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Developing the human resources in the universities in the light of the requirements of the knowledge-based economy

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Abstract
Information and communication technology revolution has played a key role in the move towards the so-called knowledge economy, which was based on the success of the information technology, and caused major changes in economic reality, through the changes in the volume of production and rapid growth, in addition to rely on investment in human capital, and it also becomes the focal system research and development is the lifeblood of the economy. Education is the most important sources of strengthening international competitiveness; especially in the information society. Where education is considered as a key to enter the era of knowledge and the development of communities through the development a reality for human capital, which is the focus of the educational process. This means that the community is linked to the concept of the knowledge economy community education, which offers many individual opportunities; knows devoted to learn, and learn so that Work, so live and learn with others and learn to achieve himself.
Therefore, we can say that the reason which leads the rise of the advanced countries,(technical, industrial) is achieved only through universities, which have a well qualified human resources, symbolized by the teacher and knowledge labors by whom the civilized project is done for the nation. it is clear that the universities have to work on the development of human resources to keep pace with the demands of the knowledge-based economy, by qualifying their faculty members, students and administrators scientifically and practically and working to develop their skills and creativity and renew their knowledge continuously through the use of technical information and communications technology, and they must change their regulatory actions to reflect the spirit of the era of knowledge.

Keywords: human resources, requirements, knowledge-based economy, universities

Introduction
In many nations, government policy and scholarly work have identified the growing role of universities and research in the world-wide knowledge economy. The role of universities is not limited to fostering the economic development of nations and providing opportunities for individuals, it extends also to promotion of cultural diversity, political democracy and trade. Emphasis is rightly placed on how universities can better serve society and promote international cooperation. However, as yet little attention has been given to two elements. The first is how universities and research are among the primary forces shaping globalization. The second is the manner in which universities and research are themselves being reshaped by globalization, with significant 'feed-back' effects into nations. Universities and knowledge are simultaneously global, national and local. Barakat (2011) [3].

It is here that teaching, learning and research in the social and human sciences have to be re-elaborated in terms of conceptualization, formalization and synthesis so as to transcend the frontiers of the new world. This brings us back to the role of universities in this new era of a knowledge linked economy. Universities in developing nations are facing entirely different challenges. The key issues are increasing demand, relevance, quality and excellence, governance and resources.

Moreover, it is important to create and use information and communication networks linking all the colleges and universities in the country. This will ensure uniformity in access to teaching material and also help to maintain high standards of education. The information network will help teachers to supplement their teaching in the classroom by imaginatively blending it with multi-media support material on a particular topic; or giving the students a feel of demonstration experiments through computer simulation; or allowing them the opportunity to watch experiments being conducted in well-equipped laboratories, or listen to experts in their own country and also other countries. Kay (2005) [8].
The innovative use of information networks will virtually enhance the academic infrastructure in the classroom, that too in a cost-effective way. We need to train and encourage teachers to develop multi-media material education develops a person's capability for learning, interpreting information and adapting knowledge to individual or local conditions. In a way, basic education provides a scaffold for lifelong learning. Universities goes beyond this. It provides the foundation for building knowledge for an information-based society. Information-based science and technologies demand more skills for diffusing, interpreting and applying knowledge. And Higher education, in traditional as well as professional streams, besides laying the foundation in basic, core disciplines, gives students new and better skills to

monitor, assess and develop appropriate strategies for the use of technology. Haider (2004) [4].

Hence, universities will have to play multiple roles generate new knowledge, acquire the capability to decipher and adapt knowledge produced elsewhere, and create intelligent human power at all levels.

Concept of the Knowledge-Based Economy

Knowledge Economy

'Knowledge Economy' is a system of consumption and production that is based on intellectual capital. The knowledge economy commonly makes up a large share of all economic activity in developed countries. In a knowledge economy, a significant part of a company's value may consist of intangible assets, such as the value of its workers' knowledge (intellectual capital). However, generally accepted accounting principles do not allow companies to include these assets on balance sheets.

The knowledge-based economy is one where the generation and utilization of knowledge contribute to a significant part in economic growth and wealth creation. While traditional factors of production, that is labour, capital, raw materials and entrepreneurship, remain important, knowledge will be the key factor driving growth, creating new value and providing the basis to remain competitive. While information technology (IT) will be the fundamental enabling tool, the nucleus of the knowledge-based economy will be human resources- essentially the capacity to create, innovate, generate and exploit new ideas as well as apply technology and exercise superior entrepreneurial skills. Existing industries will become more knowledge-intensive, while new knowledge-based and enabling industries will emerge. Accordingly, the economy will be characterized by knowledge-based activities and high-technology industries accounting for a significant share of employment, Gross Domestic Product (GDP) and exports. Besides being a factor of production, knowledge will become a commodity to be traded**.** Simon (2009) [7].

Knowledge and Characteristics of Knowledge-Based Economy

Khalaf (2008) [9] finds that the Knowledge and Characteristics of a knowledge-based economy are as follows:

- Knowledge is information that is interpreted and used by decision-makers to meet their goals. It is a public good, in that, there is no additional cost when shared with other users and others cannot be excluded from using it once it is created.
- Knowledge is generally divided into two types, namely, knowledge about technology and knowledge about attributes or tacit knowledge. The latter refers to knowledge gained from experience and which is often a source of competitive advantage.

Characteristics of a knowledge-based economy

- It has abundant resources. Unlike most resources that deplete when used, the knowledge input is ever expanding in tandem with technology and innovation.
- No location barrier. Innovation in technology opens access to resources and markets all over the world, creating virtual market places and organizations. There will be increased mobility of workers and capital.
- A highly educated labour force. The knowledge economy comprises a better-informed populace as the government invests more on human development. Workers contribute to ideas, skills and knowledge by using latest technology.
- A high level of per capita wealth. Knowledge-based investments generate increasing returns to scale and therefore, more wealth for all.
- Open cosmopolitan society attractive to global talent. There will be ample opportunities for locals to tap foreign knowledge and learn of best business practices as world-class infrastructure will encourage foreign investment. The population will be willing to accept and put into practice new ideas and technologies and hence, local companies will become fit and fully equipped to face global challenges.
- Well connected to other global knowledge nodes. Connectivity to the rest of the world and technology sharing as well as technology transformation will be made easy with the free flow of information with lower cost, and reliable infrastructure encourage information and technology sharing.
- A shift from top-down hierarchical organizational structures to flatter shared-structures such as networks of semi-autonomous teams. IT development and communications technology will lead to better interaction among workers and there will be active involvement of workers in contributing ideas and decision-making.
- Skills and knowledge are key assets. Skills and knowledge become the main assets for the economy to gain competitiveness.
- Information and communications technologies (ICTs) are pillars of the knowledge-based economy. Access to networking is essential in acquiring and disseminating knowledge and the Internet is a key driver of ICT especially in the development of E-based activities, resulting in new approaches to doing things. Pruett and Schwellenbach (2004) [10].

Knowledge in knowledge economy

Higher quality of knowledge and skills of workforce has significant impact on employment (because well-educated and qualified people have better opportunities in the labour market) and competitiveness of an economy (especially in more sophisticated fields that are drivers of economic growth). Puts The starting point for the creation of competitive knowledge economy is functioning of such a system of tertiary education that is able to flexibly respond to the needs of regions and employers and simultaneously use the latest results of research and development. The key factors of sustainable growth in post-industrial society are systematic development of human potential (enhancing the ability to obtain new knowledge and skills, flexible labour market and flexible workforce), development of research potential, cooperation between research institutes and the business sphere and the quality and availability of transport

and communication networks, especially availability of modern technologies. Zítek and Klímová (2011) [5].

The Relationship between the Knowledge Economy and Human Resources Development in the Universities

Human resources development in a knowledge economy requires more than simply training. Building and harnessing human resources involves planned interventions in at least three levels in which knowledge workers operate within an organization, namely individual, group and organizational.

A key concept of the knowledge economy is that knowledge and education can be treated as one of two things: first, a business product, as educational and innovative intellectual products and services can be exported for a high value return second, as a productive asset.

It can be defined as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence. The key component of a knowledge economy is a greater reliance on intellectual capabilities than on physical inputs or natural resources. Walter W. Powell and Kaisa Snellman (2004) [11].

The relationship between the knowledge economy and human development Since the knowledge economy structure is based on the capacities of human minds and knowledge it gives, people skills and competence in the application of that knowledge to produce new goods and services, in the performance and achievement, these people`s development in their environment constitutes the first step to form knowledge economy and the basis for its progress and growth.

And the use of knowledge, either for the development of production processes, or to improve product quality and increase the quantity, or for the rehabilitation and training of human resources; make technical knowledge take the place of financial capital, and it becomes the main source of growth. So the knowledge economy depends on having qualified and trained humans and this requires more efforts for teaching and training humans, either in the teaching and training material or in quantity or quality, thus, making qualified human resources more valuable in knowledge economy.

Since the main resource of knowledge economy are humans; what knowledge, skills, creative abilities and innovative solutions they have, represent real capital which is owned by the community, institution or company; since the human resources transforms into a high value, on the basis that human resources consists of two elements, first, specialized knowledge that is saved in the mind of the person at work. That is the knowledge of the person, and not of the institution or community. Secondly, the knowledge used by the worker in the organization, as a member, and therefore owned by the institution; and described as irrelative resources.

So that countries and companies have to attract the best skills of people with cognitive abilities and high creative skills, and works to stimulate employees to continuous learning; to develop cognitive abilities and acquire new skills and expertise by identifying the internal and external environment. Also they do so to learn more about the cognitive balance inventory with its members; to be converted to intellectual assets owned by the company or institution, for the knowledge has no complete role, unless it is accompanied by the use of advanced technology and informational revolution that brought data and knowledge for all. That is, to know how to get advantage from it and how to be accompanied by the existence of cultural climate and social relations supporting its production.

The explanation is that human development at the universities provides the basic components of the development of the abilities of community and their various skills, where it adopt them since birth, provide them with health care conditions and a decent living, and provide the right to acquire knowledge and work. So the human development is considered knowledge-based economy structure, because of its dependence on the creative industries of all its different kinds.

The estimated net proceeds of the creative industries arising only from (US copyright industry) in 2001 estimated at 791.2 billion dollars, which is equivalent to 7.75% of GDP, and the estimated number of employees in the industry for eight million, who have contributed to nearly 89 billion from exports, and what this means superior to the chemical industry, automobiles, aircraft, and the agriculture sector, electronic and computer sectors. Al-Swaidi (2004) [2].

At the same direction of the knowledge economy combined with the so-called "quality economy", as an area applied shall bind the quality of intellectual capital, and human resources cost, physical and social returns, for this and other sustainable human development has become the main concern of the knowledge economy.

And the relationship between knowledge-based economy and sustainable human development at the universities impose a deep institutional reforms in the various directions affecting education and scientific research system, and establishing the production and the labor market in the systems and regulations, and policies, plans and procedures.

Knowledge economy and what it imposes from spreading of the methods of modern teaching, different electronic technology, programmed equipped and advanced computer devices and internet, according to the steps of advanced technology and its requirements have great advantages. Such advantages reflect their results on the development of human sources. So all different at the universities sections should help in empowering the development process through inserting the role of modern technology, electronic and information system, and different teaching methods and getting advantage from it in the development of human resources in order to be able to adapt with age requirements. Also they should be able to transform this knowledge for others, to reach to permanent development of human resources. Khalaf (2008) [9].

Digital economy requirements: The trials to adapt with the circumstances and the environment of digital economy and the changes it brought, is still the concern of most organizations which like to continue and stay in the new system, through their trials in bringing excellent digital elements depending on information and knowledge in place of traditional elements without ignorance, that is, in a balanced way between the two systems. And this will not happen except through reconstructing its activities. Here are the necessary elements made for success the development in the universities in the light of digital economy:

a. Using internet and network, with all its types in the development of the universities jobs, which makes them able to adapt with things happening around. And this will make it more flexible to adapt with the changes that can

be characterized with its strength and speed. Since one of the features of digital economy is to omit all time and geographic boarders that stand between the organizations and developing and expanding their markets. This will bring flexibility, basic competitive, having more customers whichever is in the geographic map.

b. The necessity for the country to make rules that are able to protect the rights of customers in the digital economy, especially poor countries that lack such rules.
c. The necessity for the public or private institution to play the role of the third one that constitutes the safety of procedures that happen in the digital economy. And the third one means a confident one in all the procedures with taking into account the difference in cultures. So this element is basically important for poor countries, as a result advanced countries will exceed the gap among customers.
d. The necessity to adapt with all the changes happening in the environment, such as in technology, and work thoughts and philosophy. And the government has to encourage such behaviors, by adopting them and making all necessary facilities, through strong base, suitable to the needs of organizations in the digital economy age through the universities.
e. Adopting the work that is based on knowledge and information since these two elements are the basis of getting competitive features in the age of digital economy. This cannot be attained unless there is a focus on information technology and data bases through the development in the universities. Nigavekar (2010) [6].

The Role of the Universities in the Development of their Human Resources in the Light of the Knowledge-Based Economy:

The global economy is turned into a knowledge-based economy. We cannot shift to the knowledge-based economy only through an educational system that is able to develop creative abilities of people, and free them from the trap of memorization. This will maximize their ability to understand, analyze, imagine and create. Juma'h (2009) [7].

On the basis of the growing importance of the knowledge-based economy and its rapid practice in universities, and the challenges that these universities face, We must work to raise the level of faculty, students and staff, and attention to the quality of education and services research in order to serve society around them; All this requires the need to focus on the creative aspects which is usually the primary source is human. Azzawy (2004) [1].

it is clear that the universities have to work on the development of human resources to keep pace with the demands of the knowledge-based economy, by qualifying their faculty members, students and administrators scientifically and practically and working to develop their skills and creativity and renew their knowledge continuously through the use of technical information and communications technology, and they must change their regulatory actions to reflect the spirit of the era of knowledge**.**

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