Capitalization of human resources and knowledge economy: A model for creating human capital

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Summary:
The creativity and innovation are reproduced through the production of knowledge derived from human capital formation which is present the stock of competencies and skills and human capabilities they contribute to improving the competitiveness of businesses .and thus this activity aims at specifically research to identify the processes leading to the passage from Human Resources Management to the capitalized human resources within the institution. Therefore .we propose a model integrated operations among them .which deserves to be highlighted for the development of human capital capable of facing the knowledge economy .taking into account the platform for the knowledge economy as a way to strengthen and enriching the article.

Keywords: capitalization of the human resource .human capital .knowledge economy.

ملخص:
إن الإبداع والابتكار لا يتم إلا من خلال إنتاج المعرفة التي تتأتى من تكوين رأس المال البشري الذي يتمثل في مخزون الكفاءات والمهارات والقدرات البشرية كونها تساهم في تحسين القدرة التنافسية للمؤسسات، وبالتالي يهدف هذا النشاط البحثي تحديدا إلى تبيان العمليات التي تؤدي إلى الانتقال من إدارة الموارد البشرية إلى رسولتها داخل المؤسسة. وبالتالي نقترح نموذجا يتضمن مجموعة من العمليات المتكاملة فيما بينها والتي يستوجب تسليط الضوء عليها من أجل تكوين رأس مال
Introduction:
Integration in the economic world requires an assessment of the capability of Algerian companies to face competition by absorbing the contribution of human resource in the promotion of the general trend to improve functional requirements. Where that integration and international friction between institutions through competition rise the creation of jobs since the beginning of the value chain through a series of activity that contribute to the product value more than costs from research and development to the industrialization process leading to the customer.

Problematique: In order to enable the Algerian institutions to face competition we should develop our human capital, which is being prepared at the macro level where the responsibility is on State through the provision of the necessary foundations for the improvement of formal education. Either at the micro level where the responsibility of the institutions is the application of the various processes of development and the developing of human capital. Whether traditional such as the various operations of the conduct of human resources, or modern which is proposed in this article as a model represented in four axes: the enabling of workers, organizational learning, training, occupational safety, and here we ask the following cases:
What are the modern operations of capitalization of human resource within the institution under the knowledge economy?

From the above main question, we ask sub-questions:

1. What are the elements of the process enable workers to contribute to the creation of human capital?
2. What are the elements of the process of organizational learning, which contribute to the creation of human capital?
3. What are the elements of the training process, which contribute to the creation of human capital?
4. What are the elements of the process of occupational safety and how to contribute to the creation of human capital?

We will try through tribal knowledge answer these questions through the following assumptions:

- That giving the independence of workers and confidence in the completion of their tasks managed to the capitalization of the human resource.
- To adapt to change for workers from the capitalization of the human resource.
- That elements of the training process and contribute to the capitalization of the human resource.
- To provide the means of personal prevention lead to the capitalization of the human resource.

The reasons for choosing this topic: The reason for choosing this subject is due to the following points

1. The expansion of scientific regarding the capitalization of human resource and knowledge economy.
2. The need to mention institutions to the close link between the knowledge economy and human capital.
3. Inevitable steer companies toward the development of human capital and to ensure their survival and continuity.

**Importance of the subject:**
within the framework of the application of the operations of the enable workers and organizational learning and training . occupational safety . the capitalization of the human resource as a measure for the generation and distribution of knowledge of all actors involved in the projects of the institution to achieve the goals through the adoption of a particular methodology of capitalization and the development of knowledge and skills . experience and competencies of the Organization's workers.

**The aim of the subject:**
1. Highlight the concepts of capitalization . human capital . knowledge economy.
2. Reflect modern operations of human capital formation braced the economy.

**Curriculum:**
In view of the fact that the study into the issue of the transition from the Human Resources Management to the capitalization of the human resource in the knowledge economy will be the adoption of the descriptive approach.

**Plan of research:**
The research Will be divided into two parts. The first part is the entrance to the capitalization of human resources and knowledge economy . and the second is a model for creating human capital
First: The entrance to the capitalization of the human resource and knowledge economy

1. Capitalized human resource:

1.1. Capitalization: various specific actions to make the competencies and capacities available to the institution a clear and official in order to be able to exploit by various parties during the identification of human resources of the diabolic and collecting the delimitation of competencies and experience and then aprove the maintenance by the officials of the units and sections and then made available for exploitation with ensuring that enrich these competencies and experience through continuous education and training and other operations.32

1.2. The capitalization of the human resource: is the process of deviding lines of the knowledge and skills through its conversion from a group of individual skills gathered randomly in the institution and collecting them into the capital of skills and capabilities that can be shared.33

It has been a quotation of the concept of the capitalization of the human resources from the concept of the capitalization of the knowledge which declared the year 1990 reflecting the perpetuation of the development of the experiences gained through the program IMKA any initiative for managing knowledge asset in the sense of initiative of the Department

33Jeant Philippe Accort, Dispositif de capitalisation des connaissances, repérage de l’offre et construction d’une typologie, école doctorale informatique et system d’information et communication, 2001, p 06.
of knowledge assets by FORD MOTOR COMPANY.\textsuperscript{34} in the year 1991 was given the following definition of the capitalization of knowledge of the Organization: "capitalization of the knowledge of the Foundation is considered used knowledge and productive employment by the Organization as a source of wealth and build capital which brings increasing interest to contribute to increasing the value.\textsuperscript{35}

1.3. The definition of human capital: We have known human capital that the real motive for economic development being is the accumulated stock of skills and talents as reflected primarily in the science and knowledge of the labor force, where are generally measurement of human capital through formal education or casual and training.\textsuperscript{36}

In this sense, the head of the human resource is not limited to formal education but include experience practical education which occurs in the work to strengthen the skills development.\textsuperscript{37}

the human capital consists of two components, one instinctive other households maintained on unearned income, where the first reflects on the preparations for the physical and mental health of the participators which generate with the individual, the second most important reflects

\textsuperscript{34}: Michel Crwndsten, De la capitalisation des connaissances au renforcement des compétences en génie industriel, ver l’articulation entre compétences, université de Paris, 2002, p 02.

\textsuperscript{36}: Mathur V, Human capital based strategy for regional economic development, Economic development quality, 1999, p 205.

\textsuperscript{37}: Davidson p, Honig b, The role of social and human capital among nascent entrepreneurs, journal of business venturing, 2003, p 301.
the body of knowledge, skills and competencies and qualifications and physical capacities and expertise and experience gained.  

1.4. The theories of human capital: there are three basic theories:  

1_ the theory of investment in human capital: one of the most important pioneers of this theory Theodore Schultz" he had tried in 1961 drew attention turning it from a mere attention capital material of interest to those components non-material of human capital. noted the reluctance of looking for research and analyze the wealth of humankind, as one of the pillars of this theory mainly on education based on human capital on three pivots:  

_ to give the new generation appropriate parts of the accumulated knowledge of previous generations.  

_ teaching to keep pace with modern science to be exploited to develop processes and products.  

_ to encourage creativity and innovation through the development of ideas and knowledge.  

On the other hand, "Gary Baker" confirmed on the importance of the process of training in the capitalization of the human resource, in particular training primarily to strengthen the process of investment in human capital as well as to human factors and other development of
human resource such as health and provide information (make it available).\textsuperscript{40}

Thus Mr. Minser support the theory through his belief that the return of training is more than the costs and considered that the cost of training is a replacement cost because it’s a wage of the loyalty of the individual if he did not attend to other organizations.\textsuperscript{41}

2_ the theory of marginal productivity: where the human capital as a method to reach profit through investment in the workers as a means to raise productivity.\textsuperscript{42}

3_ the theory of the work: this theory assumed that education raises productivity but it criticized in many aspects the fact that education is not necessarily lead to increased productivity and inevitable but must provide other factors such as training and provide infrastructure for the development of human capital.\textsuperscript{43}

1.5. The specifications of human capital:
There are three major specifications and features of the human capital: \textsuperscript{44}

1_ knowledge: includes technical knowledge specialized or professional as knowledge to suit the industry associated operational

\textsuperscript{40}: Garry Becker, Human capital: A theoretical and empirical analysis with special reference to education, university of Chicago, Paris, 1993, p 01.

\textsuperscript{41}: د. عليان الحولي، موقع الجامعة الإسلامية، www.iugaza.ps، 2009، ص 03.

\textsuperscript{42}: ses.ens-lyon.fr/a-les-fondement-de-la-théorie-du-capital-humain-68305, kjsp, publié le 11mais 2009.

\textsuperscript{43}: د. مصطفى رجب، الاستثمار في التعليم أساس التنمية الاقتصادية، جريدة البيان الإماراتية، أفريل. العدد 1221.1999.

\textsuperscript{44}: Lan T and K Chan, and T Man, the Entrepreneurial and Managerial Competencies off small business owner, International conference on competence-based Management, 18_19 June 1995, p 09.
knowledge through understanding and awareness of the environment of changing business needs. In addition to knowing the use of technology.

The Nonaka is a model of knowledge based on classifying the knowledge into the explicit and implicit knowledge. Where the first is the formal knowledge and standard located in a manner to be expressed quantitatively or deployable. Learning and seen as the intellectual property legally protected. Patents and procedures of work. The second consists in those inherent in the people without others being self-knowledge embodied by the words. That means that we know more than we can say.  

2. **skills:** negotiating skills, the skills building relations with others, the skills to use the new snapped up update capabilities, the skills and capabilities of dealing with multilateral projects.

3. **characteristics:** include flexibility through the pace of change and the ability to adapt to the emergency rapid learning and self-orientation of development and education, and self-reliance.

6.1. **elements of human capital:** the human capital consist of the following main elements:

1. **health:** defined by the World Health Organization on the case of the well-being of the physical and psychological, social and fully, and is not limited in its concept only on the absence of disease or disability to
be in good health. 47 where divided into occupational health through the improvement of working conditions, the health of the workers and their ability to work as well as to environmental health through environmental balance which arise between rights and its periphery where human health of all aspects of the physical and psychological and social development.

2__ knowledge and skills: the knowledge and skills of individuals is that they know how to work and to be able to accomplish the specific tasks with extreme precision through education and training and experience.

2__ the knowledge economy

1.2. the definition of the knowledge economy: the United Nations Development Program (UNDP) defined the knowledge economy as the dissemination of knowledge and production and employment the adequacy in all areas of societal activity of the economy and civil society, politics, private life in order to upgrade the humanitarian situation steadily requires building human possible successful distribution of optimal exploitation of human capacity. 48

The difference between the information economy knowledge economy in the fact that the first was limited to the use of information in the form of the movable and education and distribution and switching to information and databases and software and this is what applies to the explicit knowledge while the second is expanding to include all of the

47: www.who.int/about/difinition/fr/print/html

18,17: د. عبد الرحمن الباشعي، د. فائزة محمد العزاوي، المناهج والاقتصاد المعرفي، دار المسيرة للنشر والتوزيع والطباعة، الطبعة الثانية، 2010، ص 25
knowledge of the explicit and implicit which represent the largest part of the knowledge of individuals which bewilder are non-transferable and education but sharing through the collective action of the action teams through friction and observation.

There is a difference between each of the knowledge economy and the knowledge based economy. The former is based on the operations of the same knowledge of any production of knowledge industry and research and development. And the second is considered an advanced stage of the knowledge economy. It depends on the application of the knowledge economy in various economic and social activities such as intermarriage between information technology with multiple sectors such as telecommunications and performance diseases. Surgical operations. Conferences by satellite.

Apparitions of knowledge economy was in 1951 through the institution of “Rand Corporation” where creating depots of experiences and centers of thinking through research activities to provide solutions and suggestions with a view to disseminating knowledge to be learned of the institution in the United States of America.

2.2. the platform for the knowledge economy:
The first step in the process of building a knowledge economy is the national understanding of the strengths and weaknesses of our country in addition to the strengths and weaknesses of our competitors. Current

50: http://docs.google.com/presentation/d/1/drmheli-lq3tb4hxwvi_3niezrWrgdqoz3qzh6tz-A/edit#slide=id.p17
51: http://www.youtube.com/watch?v=DBP4gE6bcd8.
and future and thus the state development objectives and the
development of their policies and investments to achieve the platform
for the knowledge economy in the following points:\textsuperscript{52}

1. **the economic system and institutional framework:** the
institutional system and economic State must provide certain
motivations for the effective use of current knowledge or new
promotion projects.

2. **education and skills:** that individuals need to education and
skills-building that qualify them to create knowledge-sharing and use
correctly.

3. **information infrastructure and communication:** to provide
information dynamically is required to facilitate effective outreach for
the dissemination and exchange of information.

4. **innovation system:** Includes the innovation system each of the
institutions, research centers, universities, knowledge warehouses, and advisory offices to take advantage of the growing stock of knowledge and development to local needs and devising new technology.

**Second:** A model for creating human capital

including that the capitalization of the human resource is the process of
demarcation of human resources through the many operations to form
the capital to be dividing these operations into two sections: the
traditional operations to capitalize human resource which is
represented in the various operations of the administration of the
human resources and processes by modern capitalization of human
resource based concentrated in the empowerment of personnel.

\textsuperscript{52} The world bank. Measuring knowledge in the world’s economies, knowledge assessment Methodology and knowledge Economy Index, knowledge for development program. 2013, p 01.
organizational learning, training, and occupational safety being represents an important elements of the theory of human capital.

1. **Empowering workers**: Empowerment known as the process to enable and support the human resources of the organization so that we can making effective decisions and efficient leads to improve quality continuously. It also knows that the strengthening of individuals, giving them the opportunity to participate and the exploitation of the mental energies in full in the solution of the problems of work and improve productivity is mainly in the transfer of authority and responsibility to take the decision of the Director to the staff.

1 / **Enabling workers steps**: there are six steps to enable these steps sequentially and tidy and logical arrangement where each step of great importance in the enable workers:

1. **Access to training**: For senior management to begin the process of empowerment there must be a desire and willingness to relinquish power and decision-making levels of the lowest in the organization.

2. **The selection of appropriate staff to the process of empowerment**: there must be the desire of the workers in the process of empowerment there are workers willing and ready to assume additional responsibilities and absorption of decision-making authority.

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53: د. أيمن حسن ديوب، تمكين العاملين كمدخل لتحسين جودة الحياة الوظيفية في قطاع الاتصالات (دراسات ميدانية)، مجلة جامعة دمشق للعلوم الاقتصادية والقانونية، المجلد 30، 2014، ص 204.

54: د. علي السلمي، ملامح الإدارة الجديدة في عصر المتغيرات وانعكاساتها على إدارة التغيير، الملتقى الاداري الثالث، إدارة التغيير ومتطلبات التطوير في العمل الاداري، السعودية، 2005.

3_ provision of information: provide senior management information about the roles and responsibilities and decision-making power to come together with the objectives of the Enterprise sections, as well as the provision of information on the Limits of the decisions which must first be taken before the workers as well as the provision of information on performance standards and rewards outstanding achievement.

4_ participation of information: through helping workers to understand the necessity of change, the participation of some sensitive information in the institution, the list of factors owned by snakes into the workers and information-sharing good and bad and error checking and explained an overview of the institution and to clarify priorities and the education of decision-making and problem-solving skills.

5_ providing training for the workers: through the provision of a clear view on the success and the fundamentals of costs and the profits associated with the performance of the staff and the financial situation of the Organization to increase links and their loyalty to it or must be continuous training being an essential factor for the success of the institutions.

6_ encourage initiatives: the supply is very fruitful for the enterprise requires the decentralization of decision-making and to promote self-discipline and the development of clear criteria for the expectations of the institution and provide an enabling environment through openness to change and tolerance during the failure.

2/elements of empowerment:
There are three basic elements of empowerment process leading to job satisfaction:

1. **Precision and clarity:** We must clarify objectives and expectations as the individuals can achieve progress in work when they have a full picture of the results expected to be achieved.

2. **Encouragement and support:** Through the provision of the means and methods which workers require to succeed and to remove obstacles that may hinder the progress of work by meeting the financial needs. This required time and resources to promote necessary to achieve the objectives.

3. **Independence and freedom:** That enable workers means give them the independence they need to perform their work once know what they must do and give them the necessary support for the diabolic give them freedom in the performance of the work and confidence in the ability of workers to fulfill their duties and the need to create the surroundings of positive action to encourage creativity.

2. **Organizational learning:** The trend toward the knowledge economy, especially in the 1970s of the last century lead to impose a new reality on the organizations which have called for the strengthening and development of creativity and innovation and openness among the roads that organizational learning.

1/ **The definition of organizational learning:** Is the process by which the organization seeks to improve the overall capacity to develop

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itself and the development of its relationship with the environment and adaptation with the internal and external conditions. It also represents the continuing review of experiences and transform it into a knowledge organization can be obtained and represents the organizational learning and sustained effort to build knowledge and improve the Organization to take advantage of them in the solution of problems faced and the first definition of this term emerged in the year of 1974 by Argins and Schon during their book “Organisational learning”.

2/Elements of organizational learning: there are internal elements and external organizational learning can be attributed to the following points:

1_ Foreign Elements: Includes the environment which must be characterized by stability with the acceptance of change and the vision of the institution where the operators to determine the substantive goals of the institution.

2_ internal elements: which include decentralization, the management of goals, flexibility, the availability of information and participation.

3_ training: training is the process of increasing the knowledge and skills of workers to do certain work as a regular and continuous activity to increase the technical skills to enable workers to perform
their duties efficiently, so we must providing training for carrying out specific tasks in an effective manner.\textsuperscript{60} In addition, the training aims to enhance the skills and capabilities of workers to control the existing posts and future and contribute to reduce the cost of control, as well as reduce industrial accidents. It also contributes to the increased productivity and quality as it represents the desired goals in modern organizations.

1/\textbf{types of training:}

There are many types of training process, the most important of this types are:\textsuperscript{61}

1. \textbf{training according to the stage:} Contain the training of new workers and training during service through the provision of information and skills and the strengthening of competencies in addition to training to upgrade transport

2. \textbf{training according to place:} Which is inside or outside the institution

3. \textbf{training by function:} Vocational of handicrafts and specialized training for skills and knowledge of the functions of the highest add management training through the provision of the necessary knowledge and the supervision to the process of planning and management leadership and decision-making and negotiation.

2/\textbf{steps to the process of training:}

We mentioned steps of training in the following points:

\textsuperscript{60}: \url{www.yourarticlrlibrary.com/epmloyee-management/training-of-employees-meaning-objectives-need-and-impact}

\textsuperscript{61}: د. أحمد ماهر، إدارة الموارد البشرية، الدار الجامعية، القاهرة، 2004، ص 323.
1_ identification of training needs (planning): by identifying changes and the required improvements in information, skills and abilities of workers with a view to overcoming the obstacles that impede the course of action.62

2_ design training program: after determining the workers to be trained to be the identification of the expected goals of the training process where the management of this operation through a preliminary tests for participants in training to determine levels of knowledge about the extent of their eligibility for training as well as compared to the first test of the final test to the process of training in addition to the necessity of the readiness and desire in the training of personnel in order to achieve the goals.63

3_the implementation of the training process: At this stage we instruct the information and skills and capacities required to the workers by a training programs with a strategic aims in order to achieving the overall goals of the Organization's programs and policies.64

4_ assessing the process of training: in order to know the extent of the efficiency of the training program we must measure the efficiency of trainers to know the size of the improvement caused by the program

63: د. أحمد عيدان جاسم، تقييم مصادرة البرامج التدريبية المنفذة من خلال مخرجاتها، مجلة جامعة الأنبار للعلوم الاقتصادية والادارية، المجلد 4، العدد 8، العراق، 2012، ص 249.
64: د. زيد منير عبوي، التخطيط والتطوير الإداري، الطبعة الأولى، الرائدة للنشر والتوزيع، الأردن، 2009، ص 189.
as well as to measure the efficiency of the trainers and stand on the cost of the training program and the proceeds of the training program.  

3/ The elements of the training process: 
the process consists of the training courses of inputs and outputs.

1_ inputs: include three key elements: 
_ physical inputs: the buildings and Money machines, equipment, and technology.
_ human inputs: Trainers any technical device with the design and implementation of and follow-up to the training, the interns any element of the beneficiary of the activity of the trainers who are working to provide an environment for training.
_ moral inputs: of knowledge and information and beliefs and ideas and theories and the methods to be used in the development of the human race.

2_ operations (processing): Activities by which the conversion of inputs into outputs and from which to determine the training needs of the conversion to the objectives and the basis for the design of the training program and then the implementation stage of any actual training phase and stand on the effectiveness of the training.

3_ outputs are the results of the training process of the material output: like rising production and reduce costs and high levels of performance and to increase knowledge. 
human outputs any individuals who detained for training after strengthening their abilities and the creation of new skills and endow them with the characteristics

66: www.abah.co.uk, Arab British Academy for higher education.
of the new information. moral outputs of the aims of the workers with the objectives of the enterprise and increase their loyalty to have a clear understanding of the message of the institution and orientations.

4_ Occupational Safety:
that safety in general is the science which seeks to protect the human and avoid Risks in any field, prevention of loss of life and property whenever possible. either occupational safety and its science and order which concerned with the preservation of the integrity and validity of the rights of the dangers to which they might be exposed due to work. by providing a secure working environment free from the causes of accidents or occupational diseases.

1/ The definition of occupational safety: is a set of rules and regulations made in a legislative framework aimed at preserving the rights of property and the and avoiding risk of injury and damage. 67

2/ The elements of occupational safety: including the following various occupational safety:

   _ a clear way of how to deal with threats to the safety of personnel: through the presence of a preventive policy to take measures to prevent the occurrence of injuries as well as there are remedial policy depends only on compensation from the risk.

   _ a clear policy on the capacity of the coverage and protection of threats: they include protection policy of morbidity. protection against accidents at work.

67, 37: www.hr.disscussion.com/hr23311.html
specify the way to design programs of occupational safety.

provide means of occupational safety: such as job design, arrange work sites, the provision of protective means from threat sources.

training of personnel to proper behavior: through business performance properly with the use of protective clothing.

the preparation of contingency plans for the safety instructions: through the issuance of the necessary instructions to avoid accidents and injuries.

provide awareness and information: appreciated that workers ways to avoid threats through lectures and distribution of information materials and Enlightenment Signs in different places.

periodic inspection: which is an essential element in the safety program of periodic inspection work sites to ensure the commitment of all to the occupational safety requirements.

Conclusion:

Algerian environment is not insular from the economic developments in the world, in the light of the profound changes companies are aimed at achieving a competitive position and pioneer strategy to guarantee the continuation and development, and for that all the organizations in our time has claimed this principle of attention to human resource supplier in parallel with the growing importance of the knowledge economy for the institutions which requires to catch up this new economy through the capitalization of this vital resource and give it what it deserves from the area of research and study.

The basic recommendations to be taken into account in the model of the capitalization of the human resource within the institution in the
strengthening of individuals and enabling them to exploit the full potential and an ongoing effort to build knowledge and improve the Organization to take advantage of them in the solution of problems faced through organizational learning and activating the training process by providing a secure working environment free from the causes of accidents or occupational diseases by devoting the elements of occupational safety.

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www.yourarticlrlibrary.com/employees-meaning-objects-need-and-impact