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5 May 2007

Online at <https://mpra.ub.uni-muenchen.de/25788/>

MPRA Paper No. 25788, posted 13 Oct 2010 11:22 UTC

# Approaches on investments in continuing management knowledge turnover appraising\*

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## Abstract

This paper approaches the problem of knowledge accumulation by the management team of organizations, but specially that ones focused on obtaining profit in order to obtain competitive advantage. After a brief presentation of the general context, the idea of continuing learning as investment is developed, tacit and explicit knowledge are differentiated and a grouping of knowledge into standardized, specialized and created knowledge is proposed. Further is proposed a process of continuing learning process for management team and the stages of continuing learning. Finally, a model of appraising investments in management knowledge turnover is also proposed.

JEL Classification: M19, O16, C65

Key words: learning, knowledge, investments in management knowledge, and investments in knowledge turnover

## Introduction

The 20th world economy has been characterized by investments in infrastructure, technology, capital market, education and health having the scope the elimination of the major differences between wealth and poor nations. The strategic management of the organization has been focused on physical and financial investments and on considering the individual as being the most valuable asset of the organization. Starting with the 21st century, due to the high speed of research results in IT and communication implementation, the main concern of the managers and organizations became the accumulation of new knowledge. Within this context, the main value of the organization is not any more the individual, but the human capital, by continuing knowledge accumulation through learning.

The learning process implies the development of the knowledge basis acquired by classical system instruction and by specialization and experiences accumulation, as well. In fact individuals and organizations are put in face of a new challenge to learn continually. But, this continuing learning process may be assimilated to any investment process because financial expenses are necessary and their effect is to be seen in time.

## Continuing learning as investment

Learning creates value and continuing learning creates added value. This value is the result of the process of continuing learning that creates the conditions to align to new technologies, including IT and communications and to the business development and to the creation of the competitive advantage on the market.

\* This paper has been published in the Proceedings of the 34th ARA Congress, Ecole Polytechnique de Montreal, ISBN 978-2-553-01547-2, pp. 228-231.

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The management team is composed by managers specialized on classical domains (technical, financial, commercial, marketing, human resources), but IT as well, having an important role in data base creation, communication network implementation (the internet included), the management of PC and software network.

The creativity becomes the organization force and it manifests by designing or acquisition of new technologies, new products or services, new management systems and procedures, as well (TQM, Environment management, risk management, brand management). In many organizations the IT manager lacks from the management team or he is not integrated in the business process or he has not the necessary skills to solve the IT problems that counts as part of the whole process of creating value for the organization. As a matter of fact, the members of the management team have to respect reciprocal, to give trust to each other, to share their domains of action, but to cooperate continually. The work inside a team is a matter of learning.

The most often the organization appeals to experts or specialists in organizational learning and coaching, which may or may not be trainers. Knowledge may be developed by learning a style of learning, by capturing information in different circumstances and by bringing benefits from any opportunity is arising into the organization life. The business success and the success within the competition on the market could be only reached out by an open to change, to learning and to communication management. The organizations already have a knowledge basis, which could be found or not in computers, in the organizational culture and in the individuals and executive teams' experiences. This basis of knowledge contains explicit and tacit knowledge. Explicit knowledge is defined as being the knowledge that can be articulated, coded and stored and may be transmitted to others. The most common explicit knowledge could be find into the manuals, documents and procedures, but the visual audio means, arts works and drafted projects, as well may be seen as forms of explicit knowledge because they externalize skills, reasons and knowledge.

Tacit knowledge is those that cannot be coded, but may be transmitted by training or gained by personal experience [1]. It implies learning and competences accumulation, but in a way that cannot be written down. Tacit knowledge is included into the human capital, value of the competitive advantage in terms of innovation, ideas and new technologies. The organizations have also standardized, specialized and created management knowledge.

- Standardized knowledge can be defined as being notions, concepts, information and experiences used by any manager always with the same meaning;
- Specialized knowledge is that knowledge that makes a special vocabulary within a specialized field of management such as: marketing, technology, IT etc.
- Created knowledge is the result of creativity and innovation in management.

Indifferent of the type of knowledge existing within an organization we understand by knowledge the totality of notions, ideas and information [2], as well as experiences and skills to apply all these and to create others. The learning spiral result that consists in the transformation of tacit knowledge into explicit knowledge and then the explicit knowledge into tacit knowledge again is called innovation, as Nonaka [3] defined the concept.

## **Continuing learning process**

The members of the management team acquire knowledge under different forms (table 1). These forms can be approached in steps, independent or combined according to the organization strategy. Translearning is inspired from the interdisciplinary concept developed by Stefan Lupasco and Basarab Nicolaescu [4].

The process of learning is presented in fig. 1. The consultants (experts) have an important role in determining coefficients and multiplicative necessary to appraise the continuing learning turnover. The

consultants may or may not provide the training programs to the organization in discussion or other organization may provide specialized training.

Table 1- Management team forms of continuing learning

Continuing learning	Details
Mono- learning	Every manager learns a single domain and he informs himself about what the other managers do
Uni- learning	A manager learns an other manager domain, but the reciprocity is not available
Inter- learning	A manager learns from an other manager domain and the reciprocity is available
Multi- learning	Every manager learns some other domains and disseminates towards the other managers
Trans- learning	Every manager learns from all domains of the other managers. The evolution is a positive one for the whole team.

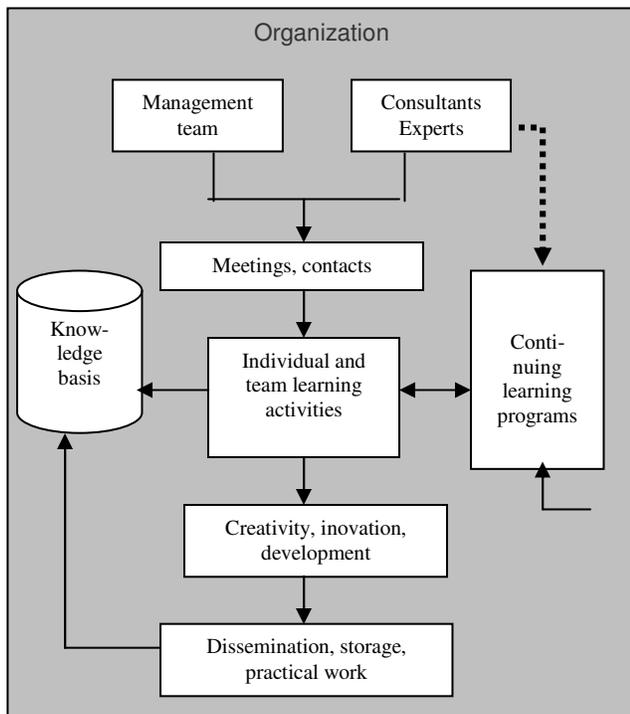


Fig. 1 Management team continuing learning process

Knowledge basis is an abstract notion, which may exist as stored in documents or computers data basis, but the tacit knowledge of management team members and other specialist executives, as well. Significant is the fact that the continuing learning process lead to individual and management team creativity, innovation and development.

## Apprizing ways to quantify investments in knowledge turnover

As in any investments process the turnover of investments in knowledge turnover is the ration between obtained effects in terms of supplementary benefit or profit and the efforts done in terms of capital engaged.

The capital engaged in investments in knowledge is composed by:

- Continuing training programs cost;
- Consultants costs (specialists and experts in consulting and coaching);
- Cost of benchmarking necessary to make comparisons with the competitors;
- Cost of infrastructure necessary for continuing communication inside the management team.

The product obtained from the investments process is the knowledge basis that is creating a supplementary benefit or profit.

The organizations wishing to use the management continuing learning by investments in knowledge may use an integrator model to apprize the investments turnover. The logical scheme of procedural continuing learning modeling is presented in fig. 2.

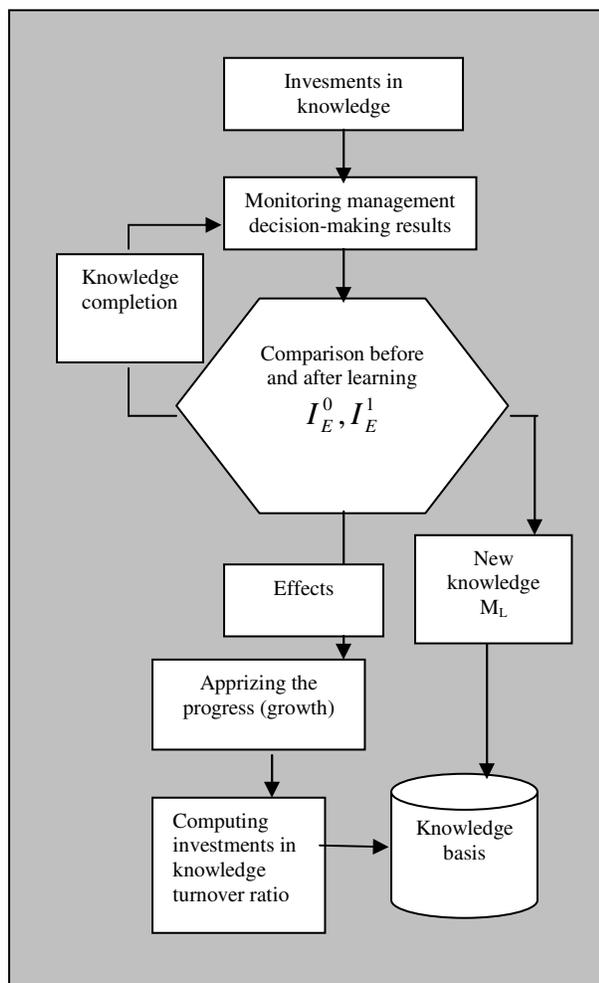


Fig. 2- Procedural modeling logical scheme of continuing learning

It is no doubt that we assume that the organization already has a knowledge basis (explicit and tacit knowledge) and a system to monitor the investments in knowledge effects.

We assume that after the first knowledge acquired by management team members the management decision-making results are monitored: cost of acquired knowledge, favorable and unfavorable results, efficiency indicators evaluation  $I^E_1$  and a comparison of these indicators with the previous obtained ones  $I^E_0$ . The team of experts (consultants) deduces the set of new accumulated knowledge ML. This team elaborates a training program and evaluates the cost of investments on a t horizon of time and the costs with consulting and coaching. This database includes:

- New knowledge ML;
- The new knowledge implications;
- The costs with investments in learning;
- Costs with consulting and coaching;
- Favorable and unfavorable effects.

A comparison between global efficiency indicators  $IE_1$  and  $IE_0$  will follow. The details analysis is kept in the database. The comparison is extended on the basis of the benchmarking that is created with information regarding the competitors. The proposed system has a complex characteristic and it may be extended. Accumulated knowledge permits organization to acquire new knowledge and to add value to competitive advantage. The knowledge bases will contain:

- The extensions of information regarding the competitors that will permit the improving the strategies and the management decisions results;
- The strategies alternatives description and the history of the innovatory ideas;
- The storage of obtained results by the organization regarding the yield obtained through continuing learning.

After following the whole process several periods of time ( $t_1, t_2...t_n$ ) the tendencies of the interlearning effects should be deduced. As consequences, in order to catch unawares the continuing learning effects in report with the traditional learning, it is necessary to introduce in the statistics the global indicators of efficiency  $IE$ , in parallel with the classical ones.

Weather after any analyze of a period of time results  $IE_1 > IE_0$  (significantly high in the apriority defined sense) means that an increase of effects has been obtained.

In order to appraise the investments in knowledge turnover the following tools could be used:

- Linear functions (resulted from an additive composition) as the utility function:

$$U(c_i) = \sum_{i=1}^n k_i u(c_i) \quad (1)$$

Where:

$U(c_i)$  = the total utility of knowledge

$u(c_i)$  = the accumulated knowledge utility

$k_i$  = importance coefficient

- Multiplicative functions, such as: fuzzy set theory, as for example the Cobb-Douglas production function.

The overall turnover of knowledge accumulation:

$$E_g = \lambda \prod_{i=1}^n e_i^{\alpha_i} \quad (2)$$

Where:

$e_i$  = Unit turnover of accumulated knowledge  $\alpha_i$  = exponent determined on statistical basis

$\lambda$  = Multiplication coefficient

$$e_i = \frac{p_i}{k_i} \quad (3)$$

Where:

$P_i$  = The benefit (profit) obtained by the exploitation of the accumulated knowledge by learning

$k_i$  = Costs of investments

The essential advantage of the isolated integration into a learning system of the organization consists in immediate fructification of any original idea. The environment does not inhibit this idea, but they may receive the necessary support starting with the moment it has been launched. Between an idea emission and its dissemination the delay and blockages will disappear, on one side due to spectaculars technology of communication development, and on the other side due to the improving in appraising by means of the relations (1), (2) and (3) and recently by introducing the concept of subtlety [5], concept useful in integration the efforts and the effects of some material and emotional components of the management issues. The quantification of the confidence with the help of a confidence degree  $g_i$  permits estimations for emotional type of components [6].

The confidence degree  $g_i^c$  is accorded to consultants that are using a certain appraising methodology. The cooperation between the organization with the consultants may expect to get success with a high probability and as consequence it will be recorded a higher confidence degree, meaning:

$$g_{i2}^c > g_{i1}^c \quad g_{i1}, g_{i2} < 1 \quad (4)$$

Where:

$g_{i1}^c, g_{i2}^c$  represents the confidence degrees accorded by the organization to its consultants

This degree of confidence has an increasing trend, being in correlation with the advanced hypothesis validation regarding the new accumulated knowledge by management appraising with effects on projected and implemented strategies and, nevertheless with the efficiency resulted by translearning.

The increasing trend of the confidence degree is accepted whether the evaluation is prudent (only after a very long period of time it is significantly closed to 1).

In proportion as the management team acquires knowledge, the quantity of tacit knowledge increases, because the explicit knowledge becomes tacit ones. On the other side, the standardized knowledge scale inside the team and the created knowledge enlarges to specialized knowledge detriment through the tendency of knowledge uniform-made within the team and its scale economy effect.

The volume of the global investments is known on the basis of the budget that sustains the continuing learning program. After the effects headway analyze the effects due to investments in explicit knowledge could be separated. On the way the computing relations (2) and (3) may lead to different estimation versions. These versions will make the subject of debates in workshops or confidential operational meetings.

## Conclusions

Continuing learning is part of the strategy of development with success of the organization. In order to gain competitive advantage the organizations need an effective and efficient management team. The team members may acquire these competences by continuing learning.

The organizations of commercial type and not only may use this methodological instruments proposed in this paper, such as: the concept of investments in continuing learning, the investments in knowledge grouping, the scheme of continuing learning for management team process, the stages of management team learning, the logic scheme of procedural continuing learning modeling steps and the ways of investments in knowledge turnover appraisal.

On our opinion, the investment in the new management knowledge brings new benefits into organization, which practices the proposed system. The management team learns through its members and the accumulated knowledge becomes tacit, contributing to the elevation of organization value and its competitive advantage.

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