريجين لكيفية التعامل مع تقنية المعلومات و الحواسيب و تطبقها في مجال العمل.	39
100			ضعف الدورات التدريبية و عدم القدرة على توفير التعليم المستمر وبرامج تأهيل القوى العاملة.	40
30			عدم التخصص وتقسيم العمل داخل دوائر القطاعات الاقتصادية.	41
100			ضعف المناخ المؤسسي داخل القاع العام.	42
80			تدني مستوى السلوكيات القيادية للمدير الاداري.	43
100			تدني سلوك الخريجين في سوق العمل لعدم رضاهم الوظيفي.	44
20			ضعف مستوى العلاقات الانسانية داخل سوق العمل.	45
100			انخفاض انتاجية القوى العاملة الليبية.	46
100			عدم القدرة على التعاون في العمل ضمن مجموعة ، بسبب عدم امتلاك مهارت الاتصال.	47
40			غياب المفهوم الصحيح للتفويض الاداري من قبل المدير للمرؤوسين.	48
100			عدم وجود مفاهيم الالتزام الوظيفي، و المنافسة، و التفوق في سوق العمل.	49
100			عدم وضوح هيكل سوق العمل و الطرق التي تحكم اساليب تدفق عمله.	50
100			ربط الاجور والمكافآت بالدرجة الوظيفية بدل من ربطها بالاداء.	51
100			عدم قدرة سوق العمل على التغير السريع و الاحساس بضرورة متابعة التغيرات العالمية.	52
100			عدم تعزيز قيم العمل الامر الذي ادى الى ازدياد تأثير القيم الاجتماعية على فرص العمل.	53
10			عدم وجود رأسمال كبير للعمل في السوق الليبية.	54
40			عدم تطوير القوانين و الانظمة السائدة لتصبح اكثر فاعلية تجاة اقناع المستثمرين و الشركات الخاصة بأهمية استثماراته.	55
100			عدم تنوع هيكل الاقتصاد الوطني من أجل ضمان عنصر الاستدامة في عملية التنمية.	56
90			وجود بعض العادات الاجتماعية التي تحد من المسألة الوظيفية وتعزيز قيم العمل.	57
90			انخفاض الحوافز والمكافآت داخل قطاعت العمل المختلفة.	58
100			ضعف النقابات العمالية يؤدي إلى جعلها عرضة للتدخلات الخارجية.	59
100			ضعف المعرفة بنظم المعلومات الرقمية التي تتولى عملية التطوير في هياكل الانتاج.	60
00			ضعف المستوى الثقافي لافراد القوى العاملة.	61

90			ندرة المراكز البحثية التي تهتم بتنمية الموارد البشرية بسبب ضعف الميزانيات المخصصة لتطويرها.	62
100			غياب القوانين التي تنظم العلاقة بين العاملين و ارباب العمل بشكل صحيح.	63
90			الخلط بين مفاهيم المنافسة والعمل الجماعي عند الخريجين.	64
100			عدم التوازن في توزيع الانفاق العام بين القطاعات الاقتصادية المختلفة.	65
80			غياب الاستراتيجيات الواضحة لتطوير سوق العمل.	66
100			ضعف القدرة على اتخاذ القرارات لدى القادة الاداريين و كذلك العاملين.	67
90			عدم وجود استقرار اداري في المؤسسات التي تهتم بسوق العمل.	68
90			عدم الاهتمام بالتغيرات التي تحدث في بيئة العمل والتي تعد نتيجة طبيعية لظهور اقتصاد المعرفة.	69
40			استخدام العمالة الوافدة مما يقلص فرص العمل للخريجين من الوطنيين.	70
100			لا توجد معايير محددة لقياس اداء العاملين او مواقع العمل من شركات و مصانع وغيرها.	71

(II): English version of the third phase of the DT questionnaire

**UNIVERSITY OF
GLOUCESTERSHIRE**
at Cheltenham and Gloucester

In the name of God the Merciful

Dear: Sir/ Madam..

I am Zakarya Abdulla Elaokali, I am PhD student at *University of Gloucestershire* in the United Kingdom, and this a questionnaire is to data collection instrument for a research project as part of a course at the University of Gloucestershire (PhD). The primary aim of the research is to evaluate the relationship between higher education skills and Libyan labour market needs, where the objectives of the research focused on four basic skills, are:

1. Job commitment.
2. Competitiveness.
3. Desire for excellence.
4. Teamwork and problem-solving.

At this stage of research I use the Delphi Technique to build scenarios for higher education and the labour market in Libya. Accordingly to this, you will be my choice as expert to answering this questionnaire. In fact this research will investigate the following:

(1) In what ways could higher education skills and changing labour market needs in Libya be better aligned?

(2) How can the Delphi technique be adapted and applied to the understanding of the relationship between higher education skills and labour market needs in the context of Libya?

Evidently, this method requires several stages to complete the questionnaire. To achieve this, I am going to send this questionnaire to you between three and five times, and it would be greatly appreciated if you could take short time to provide me with some data by answering the questions.

Thank you

PhD. Student
Zakarya Abdulla Elaokali

Notes:
1   Please put a cross (x) in the relevant box.
2   The information that is disclosed in the context of a professional relationship will be held confidential, and so the research proposed will be conducted within the framework of the University's Research Ethics Code.

No	Questionnaire Paragraphs	Answer choices		Rate of Approving %
		Agree	Disagree	
1	Weakness of practical training during the undergraduate.			100
2	In curriculum there is no method to teach these skills.			100
3	The absence of the concepts of career commitment, competition, and excellence at the Libyan universities.			90
4	The inability of students to absorb information and turn it into usable knowledge.			60
5	Inability to adapt and learn quickly and possess the skills necessary to do it.			50
6	Inability to work collaboratively within a group, because of non-possession of skills of verbal and written communication and others.			60
7	The absence of multiple domains at the Libyan universities to meet the labour market needs.			80
8	There is no correlation between technical and learning, and failure to develop of thinking in general and scientific thinking in particular.			100
9	Using the method of memorization in teaching.			100
10	The absence of precise criteria to admission students at Libyan universities.			90
11	Lack of interest in foreign languages, which affects the student's ability to learn and develop his skills.			40
12	The absence of criteria for the selection of lecturers for the work at universities.			20
13	Focus most of the lecturers in the educational aspect without focusing on the community development and scientific research.			100
14	The absence of continuing education programmes for lecturers, and the inability of lecturer on innovation and continuous learning.			100
15	The actual study during the academic year is not sufficient (between 22 and 25 weeks).			30
16	There is no balance in the distribution of students between the departments at universities.			90
17	The lack of good information system at universities and therefore the lack of adequate information for decision-makers and curriculum designers.			90
18	Scarcity and poor conduct conferences and scientific symposia			40
19	The imbalance in the salaries of employees within the University.			10
20	There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives.			100

21	There are no specific criteria for measuring the quality of universities in order to improve higher education and its outputs.			40
22	The absence of the concepts of career commitment, competition, and excellence in the Libyan society.			100
23	The absence of administrative and organizational stability of universities.			100
24	Not to mind the cultural diversity between regions.			100
25	The low level of spending on higher education.			100
26	There is no comprehensive philosophy are clear principles and requirements, targets and policies.			100
27	Lack of attention of impact of the customs and traditions on the educational system when planning for higher education.			90
28	There are no sufficient laboratories at the universities, and the libraries do not contain the modern periodicals and books.			90
29	There is no relationship between the central planning system and planning system on the higher education sector.			100
30	Not to mind the demographic distribution when creation of universities.			10
31	Weakness of the cultural level and the high rate of illiteracy among parents.			10
32	Weakness spending of research and studies at universities.			100
33	Absence of a board is responsible for higher education on an ongoing basis.			100
34	The uneven geographical distribution of universities.			30
35	Large family size as a guarantee for parents, because of the effect of the customs and traditions.			30
36	Propagation of the establishment of small universities, Which does not have human resources and capital assets.			100
37	The manpower does not have the skills different from traditional skills requested for work routine.			90
38	The lack of continuous assessment and follow-up in order to achieve human development in accordance with international standards and national particularities.			100
39	The higher education graduates do not know how can be deal with information technology and computers, and applied at the workplace.			100
40	Weak training courses and inability to provide continuing education.			100
41	Lack of specialization and division of labour within the economic sectors.			30
42	Weak institutional environment within the public sector			100

43	The low level of leadership behaviours among the managers.			80
44	Low the behaviour of graduates at the labour market due to lack of their job satisfaction.			100
45	The low level of human relations within the labour market.			20
46	Low of Libyan manpower productivity.			100
47	Inability to work collaboratively within a group, because of lack of their communication skills.			100
48	The absence of the correct concept of delegation of authority by the Director to his subordinate.			40
49	The absence of the concepts of career commitment, competition, and excellence in the Libyan labour market.			100
50	Lack of clarity in the structure of the labour market and the ways in which control the flow of its work.			100
51	Linking the wages and bonuses with position functional rather than linked to performance.			100
52	Inability of the labour market of rapid change in order to follow global changes.			100
53	Failure to promote the values of work, which led to the increasing influence of social values on the opportunities of employment.			100
54	The absence of large private capital to work in the Libyan labour market.			10
55	Not to develop laws and regulations prevailing to become more effective for convince investors and companies to invest in Libya.			40
56	There is no diversification of the structure of the Libyan economy in order to ensure sustainability in the development process.			100
57	There are some social customs, which limit of the accountability functional and promote the values of work.			100
58	Low incentives and rewards within different business sectors.			90
59	Weakness of labour union that lead to make it vulnerable to external interventions.			60
60	Lack of knowledge of digital information systems, which holds the development process in the production structures.			50
61	Weakness of the cultural level of the workforce.			60
62	Scarcity of research centres dealing with the development of human resources.			80
63	The absence of laws regulating the relationship between workers and employers.			100
64	Confusion between the concepts of competition and teamwork among graduates.			100
65	The imbalance in the distribution of public spending between different economic sectors.			90

66	The absence of clear strategies to develop the labour market.			40
67	Poor decision-making capacity of the administrators as well as personnel.			20
68	There is no stability at the labour market institutions.			100
69	Lack of attention to changes that occur in the work environment that is a natural result of the emergence of the knowledge economy.			100
70	Use of foreign labour, which will reduce job opportunities for Libyans graduates.			30
71	There are no specific criteria for measuring the performance of workers or companies and factories.			90

Appendix (23)

Initial SWOT Matrix for HE

(II): Arabic version of the initial SWOT matrix for HE

التهديدات	الفرص	
(1) تدني مستوى الإنفاق على التعليم العالي **(2)** ليس هناك ما يكفي من المختبرات ، والمكتبات لا تحتوي على الدوريات والكتب الحديثة **(3)** ضعف الإنفاق على البحوث والدراسات **(4)** لا توجد استراتيجيات وآليات التنفيذ التي تفسر معتقدات ووجهات نظر الجامعات **(5)** غياب الاستقرار الإداري والتنظيمي للجامعات **(6)** ليس هناك فلسفة ومبادئ واضحة شاملة والمتطلبات والأهداف والسياسات **(7)** لا توجد علاقة بين نظام التخطيط المركزي و قطاع التعليم العالي **(8)** عدم وجود هيأة مسؤولة عن التعليم العالي بشكل مستمر **(9)** الدعوة لإنشاء الجامعات الصغيرة ، التي لا تملك الموارد البشرية والأصول الرأسمالية **(10)** غياب مفاهيم الالتزام الوظيفي ، والمنافسة ، والتميز في المجتمع الليبي **(11)** عدم مراعاة التنوع الثقافي بين المناطق **(12)** اهمال جانب العادات و التقاليد عند التخطيط للتعليم العالي **(13)** عدم التوازن في رواتب الموظفين داخل الجامعة	**(1)** هناك معايير محددة لقياس جودة الجامعات. **(2)** مراعات التوزيع السكاني عند إنشاء الجامعات. **(3)** التوازن في التوزيع الجغرافي للجامعات. **(4)** المستوى الثقافي العالي وانخفاض معدل الأمية بين الآباء والأمهات. **(5)** انخفاض في حجم الأسرة	**العوامل الخارجية** **العوامل الداخلية**
		نقاط القوة
ق ت	**ق ف**	**(1)** قدرة الطلاب على استيعاب المعلومات وتحويلها إلى معرفة قابلة للاستخدام. **(2)** القدرة على التكيف والتعلم بسرعة وامتلاك المهارات اللازمة للقيام بذلك. **(3)** القدرة على العمل بشكل تعاوني ضمن مجموعة ، وذلك بسبب امتلاك مهارات الاتصال اللفظي والكتابي وغيرها. **(4)** هناك مجالات متعددة في الجامعات الليبية لتلبية احتياجات سوق العمل. **(5)** الاهتمام باللغات الأجنبية. **(6)** هناك معايير لاختيار المحاضرين للعمل في الجامعات. **(7)** الدراسة الفعلية خلال السنة الدراسية كافية (بين 22 و 25 أسبوعا). **(8)** وهناك ما يكفي من المؤتمرات والندوات العلمية
		نقاط الضعف
ض ت	**ض ف**	**(1)** ضعف التدريب العملي أثناء الدراسة الجامعية. **(2)** في المناهج الدراسية لا توجد طريقة لتعليم هذه المهارات. **(3)** عدم ربط التقنية بالتعلم و تشجيع الطلبة و تنمية التفكير. **(4)** استخدام أسلوب التلقين في التدريس. **(5)** عدم وجود معايير دقيقة لقبول الطلاب في الجامعات الليبية. **(6)** تركيز معظم المحاضرين في الجانب التعليمي دون التركيز على التنمية المجتمعية والبحث العلمي. **(7)** عدم وجود برامج التعليم المستمر للاساتذة ، وعدم قدرة المحاضر على الابتكار. **(8)** ليس هناك توازن في توزيع الطلاب بين الاقسام العلمية في الجامعات. **(9)** عدم وجود نظام معلومات جيدة في الجامعات ، وبالتالي غياب المعلومات الكافية لصانعي القرار وواضعي المناهج.

(II): English version of the initial SWOT matrix for HE

	Opportunities	Threats
External factors / **Internal factors**	(1) There are specific criteria for measuring the quality of universities (CF). (2) Harmony of the geographical distribution of universities (CF). (4) High cultural level and low rate of illiteracy among parents (SCF). (5) Decline in family size (SCF).	(1) The low level of spending on HE (EF). (2) There are not sufficient laboratories, and the libraries do not contain the modern periodicals and books (EF). (3) Weakness spending of research and studies (EF). (4) There are no strategies and implementation mechanisms that explain the universities beliefs and perspectives (PF). (5) The absence of administrative and organizational stability of universities (PF). (6) There is no comprehensive philosophy or clear principles and requirements, targets and policies (PF). (7) There is no relationship between the central planning system and planning system on the HE sector (PF). (8) Absence of a board is responsible for HE on an ongoing basis (PF). (9) Propagation of the establishment of small universities, which do not have human resources and capital assets (CF). (10) The absence of the concepts of career commitment, competition, and excellence in the Libyan society (SCF). (11) Not interested in the cultural diversity between regions (SCF). (12) Lack of attention of impact of the customs and traditions on the educational system (SCF). (13) The imbalance in the salaries of employees within the University (EF).
Strengths (1) Ability of students to absorb information and turn it into usable knowledge (FRS). (2) Ability to adapt and learn quickly and possess the skills necessary to do it (FRS). (3) Ability to work collaboratively within a group, because of possession of skills of verbal and written communication and others (FRS). (4) There are multiple disciplines at the Libyan universities to meet the LM needs (FRA). (5) Interest in foreign languages (FRC). (6) There is a criterion for the selection of lecturers for the work at universities (FRA). (7) The actual study during the academic year is sufficient (between 22 and 25 weeks) (FRA). (8) There are enough conferences and scientific symposia (FRA).	**SO**	**ST**
Weakness (1) Weakness of practical training during the undergraduate (FRA). (2) In curriculum there is no method to teach these skills (FRC). (3) There is no relationship between technical knowledge and learning, and another to develop thinking in general and scientific thinking in particular (FRC). (4) Using the method of memorization in teaching (FRFM). (5) The absence of precise criteria to the acceptance of students at Libyan universities (FRA). (6) Focus most of the lecturers in the educational aspect without focusing on the community development and scientific research (FRFM). (7) The absence of continuing education programmes for lecturers, and the inability of lecturer on innovation and continuous learning (FRFM). (8) There is no balance in the distribution of students between the departments at universities (FRA). (9) The lack of good information system at universities and therefore the lack of adequate information for decision-makers and curriculum designers (FRA).	**WO**	**WT**

Appendix (24)

Initial SWOT Matrix for LM

(I): Arabic version of the initial SWOT matrix for LM

التهديدات	الفرص	
(1) ربط الأجور والمكافآت بالترقيات بدلا من ربطها بالأداء. **(2)** الحوافز والمكافآت منخفضة ضمن مختلف قطاعات الأعمال. **(3)** ندرة مراكز الأبحاث التي تتناول تنمية الموارد البشرية. **(4)** الاختلال في توزيع الإنفاق العام بين القطاعات الاقتصادية. **(5)** ضعف النقابات العمالية. **(6)** غياب القوانين التي تنظم العلاقة بين العمل وأرباب العمل. **(7)** عدم وجود استراتيجيات واضحة لتطوير سوق العمل. **(8)** ليس هناك استقرار في مؤسسات سوق العمل. **(9)** عدم قدرة سوق العمل على التغير السريع في لمتابعة التغييرات العالمية. **(10)** ليس هناك تنويع هيكل الاقتصاد الليبي من أجل ضمان الاستدامة في عملية التنمية. **(11)** عدم الانتباه إلى التغييرات التي تحدث في بيئة العمل. **(12)** زيادة تأثير القيم الاجتماعية على قيم العمل ، التي تحد من المساءلة الوظيفية.	**(1)** وهناك رؤوس الأموال الخاصة الكبيرة والحرة للعمل في سوق العمل الليبي **(2)** القوانين والأنظمة السائدة وأكثر فعالية لإقناع المستثمرين والشركات للاستثمار في ليبيا. **(3)** تدني مستوى استخدام العمالة الأجنبية.	**العوامل الخارجية** **العوامل الداخلية**
		نقاط القوة
ق ت	**ق ف**	**(1)** وهناك التخصص وتقسيم العمل داخل القطاعات الاقتصادية. **(2)** ارتفاع مستوى العلاقات البشرية في سوق العمل. **(3)** فهم تفويض السلطة من قبل المدير لمرؤوسيه. **(4)** ارتفاع المستوى الثقافي للقوى العاملة
		نقاط الضعف
ض ت	**ض ف**	**(1)** القوى العاملة لا تملك مهارات مختلفة من المهارات التقليدية المطلوبة للعمل الروتيني. **(2)** عدم وجود تقييم مستمر ومتابعة من أجل تحقيق التنمية البشرية. **(3)** لا توجد معايير محددة لقياس أداء العاملين والشركات والمصانع. **(4)** الخريجين لا يعرفون كيف يمكن التعامل مع تكنولوجيا المعلومات وأجهزة الكمبيوتر، وتطبيقها في مكان العمل. **(5)** عدم معرفة نظم المعلومات الرقمية. **(6)** ضعف الدورات التدريبية وعدم القدرة على توفير التعليم المستمر. **(7)** ضعف البيئة المؤسسية داخل القطاع العام. **(8)** انخفاض مستوى سلوكيات القيادة لدى المديرين. **(9)** انفاض سلوك الخريجين في سوق العمل نظرا لعدم الارتياح في وظائفهم. **(10)** انخفاض إنتاجية القوى العاملة. **(11)** عدم القدرة على العمل بشكل تعاوني ضمن مجموعة، وذلك بسبب نقص مهاراتهم الاتصالية. **(12)** الخلط بين مفاهيم المنافسة والعمل الجماعي بين الخريجين **(13)** غياب مفاهيم الالتزام الوظيفي، والمنافسة ، والتميز في سوق العمل. **(14)** عدم الوضوح في هيكل سوق العمل والطرق التي تتحكم في تدفق عمله. **(15)** ضعيف القدرة على اتخاذ القرارات من المسؤولين، وكذلك الأفراد.

(II): English version of the initial SWOT matrix for LM

	Opportunities	Threats
External factors / **Internal factors**	(1) There is large private capital and free to work in the Libyan LM (EF). (2) The laws and regulations prevailing are more effective for convince investors and companies to invest in Libya. (PF). (3) Low level of use of foreign labour (CF).	(1) Linking the wages and bonuses with position functional rather than linked to performance (EF). (2) Incentives and rewards are low within different business sectors (EF). (3) Scarcity of research centres dealing with the development of human resources (EF). (4) The imbalance in the distribution of public spending between economic sectors (EF). (5) Weakness of labour unions (PF). (6) The absence of laws regulating the relationship between workers and employers (PF). (7) The absence of clear strategies to develop the LM (PF). (8) There is no stability at the LM institutions (PF). (9) Inability of the LM of rapid change in order to follow global changes (CF). (10) There is no diversification of the structure of the Libyan economy in order to ensure sustainability in the development process (CF). (11) Lack of attention to changes that occur in the work environment (CF). (12) Increasing influence of social values on the values of work, which limit of the accountability functional (SCF).
Strengths (1) There is specialization and division of labour within the economic sectors (FRA). (2) High level of human relations within the LM (FRW). (3) Understanding delegation of authority by the director to his subordinate (FRA). (4) High cultural level of the workforce (FRW).	**SO**	**ST**
Weakness (1) The manpower does not have the skills different from traditional skills requested for work routine (FRW). (2) The lack of continuous assessment and follow-up in order to achieve human development (FRA). (3) There are no specific criteria for measuring the performance of workers or companies and factories (FRA). (4) The HE graduates do not know how to deal with information technology and computers, and have to application at the workplace (FRW). (5) Lack of knowledge of digital information systems (FRW). (6) Weak training courses and inability to provide continuing education (FRA). (7) Weak institutional environment within the public sector (FRA). (8) The low level of leadership behaviours among the managers (FRA). (9) Low of behaviour of graduates at the LM due to lack of their job satisfaction. (FRW). (10) Low of manpower productivity (FRW). (11) Inability to work collaboratively within a group, because of lack of their communication skills (FRW). (12) Confusion between the concepts of competition and teamwork among graduates (FRW). (13) The absence of the concepts of career commitment, competition, and excellence in the LLM (FRA). (14) Lack of clarity in the structure of the LM and the ways in which control the flow of its work (FRA). (15) Poor decision-making capacity of the administrators as well as personnel (FRA).	**WO**	**WT**

Appendix (25)

Confrontation SWOT Matrix for HE

(I): Arabic version of the confrontation SWOT matrix for HE

ت	ف	الاستراتيجيات	
ق ت	**ق ف**		**ق**
إعادة تشكيل وتعزيز دور الجامعة من خلال :	*تحسين التنسيق وإدارة سياسات التعليم العالي لدعم التطوير والابتكار من خلال :*		
1) وضع منهج محدد لتحقيق الاستقلال المالي والإداري للجامعات.	1) زيادة التدابير وتطوير العمل في مجال البحوث المرحلة الاولية.		
2) تفويض السلطات الإدارية والمالية لتعزيز اللامركزية.	2) زيادة تنسيق الجهود المبذولة من الجامعات الليبية من أجل تجنب أي ازدواجية أو تداخل.		
3) تشجيع وتوسيع العلاقات القائمة بين الجامعات والجهات الأخرى صاحبة المصلحة في التطوير والابتكار.	3) تبادل المعلومات والخبرات وأفضل الممارسات بشأن المسائل ذات الاهتمام المشترك بين الجامعات.		
4) تشجيع البحوث الموجهة نحو مجتمع الأعمال.	4) توفير التعليم الذي يوجة الطلاب نحو المواقف الريادية والإبداعية والتعاونية.		
5) إعداد معاهد البحوث في الجامعات على أساس مبادئ السوق.	5) التأكيد على فكرة التدريب والتعلم مدى الحياة.		
ض ت	**ض ف**		**ض**
تنمية الموارد البشرية والأصول الرأسمالية المتاحة في الجامعات من خلال :	*سد الفجوة بين المهارات المطلوبة والمتاحة من خلال :*		
1) توفير التكنولوجيات الجديدة للتعليم الجامعي.	1) زيادة ساعات التدريب العملي.		
2) وضع برامج التعليم المستمر للاساتذة.	2) وضع معايير محددة لقبول الطلاب في الجامعة.		
3) تطوير نظم المعلومات في الجامعات لتوفير المعلومات الكافية لصانعي القرار وواضعي المناهج.	3) تعديل أهداف المناهج الدراسية لتصبح أكثر ملاءمة لاحتياجات سوق العمل.		
4) عدم إنشاء الجامعات الصغيرة ، التي لا تملك الموارد البشرية والأصول الرأسمالية.	4) زيادة التركيز على تنمية المجتمع المحلي والبحث العلمي.		
5) تحديد الامانة المسؤولة عن التعليم العالي بدقة.	5) زيادة معدل دمج التكنولوجيا في التعليم العالي.		
6) زيادة الانفاق على التعليم العالي			

(II): English version of the confrontation SWOT matrix for HE

Strategies	O	T
S	**SO** *Improve the coordination and governance of higher education policies to supporting the development and innovation through:* 1. Increase the measures and develop action on primary-level research. 2. Increase coordination of the efforts made on the part of the Libyan universities in order to avoid any duplication or overlap. 3. Exchanging information, experience and best practices on matters of common interest among universities. 4. Provide an education that points students towards entrepreneurial, creative and cooperative attitudes. 5. Emphasis on the idea of lifelong training and learning.	**ST** *Reshape and strengthen the role of the university through:* 1. Develop a specific approach to achieve the financial and administrative autonomy of universities. 2. The delegation of administrative and financial powers to promote decentralization. 3. Encourage and extend the existing relationship between universities and other stakeholders in the development and innovation. 4. Encourage research oriented towards the business community. 5. Setting up research institutes in universities based on market principles.
W	**WO** *Bridging the gap between skills required and available by:* 1. Increase the hours of practical training. 2. Develop specific criteria for admission of students at the university. 3. Modify the aims of curriculum to become more suited to the needs of the labour market. 4. Increased focus on the local community development and scientific research. 5. Increase the rate of integration of technology in higher education.	**WT** *Development the human resources and capital assets available at the universities through:* 1. Provide new technologies for university education. 2. Develop continuing education programmes for lecturers. 3. Develop the information system at universities to provision adequate information for decision-makers and curriculum designers. 4. Not to establish small universities, which do not have human resources and capital assets. 5. Determine the ministry responsible for higher education accurately. 6. Increased spending on higher education.

Appendix (26)

Confrontation SWOT Matrix for LM

(I): Arabic version of the confrontation SWOT matrix for LM

ت	ف	الاستراتيجيات
ق ت **يجب تنمية القدرات المحلية لتمكين جميع القطاعات الاقتصادية على المنافسة من خلال :** 1. تطوير العلاقات الإنسانية داخل سوق العمل. 2. جعل مؤسسات سوق العمل أكثر استقرارا. 3. الحد من تأثير القيم الاجتماعية على قيم العمل. 4. زيادة إنتاجية القوى العاملة من خلال التركيز على مستويات أعلى من استخدام التكنولوجيا. 5. إعطاء الأولوية للتركيز الموارد المتاحة لتطوير البنية التحتية الرئيسية لإجراء الأبحاث الرائدة في المستقبل. 6. ادخال تحسينات في التطور التكنولوجي في جميع القطاعات الاقتصادية ، مثل الإدارة والتسويق والجودة ، وتنمية المهارات ، الخ.	**ق ف** *تشجيع وتحفيز استخدام والطلب على الخدمات التكنولوجية من البنية التحتية القائمة من جانب مؤسسات سوق العمل من خلال:* 1. زيادة التخصص وتقسيم العمل داخل القطاعات الاقتصادية. 2. وضع سياسات مرنة لتكنولوجيا المعلومات. 3. تطوير القوانين واللوائح لتكون أكثر فعالية لإقناع المستثمرين والشركات للاستثمار في ليبيا. 4. تبسيط الإجراءات البيروقراطية عند البدء في أعمال تجارية جديدة مع الإطار القانوني والإداري والمالي التي تسهل النشاط الابتكاري.	**ق**
ض ت **تنويع هيكل الاقتصاد الليبي من أجل ضمان الاستدامة في عملية التنمية من خلال :** 1. وضع معايير محددة لقياس أداء العاملين والشركات والمصانع. 2. زيادة الأجور والحوافز والمكافآت وربطها مع الأداء بدلا من الترقيات. 3. التوازن في توزيع الإنفاق العام بين القطاعات الاقتصادية. 4. وضع قوانين تنظم العلاقة بين العمال وأرباب العمل.	**ض ف** **دعم القطاعين العام والخاص لتعزيز وتطوير الموارد البشرية من خلال :** 1. تطوير مهارات القوى العاملة الليبية لتحل محل العمالة الأجنبية. 2. تطوير الدورات التدريبية وبرامج التعليم المستمر للأيدي العاملة الليبية للتعامل مع تكنولوجيا المعلومات وأجهزة الكمبيوتر ، وتطبيقها في مكان العمل. 3. تطوير البيئة المؤسسية داخل القطاع العام. 4. تطوير مستوى القيادة.	**ض**

(II): English version of the confrontation SWOT matrix for LM

Strategies	O	T
S	**SO** *Promote and stimulate use of and demand for technological services from the existing infrastructure on the part of LM institutions through:* 1. Increase specialization and division of labour within the economic sectors. 2. Develop flexible policies for information technology. 3. Develop the laws and regulations to be more effective for convince investors and companies to invest in Libya. 4. Simplification of bureaucratic procedures involved in starting up new businesses with a legal, administrative and financial framework that facilitates innovative activity.	**ST** *Domestic capabilities must be upgraded to enable all economic sectors to compete through:* 1. Develop human relations within the labour market. 2. Make labour market institutions more stable. 3. Reduce the impact of social values on the values of work. 4. Increase of manpower productivity through emphasis on use higher levels of technology. 5. Give priority to concentration of existing resources to developing major infrastructure for conducting leading research in future. 6. Improvements in technological development in all economic sectors such as management, marketing, quality, skills development, etc.
W	**WO** *Strongly support public and private actions to strengthen and development the human resources through:* 1. Develop the Libyan manpower skills to replace foreign labour. 2. Develop training courses and programmes of continuing education to Libyan manpower to deal with information technology and computers, and applied at the workplace. 3. Development the institutional environment within the public sector. 4. Development level of leadership behaviours among the managers.	**WT** *Diversification of the structure of the Libyan economy in order to ensure sustainability in the development process through:* 1. Develop specific criteria for measuring the performance of workers or companies and factories. 2. Increase the wages, incentives and rewards and linking them with performance rather than position functional. 3. Balance in the distribution of public spending between economic sectors. 4. Establish laws governing the relationship between workers and employers. 5. Establish laws governing the ways of work.

Appendix (27)

The number of Libyan households' size from

1954 to 2006

Years	No. of families	Total of Households	Average Libyan Household Size
1954	240.549	1.088.889	4.5
1964	331.990	1.557.046	4.7
1973	346.739	2.071.760	6.0
1984	476.463	3.250.806	6.82
1995	634.919	4.413.033	6.96
2006	963.899	5.673.031	5.9

Source: *Researcher collated the data from raw data published in the LGPC 1954, 1964, 1973, 1984, 1995 and 2006.*

Appendix (28)

The number of the specialized research centres in

Libya in 2002

No	Area of Specialization	Number of Centres
1	Agriculture and animal production and fish	3
2	Industry and Technology	2
3	Building and construction	1
4	Health and medicine and biotechnology	2
5	Energy	3
6	Economic Sciences	1
7	Historical Sciences	1
8	Different areas	7
	Total	**20**

Source: El-Hawat (2003)