

**PERSONNEL TRAINING EFFICIENCY EVALUATION SYSTEM:  
COMPETITIVE ABILITY ASPECT**

**Asta Stankevičienė**

**Aušra Liučvaitienė**

**Agnė Šimelytė**

*Vilniaus Gedimino technikos universitetas*

**Abstract**

Theoretical premises of personnel training efficiency evaluation as one of the factors establishing competitive ability advantage, while emphasising changes of working productivity, are analysed in this article. The analysis of general competitive ability models and the possible application of prospective in the companies' competitive ability surveys are necessary when trying to clarify peculiarities of modelling competitive ability as a factor which forms the competitive advantage. Referring to the introduced arguments and analysis of theoretical scientific literature, the possible scheme of competitiveness evaluation is proposed. The provided methodology on the competitive evaluation may be in order to evaluate the competitiveness of a company. The elements of advantageous and efficient activity become weighty criterion assessing the competitive advantage. The criterion assists accurately and explicit of competitive advantage evaluation. In Lithuania, during the period of transformation competitive advantages were formed as a part on impact of such factors as qualified and cheap labour force, cheap raw materials, etc. It is worth while to notice the significance of results evaluation resources used to achieve those results in the methodology. Therefore, examining the personnel's work efficiency as one of factors which forms the competitive advantage, it should be appropriate to identify the essence and methods of results evaluation and expenditure for resources of work (especially, in investments of personnel training).

Personnel training importance when company's competitive ability is established. After analysis of modern attitudes towards personnel training efficiency evaluation it was determined that there is no coherent personnel training efficiency evaluation system. Performed analysis of questionnaire research data on companies' attitude towards personnel training efficiency evaluation has shown that opinions of the companies also are not completely established. Place of personnel training efficiency evaluation system while evaluating company's competitive ability is provided, with a reference to competitive ability and personnel training efficiency evaluation methods. The position of personnel training efficiency evaluation system determined in common evaluation system of competitiveness permits evaluation and not only the impact of material devices on benefit, but also the return on investments in human factor, and the impact on working profitability. The suggested objective of personnel training may have an impact on different levels of evaluation. The proposed integrated training efficiency evaluation system is based on various objectives, levels, criteria, objects and methods in evaluation, and evaluation of the effects. Personnel evaluation system might be used in organizations in which the training is performed, and the system may be the basis of personnel training efficiency evaluation. The training efficiency evaluation acquires the strategic significance in the competitive advantage formation.

**Keywords:**

**Personnel training, personnel training efficiency evaluation system, competitiveness, competitive ability.**

**Introduction**

**The relevance and the problem of research.** The authors who analyse the problem of competitive ability state that the fundamental and strategic direction of companies enhancing competitive ability which is the basis of competitive ability on intangible investments (technologies, managerial, professional and business organizational competency and etc.) The core condition of company's competitive ability becomes ability to use

up-to-dated information and knowledge, in this way, the principal competency of the company is developed. Consequently, the personnel's training appears as the basic method.

Appreciating attitude of Lithuanian companies' managers towards personnel training, it is likely that they admit the importance of training. Although to perform personnel training some inconvenience concerning unwelcome conditions come into existence. First of all, it is the lack of financial resources and the

resistance of individual executive's managers as well as there are some barriers created by individuals such as unwillingness to get knowledge, lack of time, etc. Naturally, mentioned holdbacks are usually related to some managers' indifference towards the performance of personnel training since it is complicated to ascertain impact of personnel training has or might have on company's performance. Such situation is related to uncertainty of personnel training efficiency evaluation due to the fact that there is no unite system of personnel training efficiency evaluation.

**The object of research** – the system of personnel training efficiency evaluation. The used methods involve: theoretical review of concepts concerning personnel training efficiency evaluation, systematic, logical analysis and synthesis and performed analysis of questionnaire research data.

**The aim of research** – introduce the system of personnel training efficiency evaluation and the system position in a general scene of competitive ability evaluation.

**The tasks of research:**

- to evaluate the importance of personnel training by creating competitive advantage;
- to represent the review of modern attitudes towards the personnel training efficiency evaluation;
- to evaluate the companies' attitudes towards the system of personnel training efficiency evaluation, applying the questionnaire;
- to introduce the system of personnel training efficiency evaluation and to define its place in general competitive ability evaluation system, considering the methodology personnel training efficiency evaluation and competitive ability.

**Theoretical Assumptions on the Evaluation of the Competitive Ability**

In the scientific literature various methods are proposed to estimate the competitive ability though they are marked as separate methods evaluating the competitive ability of a country, of a product, etc.

Moreover, in the scientific literature might be initiated more than one general competitive ability evaluation model which analyses the competitive theory. However, there could be hardly found any empirical studies emphasising the suitability for investigation of personnel efficiency as a factor which creates the problems of competitive advantage.

The analysis of general competitive ability models, and the possible application of prospective in the companies' competitive ability surveys is necessary when trying to clarify peculiarities of modelling competitive ability as a factor which forms the competitive advantage.

The scientific literature (M. Porter, 1990; A.M. Rugman, J.R.D'Cruz, 1993; R.A. D'Aveni, 1994; F. Weston, K.S. Chung, 1990; B. Balassa, 1965; T.L. Vollrath, 1991, W.J. Baumol, 1998) introduces various methods used in analysis of competitive ability though generally they are applied as separate methods evaluating competitive ability of a country, of a product, etc. Furthermore, some authors (R. Amit and M. Belcourt, 1999) state that the personnel training and evaluation of personnel training efficiency is as a company's human resources quality determining factor which has ability to reduce risk and create competitive advantage. After the analysis of works presented above has been done, used evaluation methods could be grouped into these:

1) Miscellaneous evaluation of competitive ability of all economic branches or of one economic branch in a country. An objective of the research is to determine competitive sectors of a country's economics and evaluate the development perspectives in international markets;

2) Analysis of manufacturing groups, when bonds of the chosen sector to other sectors are examined. It includes not only subjects of particular economy, but also suppliers of services and goods which in the production process are essential. Even more analysis is performed according to the M. Porter's proposed methodology which examines whole production process from receiving the raw materials to delivery for a consumer;

3) Evaluation of separate product (good) competitive ability. In the analysis of separate product competitive ability, size of the subject in the market and of average in branch produced production is used;

4) Evaluation of environment practise. The research estimates indicators of modular living level, foreign trade, labour force potentiality, condition of infrastructure, etc. The indicators introduce conditions of development on particular economic branch. Even more indicators are applied which reflecting innovations, IT and communication level, interface between science and economics.

Evaluations of the competitive ability of country economics, or its separate branch, or of a product, or an environment of a business subject are usually performed by international organisations, independent experts groups and institutes which survey and settle ratings of countries in global context by their competitive position in an adequate market. Furthermore, there are some experts from discrete countries whose objectives are to evaluate competitive ability of their own subjects and further direction of national economic development. Table 1 represents the most frequent methods of competitive ability evaluation<sup>1</sup>

<sup>1</sup> There is attached an officially acknowledged methodology oriented especially to the potential of practice.

**Table 1. Comparison of Methods in Competitive Ability Evaluation**

Methodology	The Essence of Methodology	Used factors	Possibilities to Apply the Methodology When Assessing the Competitiveness of a Company
1	2	3	4
<b>M.Porter's Methods</b> (Портер, 2000).	The term of competitive advantage of economic subject depends on the profitability of the subject which is determined by five strengths.	1) internal factors: conditions of demand; associated sectors; a strategy, structure and competition of economical subject; 2) External factors: Government; an international practice.	It can be used when assessing competitiveness on the scale of a country.
<b>The World Bank's Methodology</b> (The Competitiveness of European industry, 1999)	The database is composed of 49 indicators that allow assessment of a county's economic condition and expansion possibilities in the competitive business.	1) common factors of economy expansion (GDP, GDP annual growth, standard deviation of finance distribution); 2) the dynamics of factors (investments, productivity, a structure of export) of relation between microeconomics and international economics; 3) the dynamics of financial indicators (the foreign debt, GDP growth influenced by price rate, government bonds); 4) factors of the infrastructure and the investments climate (communications, roads, railways, electricity supply); 5) factors of human resources and intellectual capital development (higher education, a life long expectancy, patents).	Only some of the mentioned factors can be used because the factors of the dynamics of financial indicators (the foreign debt, GDP growth influenced by price rate, government bonds) infrastructure and investments climate (communications, roads, railways, electricity supply) are assessed merely on the scale of a country, and are not differentiated in accordance with separate sectors and - much less – with companies.
<b>European Committee's Methodology</b> (The Competitiveness of European industry, 1999)	One of the essential factors influencing competitiveness in the modern, changeable conditions of global economics is a competence to conform to rapid improvement of technologies and to immediately react to changes.	1) an annual variation of production size and working productivity (as a relation of the value-added and annual personnel's quantity); 2) an annual variation of the busy condition; 3) an annual average production, export and import variation (when the growth of export surpasses the growth of production, and when the volume of export increases more rapidly than the volume of import, it can be inferred that increases the competitiveness of the country in the international market, or it is maintained stable); 4) factors of specialization and concentration: a coefficient of concentration; Herfindal's index; a standard deviation of parts (a dispersion measure of sectors); coefficients of specialization: Balla's index, an indicator of the geographic specialization; an index of dissimilarity (the sum of absolute discrepancies); Gini's coefficient.	It can be partially applied. If an object of research is the economics of one country, for instance, Lithuania, a calculation of indexes of the concentration is not necessary. Besides, Central and Eastern Europe's, including Lithuanian, structural change importance cannot be compared with results in the analysis of EU – 15 countries because the comparable countries are in different conditions of the economic development.

1	2	3	4
<b>Methodology of New Zealand's Department of Research, Science and Technologies</b> (The World Competitiveness Yearbook, Orla M., 1996)	Sectors of the country economics are subdivided into four groups according to the level of use of the equipment and technologies, i.e., high and low technologies, and technologies of medium height and medium lowness.	Coefficient of export/import; factors of import infiltration and directness on foreign competition rate; specialization of export; a factor of an inner trading rate.	It can be used on a scale of the whole country, on condition that there will be a possibility to calculate all the factors, proposed in the methodology because not evaluating the one of them may distort results.
<b>Methodology of Local Resources Outlay</b> (Lietuvos pramonės konkurencingumo įvertinimas, 2000)	Competitiveness of the whole country economics, of the specific sector or of the group of a commodity is evaluated during the short-term and medium-term period. If DRC factor denotes less than 1 - the production is claimed to be competitive. If DRC is equal to 1, or larger than 1 - the production is not competitive.	DRC (production is competitive, if $DRC > 1$ ).  DRC – a factor of the local financial reservoir.	It can be used when the thorough information is provided about the variation of microeconomic and macroeconomics factors during the period of investigation.
<b>Methodology of Lithuanian Economy Institute</b> (Lietuvos pramonės konkurencingumo įvertinimas, 2000)	The evaluation of competitiveness is performed referring to the external factors of practice in Lithuanian foreign trade and industry, and the comparison of the factors with appropriate ES – 15 countries' factors.	1) disclosed comparative advantage; a part of Lithuanian export of commodities in the adequate export of countries of EU; a part of import from EU which is composed of Lithuanian export of commodities; percentage of export in the total Lithuanian export; a part of export to EU in the total Lithuanian export to EU; the net-income from Lithuanian export of commodities; 2) working productivity (according to production); the working productivity (according to the value-added); the rate of the growing working productivity; the rate of growth of volume in industrial production; the rate of growth of personnel's quantity; 3) a quality of products, a level of technologies, a level of service for customers, an installation of innovations, marketing, the qualification of the labour force; 4) Scientific researches and development; a qualitative level of stock among the labour force; accessibility of financial reservoirs; a level of infrastructure in activity.	It can be used to evaluate the industrial competitive, though the necessary addition on the specific factors of an examined sector should be involved when assessing the competitive of a company and determining the personnel as one of factors that forms the competitive advantage.

After examining the competitive ability evaluation methods, the essential indicators are determined which might be grouped into these: 1) indicators of the measurement of the competitive advantage, 2) indicators of the profitability, 3) indicators defining the level of state support.

The competitive ability of a country and a separate object of economics cannot be isolated from evaluation

of possibilities in formation of competitive ability advantage<sup>2</sup>.

Hence, it is noticeable that retain of competitive advantage longevity may cause some problems when

<sup>2</sup> Herein the competitive advantage is interpreted as the indefeasible competitive exclusiveness of subject in economics, when introducing more valuable than competitors' products in the market.

such factors as customers – consumers' needs, demand, an increase in number of market participants, innovations, an installation of modern technologies, market growth and etc. – give an ambiguous meaning to long-term competitive advantage.

Resources of competitive advantage usually discussed in theoretical researches are these: highest quality manufacturing, lower than competitors' costs, more advantageous geographical situation and creating the higher value for consumers. In order, to estimate competitive possibilities of the economy subject in a market, the notion of the competitive advantage should be purposefully extended by the notion of efficient activity which would include output, innovations, an internecine compatibility in work spheres of the subject, an efficient management of a company, human enterprise of the subject, etc. Furthermore, these elements of advantageous and efficient activity become weighty criterion assessing the competitive advantage; the criterion assists in accurate and explicit of competitive advantage evaluation.

In Lithuania, during the period of transformation competitive advantages were formed as a part on impact of such factors as qualified and cheap labour force, cheap raw materials, etc. The formation and reinforcement of competitive advantages (including not only the above mentioned) of Lithuanian economy branches is one of the essential strategic objectives in the economic country's policy while achieving the competitive ability in the international market. The recently formed view claims the competitive possibilities in the international market of economics subjects particularly depend on the personnel's ability to use the acquired knowledge, skills and creativity. Researches of this sphere are performed in such directions:

a) an analysis of specific economy branches, where traditional competitive factors are used. Although, in accordance with the three parameters, an application of new classification of economic branches reflects a level of technologies; a level of the intensity of manufacturing factors; level of labour force a qualification.

b) An evaluation of the accumulated knowledge in country, of potential qualification, development of sectors opened to knowledge, of rate in installation of innovations, and other factors reflecting abilities of economic subjects to compete in spheres of high technologies and of the complicated production.

In order, to attain aim of the article, company's competitiveness might be evaluated using the introduced methods in competitive evaluation though possibilities of use are limited because of information lack when most indicators should be calculated, or because of the opinion formed in the company (as results of the investigation disclosed) when personnel is not adequately evaluated as a resource of competitive advantage. It is worth while to notice the significance of results evaluation resources

used to achieve those results in the methodology. Therefore, examining the personnel's work efficiency as one of factors that forms the competitive advantage, it should be appropriate to identify the essence and methods of results evaluation and expenditure for resources of work (especially, in investments of personnel training). It is considered appropriate to take cognizance of the theoretical definiteness of activity, its correlation with the obtainment of competitive advantage; particular attention should be paid to personnel training efficiency evaluation.

### **Theoretical assumptions in personnel training efficiency evaluation**

Describing the essence of training efficiency, definition of a notion evaluation should be introduced. The evaluation could be understood as determination of value. With reference to Guba E. B. and Lincoln Y.S. (1981), "value" is understood twofold: value as merit which is interpreted as inner and outward ones.

The training efficiency evaluation does not only refer to a definition of an inner or outward value, but also to the very process of training and its results. An executive manager evaluating the process of training performs:

- an examination of practice related to training;
- the search for possibilities of improvement.

These stages were called a forming evaluation by Scriven M (1967). Scriven M. proposed a notion of a total evaluation when after training the process is viewed as in the mass and the outward value is estimated.

Hamblin A.C. (1974) offered a traditional definition of the training environment evaluation: the training efficiency evaluation – any effort to get information (feedbacks) about results of training programme and to determine the value of training in the context of the provided information.

Different authors introduce a definition of training efficiency as seeking for objectives in learning (education): such a definition was criticized by Guba E.B. and Lincoln Y.S. (1981) as very narrow. Such an evaluation is called "determining the whole". This evaluation is defined before the beginning of the very process of the evaluation, and it is oriented to the measured results. A Guba E.B. and Lincoln's Y.S. proposed approach was later called "responsive", which differs from "determining the whole" and evaluate changing condition and new information. And more attention is paid to the description than to the measurement.

Besides, many scientific sources training efficiency evaluation call as a validity of a curriculum of training. The validity of curriculum as an objective evaluating the training efficiency is an estimation whether the curriculum achieved the objectives. Theorists divide the process of the validity into two discreet parts – an inner and an outer one. In practice these two parts are analysed

as the whole because they can be hardly separated for their close relation. The inner validity is appointed to assess whether the training reached objectives, and the question “Did the trained acquired what they wished?” must be answered. The purpose of the outer validity is to discover the possibilities of using the gained knowledge in the real situation. The close connection between the inner and outer validity stipulates the necessity of the integrated training efficiency evaluation. A.C. (1974) and Kirkpatrick D.L. (1967) claim such an evaluation may involve these layers:

- *reaction* (trained personnel’s and executives managers attitude towards training, the structure of training, content and methods are applied);
- *acquisition of knowledge and skills* (facts and measures acquired by the trained);
- *behaviour at work* (what changes took place during the period of training, and how the modern knowledge and skills are used at work);
- *Changes in an organization* (what is an effect done for the company).

Some authors (for instance, E.F.Holton, 1996), who examine these problems, improved suggestions, proposed by Kirkpatrick D.L. and distinguished three levels – training, performing an individual task and general effects of an organization. Others (J.J.Phillips, 1996) introduce the new attitude towards the training efficiency evaluation systems which involve the reaction and anticipated actions, the training, use of the acquired knowledge, effects of practice and return on investment (hereinafter – ROI). Some authors (I.L.Goldstein,

1986, V.Kumpikaitė, A.Sakalas, 2005) analyse training as process and determine the attitude of organization towards training of human resources, towards the accomplishment of a task, and an arrangement of the reservoir and career, training, professional training, adaptation and determination need of training.

Briefly, it could be stated that the levels of training efficiency evaluation proposed by Hamblin A.C. (1974) and Kirkpatrick D.L. (1967) the best focus on ROI to personnel progress while emphasising changes of personnel’s behaviour, i.e. working productivity.

In order to evaluate rate of growing working productivity, it is worth to choose an appropriate strategy of evaluation in accordance with the level of training efficiency evaluation. Hamblin A.C. defines some strategies of evaluation depending on training results. The author believes the training may be a cause of a chain reaction in an organization, and the strategy of evaluation may be selected in every stage (Table 2).

A.C. Hamblin’s analysis is interesting because it discloses how the evaluation can be performed in various levels, every of levels have its own possibilities of evaluation, and different reference points. The first three levels are evaluating objects in “determining the whole”, the rest depends on the feedback.

Different attitudes towards training are introduced as strategy chains of interrelation and evaluation. An object evaluating spectrum is very wide. It involves not only the learners and executive of their training (organization and service suppliers), but also a context of training, content and methods.

**Table 2. Strategies of Training Efficiency Evaluation**

<b>Event</b>	<b>Strategy of Assessment</b>	<b>Orientation</b>
Teaching	Considers the teaching	Resources of learning
Trainees’ reaction	Considers the reaction	The learners
Learning	Considers the process of learning	The learners
Changes of behaviour at work	Considers the behaviour at work	The trainees and on lookers
Changes in the institution	Development of an organization	Unanimous organization
An impact on final objectives of organization	Analysis of expenditures and incoming	Financial aspect

Besides, methods, materials and variation of behaviour are used in training. The curriculum efficiency is evaluated in accordance with the above enumerated objects. Consequently, the general assessment can be based on some or on all the factors.

An appropriate definition of evaluating criteria is the essential task in the process of evaluation. Many of organizations face some difficulties when defining a certain selection of criteria because of complications quantitatively evaluating most effects of training (an increase in personnel activity, fulfilment at work, etc.).

That is why, the variety of criteria is determined by the whole spectrum of quantitative and qualitative factors: the

learners’ fulfilment, customers satisfaction, personnel’s ability to solve problems, personnel’s adaptation to situation, personnel’s receptivity to innovations, changes in cultural and work atmosphere in organization, changes in product quality, changes of profit and turnover, and changes in resources efficiency use.

There are also used appropriate methods of evaluation during the practice in assessing the training efficiency: table 3 introduces them.

**Table 3. Methods of Training Efficiency Evaluation**

Methods of Evaluation	Content of Methods of Evaluation
1. The trainees' opinion questioning straight after the training	Performing an interview (questioning) with learners on the training process efficiency
2. The trainees' opinion questioning after a certain period of time after the training	Performing an interview (questioning) with learners on the training process efficiency after 1, 3 or 6 months
3. The participants' self-examination	Participants of the process evaluate the level of achieved objectives
4. A written form examination or testing of knowledge acquired during the training straight after the learning	The level of acquired knowledge is evaluated with the help of tests and tasks
5. A written form examination or testing of knowledge acquired during the training after a certain period of time	It is evaluated, whether the presentation of information is recalled after 1, 3 or 6 months, with the help of tests and tasks
6. A heads' opinion inquiry on the evaluation of their personnel's work after a certain period of time	Performing an interview (questioning) with the heads on the change of work efficiency of the personnel which participated in training
7. Inquiry on 360 degrees.	The thorough evaluation (questioning heads, colleagues, clients on changes of personnel's behaviour and work efficiency after trainings, and the participants' self-examining)
8. Experiment on verification	Comparison of effects in work of two groups of people, one of which did not participate in training
9. Supervision in the organization	Observations on participants' behaviour and task performing during a certain period of time ( it is executed by the head or some external supervisors)
10. The feedback on teaching – learning investments (ROTI)	a), an analysis of financial feedback (expenses and income analysis) b) an analysis of factors related to investments in training (calculation of indicators directly related to the performed training in the organization: common expenditure in training, expenses afforded to one trainee, a number of days afforded to one trainee, a number of trainees ); c) an analysis of the suggested objectives and of the achieved ones (it is based on the suggested objectives of training, methods of training, content, organizational aspects and their appropriateness to the suggested objectives are assessed); d) clients' satisfaction in the activity of personnel which participated in training; e) The improvement in the climate of organization (better relations among personnel)

To summarising the introduced information, it is worth to pay attention into integrated training efficiency evaluation model proposed by Hamblin A.C. (1974) and Kirkpatrick D.L. (1967). Four levels are involved in the

integrated training efficiency evaluation: an acquisition of reaction, knowledge and skills (inner validity), behaviour at work and work indicators (outer validity), training efficiency in organization (Table 4).

**Table 4. Levels of Integrated Training Efficiency Evaluation**

Level	Objective	Who Executes and When	Methods	Activities
1	2	3	4	5
Reaction	Trainees' and executives' reaction to training, its structure, content, methods, teaching style, etc.	Throughout the training course and/or after it (a lecturer)	Daily reviews, questionnaires, assemblies	The structure of curriculum and amendment of content
Acquisition of knowledge and skills, change of attitude (inner validity)	Find out how the knowledge and skills are acquired, and whether attitude has changed	Throughout the training course and/or after it (a lecturer)	Tests, practice, a verbal quiz	The adjusted course for separate trainees, the repeated training, an improvement of knowledge and skills, the change of training methods

1	2	3	4	5
Behaviour at work, a completion of work (outer validity)	Examine the ability of trainees to apply the acquired knowledge and skills in the work environment; how trainees' and heads' needs were satisfied	2-3 months later (a lecturer, a department of personnel training, the direct heads)	Questionnaires, interviews with the former trainees and their direct heads; personnel's observations	A continual improvement and renewal of curriculum due to changes of needs
Effects of training on organization (evaluation)	Evaluate the benefit of the training (on money or non-money terms) for organization	Periodically. Some time should pass in order that effects were noticeable in the organization	Refund of investments in teaching-learning	Inform the office of the training about the efficiency of the used procedures, and introduce the appropriate procedures

After the analysis of competitive resources evaluation introduced in the scientific literature, it can be presumed that a formation of the competitiveness and of the competitive advantage is approached as a versatile and changing phenomenon. In the formation of competitive advantage more and more attention is paid to a notion of the working productivity which involves the manufacturing efficiency, innovations, internecine compatibility of spheres in the activity of the subject, the management efficiency of a company, the human enterprise of the subject, etc. The latter factor more and more often is related to process of training; economists connect it with the training efficiency evaluation (return). The training efficiency evaluation can be stated to be a complicated problem which causes lots of discussions among researches. Although, radically, the training efficiency evaluation can be based on 3 elements: 1) on the objectives of training that are set (when methods of training, the content, and their appropriateness to the set objectives are examined); 2) on a psychological prosperity of an individual and a group (when the attitude is mostly paid to the trainees' satisfaction); 3) on factors of the return on economic investments (that are not always appropriate to define the return because of large number factors determining return of training and delayed effect).

Naturally, to pay attention not only to the theorists' point of views, but also to very participants' and heads' standpoint, needs and of process evaluation.

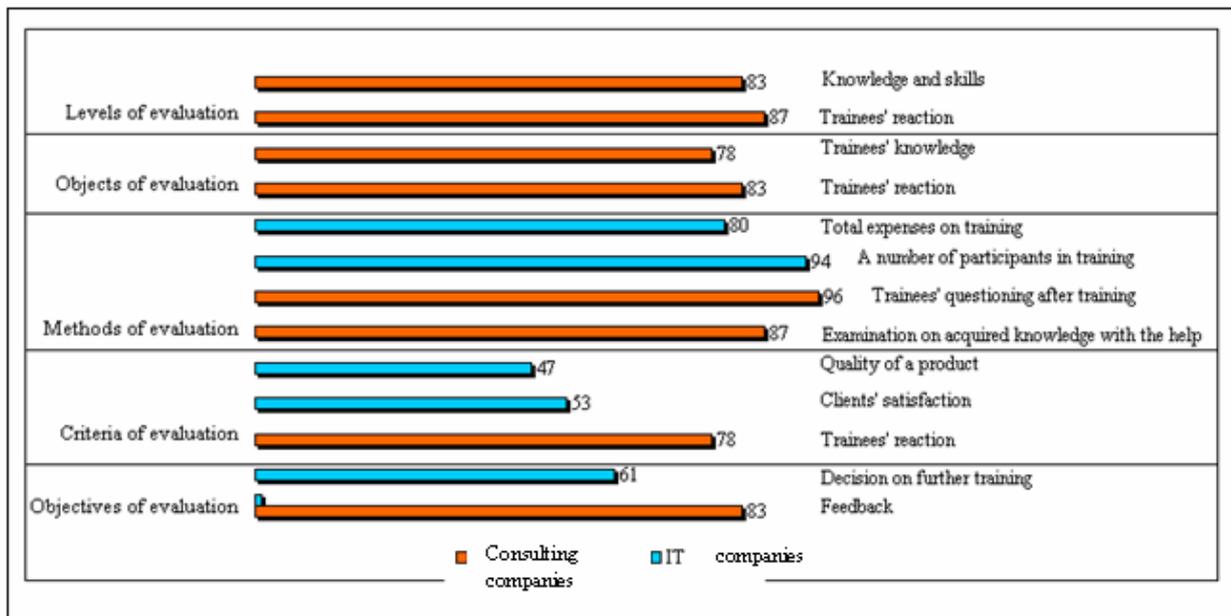
### **Research on personnel training efficiency evaluation**

A research on the customers who applied for training services and on companies offering training services was carried out on purpose to find out a problem solution of training efficiency in environment of the company. Two groups of participants concerned with personnel training efficiency were questioned during survey: on the one side, Vilnius city consultancies offering services for the

personnel training standing, the customers who applies for personnel training services (herein, the companies of the IT department) – on the other side. During the survey 278 IT companies and 40 consultancies were questioned. The integrated pattern of the training efficiency evaluation proposed by Hamblin A.C. and Kirkpatrick D.L. was chosen for the composition of the questionnaire, and involved four levels of the training efficiency evaluation: a reaction, an acquisition of knowledge and skills (inner validity), the behaviour at work and indicators of activity (outer validity), effects of training for the company are widely used.

Analysis of the effects of research in IT companies and consultancies (Figure 1) states the problem in incompatibility of the objectives in the training efficiency evaluation exists between customers who apply for the training service and suppliers. According to the clients, fundamental objectives in training efficiency evaluation are directed towards the decision on the further training (61 percent) and towards the identifying the adequacy for expectations of the quality in the training (25 percent). Only 10 percent of respondents seek for the financial payback in training. Although, according to specialist experts some companies who seek to financially assess the payback of the training, or to define whether the quality of training satisfies employers' expectations are those whose systems of the activity evaluation and motivation are not connected. Thus, in essence, the quality of the training is not evaluated or it is evaluated inefficiently (because the results of analysis are not used).

Whereas, training service suppliers' aims are related to feedback (83 percent) that provide an information of training efficiency methods, of the content of the training and an appropriateness of a structure that is beneficial for suppliers' of the training only.



**Fig. 1. Attitude towards objectives, criteria, methods, objects and levels of evaluation (%) in consultancies and IT companies**

Trainees' knowledge and reaction (83 percent) are the most popular objects of evaluation. Meanwhile, the training methodology, a content and structure as objects of the evaluation determining trainees' knowledge and reaction are mentioned considerably rarely (relatively, 48 and 17 percent). Examination with the help of tests and (trainees' and their heads' questioning) questioning are the most popular methods of evaluation among consultancies (relatively, 87 and 96 percent). When a certain period of time passed, only 17 percent of respondents mentioned an examination of knowledge after training, though the method is an excellent way to evaluate the success of use of the acquired knowledge in practice. In the foreign countries the verification experiment is absolutely unpopular in Lithuania (4 percent), and only 61 percent of companies use the questioning for clients, although the survey of clients exposed the fact that a criterion of clients' opinion was one of the essential.

A level of trainees' reaction (the first one) is the most popular in evaluation (83 percent), whereas the training efficiency is evaluated more rarely in the three upper levels of the evaluation. Knowledge and skills play an important role (87 percent, Figure 1), whereas 52 percent rank the change of behaviour at work, and only 30 percent of respondents rank effects of the training in organization. Some authors prove our conclusion that claims the most popular level of the training efficiency evaluation is the trainees' reaction; effects of the training are rarely evaluated in other levels of training efficiency evaluation

To sum up, the research confirmed the presumption emphasized in the theoretical analysis: incompatibility exists in perception of training efficiency evaluation process among suppliers of the training service and

customer which is, the essence and benefit of training evaluation system, especially when forming competitive advantage, is not realized. In this way, the necessity of the arrangement of the training efficiency evaluation system is motivated.

#### **Personnel training efficiency evaluation and its position in the general system of the competitiveness evaluation**

After the theoretical principles analysis of the competitiveness and the methodology used in the competitiveness evaluation, and after the designation of the essence of improvement in continual personnel's qualification and of impact on working productivity, and of necessity of the personnel training efficiency evaluation, there is considered appropriate to offer an integrated personnel training efficiency evaluation system, and its position in the general evaluation system of the competitiveness.

There should be remarked that competitiveness of a company must be evaluated during the performance of personnel training not only according to the attainment of the competitive advantage, but also according to the return in process. Thus, it is significant to determine principles of the competitive evaluation which might be used when assessing an impact of inner and outer factors on competitive advantage. None the less important to predict how the benefit of the economy subject (herein, a company) - that provides a possibility to define a level of the efficient activity, and a degree of impact on factors determining the latter indicator - will be assessed. Referring to the previously introduced arguments and analysis of theoretical scientific literature, the possible scheme of competitiveness evaluation is proposed. (Figure2).

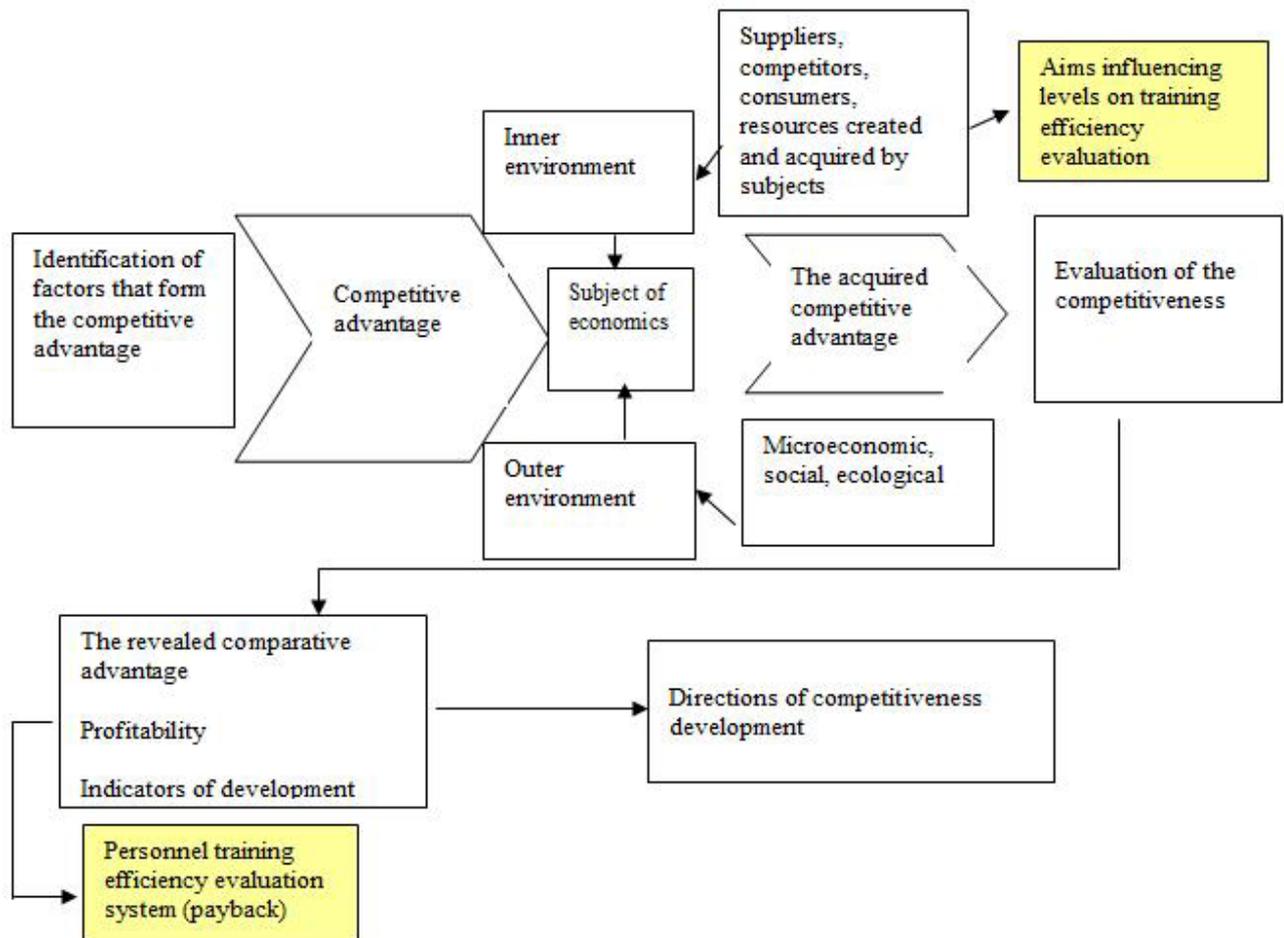


Fig. 2. A position of personnel training evaluation system in the competitive evaluation system (created by the authors)

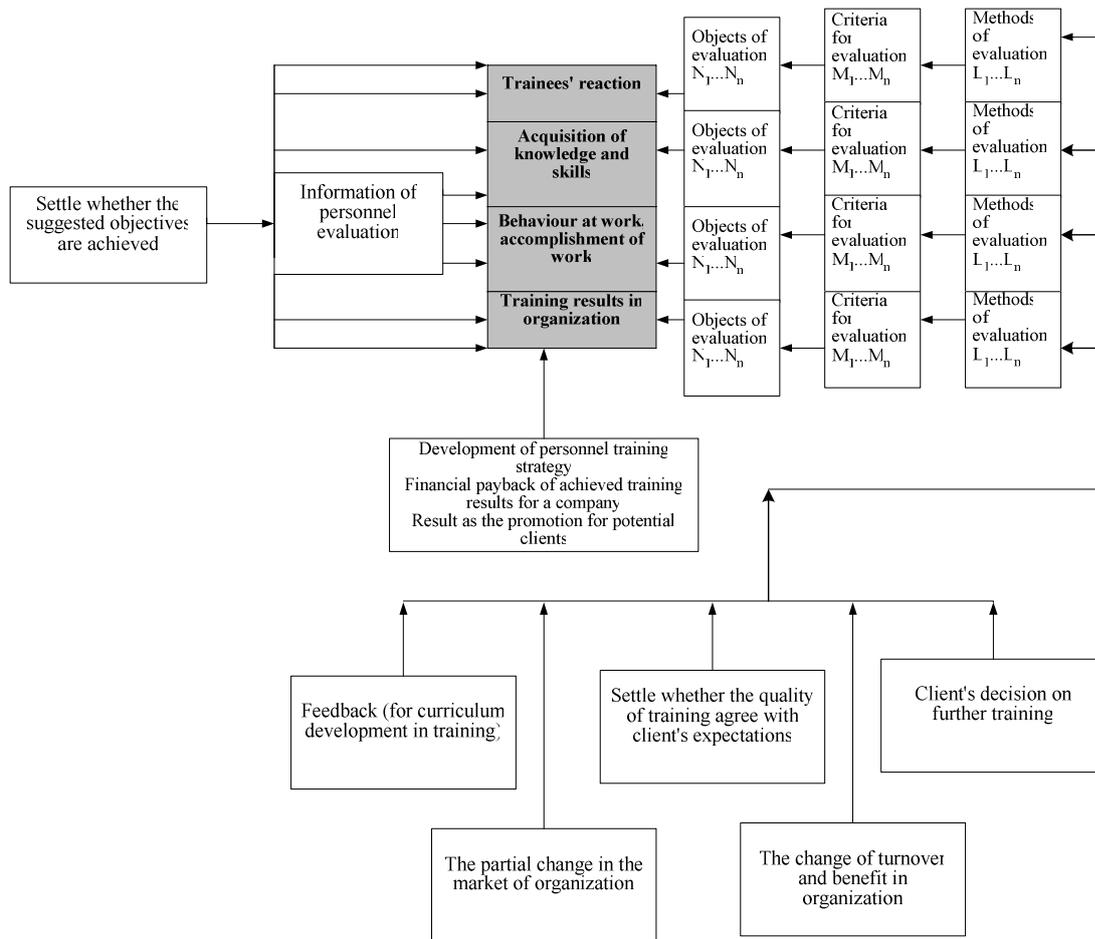
After the authors' analysis which investigates competitiveness evaluation and determining factors, the inferences can be drawn such as both inner and outer competitive advantage forming factors can be identified. It seems likely that evaluating possibilities of an impact on company's environment, factors of inner environment might be purposefully oriented towards the maximum efficiency in activity of a company. Recently, the scientific literature grants its attention to investments on human resources which are determined as one of the possible factors composing acquired competitive advantage. That is why it is considered appropriate to determine how these factors influence the competitiveness of a company in the market. Thus, it might be purposeful to find out how the objectives of the training agree with common factors of formation of competitiveness in a company. In the context of acquired competitive advantage the personnel training efficiency evaluation system (payback) is involved into the total system of factors of the competitive evaluation in company. Personnel training efficiency evaluation system (payback) may be approached as one of directions to enhance the competitiveness.

After the analysis of methodology in personnel training efficiency evaluation – with the reference to

analysis of the research data – it may be purposeful to provide an integrated personnel training efficiency evaluation system (Figure 3).

The authors examine the problem of personnel efficiency evaluation in accomplished studies propose the purposeful enumeration of objectives that are influenced by training efficiency evaluation, when the formation of personnel training efficiency evaluation takes place. The information for personnel evaluation is collected after the assessment of a level of the suggested objectives accessibility. The suggested objective of personnel training may has an impact on different levels of evaluation. That is why the most significant in the stage is to properly determine the level of evaluation (trainees' reaction; acquisition of knowledge and skills; behaviour at work, accomplishment of work; training effects on organization).

The chosen levels of evaluation influence criteria of evaluation and objectives; consequently the method of evaluation is chosen and the achieved result is defined, and it permits evaluation of clients' expectations for further training.



**Fig. 3. Personnel training efficiency evaluation system (composed by the authors)**

To sum up, there can be stated that the integrated personnel training evaluation system allows to achieve the best representative results in the training efficiency when the customer's and the supplier's objectives training service and evaluation levels, and the understanding of criteria and objects, are matched up.

### Conclusions

1. Finally, a conclusion can be drawn: all the provided methodology on the competitive evaluation may be used evaluating the competitiveness of company. Although the possibilities of use are limited because of lack of information in calculations of factors, or because of attitude of company when the personnel is not adequately evaluated as a resource of competitive advantage (a fact was confirmed by performed empirical survey).

2. The theoretical conceptual analysis in personnel training efficiency evaluation indicates that, basically, training efficiency evaluation may be motivated by 3 factors: 1) the suggested training objectives (when training methods, their content and agreement with the suggested objectives are studied); 2) the psychological welfare of individual and group (when attention is mostly paid to trainees' satisfaction); 3) the factors of return on investments (which are not always appropriate for the

training return evaluation because of plenty of factors determining training return and delayed effect, having respect to time).

3. The accomplished survey is confirmed by proposed presumption in the theoretical analysis. It says that the incompatibility exists between the customers' and suppliers' understanding of a process of training efficiency evaluation process, that is, the essence and benefit of training evaluation system is not realized, especially in the formation of competitive advantage. The fact motivates necessity of formation of integrated training efficiency evaluation system.

4. The position of personnel training efficiency evaluation system determined in common evaluation system of competitiveness permits evaluation and not only the impact of material devices on benefit, but also the return on investments in human factor, and the impact on working profitability.

5. The proposed integrated training efficiency evaluation system is based on various objectives, levels, criteria, objects and methods in evaluation, and evaluation of the effects. An integrated training efficiency evaluation system allows selection of an appropriate evaluation methodology and the achievement of the best representative results in training efficiency.

### Suggestions

1. The personnel evaluation system should be used in organizations in which the training is performed, and the system should be the basis of personnel training efficiency evaluation. In this case, the training efficiency evaluation acquires the strategic significance in the competitive advantage formation.

2. Consultancies should popularise the training efficiency evaluation service in order the customers would understand the significance of the received information in the period of evaluation. Thus, during the survey, the efficiency evaluation methodology, criteria, levels and the use of results in practice should be introduced to customers.

3. Consultancies should more actively adapt methodologies created in foreign countries, and analysing training conditions and consulting experience they should create their own methodology.

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The article has been reviewed.

Received in March, 2009; accepted in April, 2009.

DOI: 10.5755/j01.eis.1.3.25747