

## STAFF TRAINING AND DEVELOPMENT IN METALLURGICAL COMPANIES

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### Abstract

The article deals with staff training and development in metallurgical and collaborating companies. Based on a survey of HR departments of those companies, conducted during 2015, the practices in staff training and development have been analyzed, focusing on the methods used, planning and the role of this area in HR management. The aim of this article is on the basis of survey conducted to compile a set of management recommendations for the area of training and development in metallurgical enterprises, taking into account current trends and specifics of metallurgical industry.

**Keywords:** Human resource management, learning and development, internal and external learning, coaching, mentoring

### 1. INTRODUCTION

Human resources give companies a competitive advantage. Their continuous training and development increase both their value as an input production factor and also the attractiveness of the organization for potential and ambitious jobseekers [1]. Staff training and development should be understood as a part of strategic HR management [2]. The requirements for the knowledge and skills of people in the working process are constantly changing and expanding, depending on many external factors which include an increasingly rapid development of technologies and materials and a shortening of product life cycles. For the company management, both of these factors mean in particular that they have to take care to continuously update and widen the knowledge and skills of their employees. The training and development of employees can and will on the other hand also play a significant role in building the social responsibility of companies. Even if the benefit of this area is currently hotly debated and questioned, the T&D can have a positive impact on ethics, social responsibility and sustainability, especially thanks to questioning the company's focus only on performance and efficiency [3].

Czech employers are becoming increasingly interested in staff training. According to the DLSF data [4], companies currently invest up to several billions of crowns in T&D per year. However, according to many surveys conducted in this area, business approaches vary considerably, mainly depending on the size and focus of the company. According to an extensive survey by Jobs.cz, four fifths of Czechs consider continuous education important for their long-term career opportunities; the main benefit to them usually being not an increase in salary or promotion, but that they can do their job faster and thus acquire more free time. At the same time, they increase their value on the job market. Czech employees and companies are still mainly interested in off-line courses. The employers often pay for them partially or in full, in case of the on-line courses rather not, thanks to a certain distrust in their benefits. The investments of Czech companies into staff training already shift from the language courses to so called hard skills - expert knowledge in their area. Language skills of the candidates are now increasingly taken for granted. Regarding financing of the educational activities, a number of Czech employers are moving to the model of financial participation. Only a few years ago it was common for employers to pay for the training courses in full. However, the employee is much strongly motivated during education if he/she is financially partaking in the activities developing his/her skills. The efficiency thus increases on all levels. The IPSOS agency survey for CEMI [9] also shows that the amounts that the surveyed employers and top managers mainly invested in the training of a subordinate were between

30 and 70 thousand crowns. In 2015, the top performers invested the most - twelve thousand crowns per employee - in the company T&D [10].

This article aims to present the results and the related managerial recommendations arising from the survey among Czech enterprises in the metallurgical and cooperating industries. Modern trends are taken into account as well as recommendations resulting from the trends and from specifics of the metallurgical industry.

## 2. TRAINING AND DEVELOPMENT BACKGROUND

Given the focus of the research, following chapters focus on the methods of training and development. For more information on the background of learning, education and employee training primarily exhaustive summary by Salas et al. [5] which aims to explain why training is important and how to use training appropriately can be recommended. The importance of measuring and evaluating the success of the educational process has been widely discussed in recent publication by Phillips and Phillips [6], dealing with most recent trends in the field, related myths and ROI methodology implementation. For further reading on early development of the training and development and organizational development the article by Torraco [7] is a suitable source. His work addresses the early history of training and development and organization development, and begins with the influence of World War II on work-related education and training and ends in the mid-1990s. It traces the origins of the field up to, but not including, the founding of the Academy of Human Resource Development in 1994. The historical development of training and development and organization development is shown to be a confluence of historical events and the intellectual contributions of seminal thinkers.

### 2.1. Training and development methods

As the field of training and development methods is broadly discussed, has a quite long tradition and a lot of new methods have been introduced recently, following chapter is based mainly on exhaustive publication by Noe [8]. Regarding the classification of wide spectre of training and developments methods certain approaches exist. Methods could be classified according to various aspects such as progressiveness (traditional/modern methods), number of attendants (single/group) and much more. For the purposes of this article the classification of methods into two groups was adopted, taking into account internal and external methods, which is convenient for the study as the use of training and development agencies was taken into account.

Internal methods	External methods
<ul style="list-style-type: none"><li>• Instruction</li><li>• Work meetings</li><li>• Task assignment</li><li>• Coaching</li><li>• Work rotation</li><li>• Counselling</li><li>• Mentoring</li></ul>	<ul style="list-style-type: none"><li>• Assistance</li><li>• Lecture with Q&amp;A</li><li>• Lecture</li><li>• Demonstration</li><li>• Workshop</li><li>• Brainstorming</li></ul>

### 2.2. Trends in staff training and development

Investments in staff training and development may matter more than ever, based on research findings by ERC [1]. A new analysis suggests that organizations are investing more time and money in training and developing employees and top talent and that these investments are paying off in lower turnover, higher tenure, higher employee engagement and stronger promotion rates. Key findings of the study say that:

- Investment in training and development, especially for top performers, is rising.

- Monetary and time investments in training and development are linked to turnover, tenure, and engagement.

Together with the development of communication and information technologies, education also moved from the level of personal contacts or studying of literature to the level of so called e-learning. The efficiency of any form of training is influenced by various factors, including motivation and the attitude of employees; e-learning is no different [11]. The last three years brought an explosion of new educational tools including the so called MOOCs, or Massive Open Online Courses (over 400 universities offer free or low-cost courses), digital technologies, M-learning, video courses and new cloud-based training systems.

These and other technologies affected the way of learning dramatically, and they are more and more used by employers to save time and money, while making the training activities more attractive and thus more efficient for the employees. Education using modern technologies is actually up to 90 % cheaper than current "in-class" courses with the presence of a lecturer [12]. They also require less employee time and lower transportation costs. Therefore more and more companies are expected to switch to new, innovative forms of training. With the development of modern technologies and the new possibilities of development one has to keep in mind that the delivery of content to the user is not the main purpose of the effort. Instead, the intense focus shall be on the support of the learning itself, through the understanding of the process of education [13].

The main aim of businesses is training for line managers in leadership skills; hence the following three tools will be among the most exploited [14]:

- **Mixed training** - combines e-learning or virtual class and the classical personal education in class so that the employees gain the best of both styles. In 2014, there were over 29 % mixed training courses and further growth is expected in the following years.
- **Gaming school** - to increase the captivation and involvement of the employees in the education, companies are expanding the use of educational techniques in the form of games, alternative scenarios and simulations, because these are a more entertaining and hence more efficient form of learning.
- **M-learning** - mobile learning is the future, as more users possess smart phones that can provide most of the necessary functions of a PC. Documents must be appropriately adapted to mobile technology and screen size and also be available in the full version via a regular PC. People keep them on their person permanently, mostly with internet access, they can practically use every free moment, perhaps while waiting or travelling on public transport, to study. Some mobile technologies enable the sharing of experience with this type of learning via popular social networks. For some time the mobile technologies are commonly used in business practice, but their full use for purely educational purposes is still in its infancy. [15]

### 3. METHODOLOGY AND DATA COLLECTION

The data for the analysis of staff T&D and its links to other HRM activities have been obtained from a questionnaire survey conducted in a Czech-Chinese project. The project on the comparison of approaches to HR management in CR and PRC has been solved together with representatives of VŠB - TU Ostrava and the Hubei University of Technologies in Wuhan, PRC.

The questioning of HR departments in writing was simultaneously conducted on the Czech and Chinese side in 2015. On the Czech side, 42 smelters, metallurgical and cooperating companies were surveyed both on the side of their suppliers and customers. The return rate of the questionnaires was 86 %, with fully completed questionnaires returned from only 36 companies, of which 55 % had 100 (min. limit for participation in the survey) to 250 employees, 23 % 251-750 and 22 % over 750 employees.

The questionnaire had over 40 questions, of which 15 were in the area of staff T&D. Based on the analysis of the processed data and their comparison with theoretical recommendations and experiences of the authors,

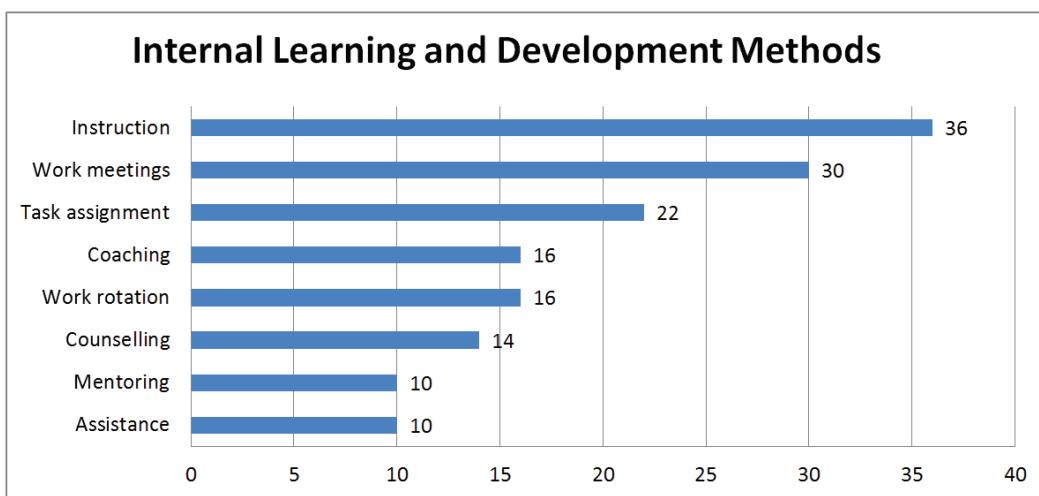
major positives as well as negatives of staff training and development systems of the monitored companies were revealed.

#### 4. RESULTS AND MANAGERIAL IMPLICATIONS

All of the surveyed companies educate their employees in some form, but only 32 of them create some training plans, 4 enterprises therefore educate their employees without a plan, according to current needs. 67 % of the companies create training plans for a period of 6-12 months; this includes all companies with 100-250 employees. Only two companies create plans for a period over 2 years; these were the largest enterprises.

Education and professional knowledge are always the first criterion for large enterprises in choosing between candidates. At the smallest ones, it was not uncommon that priority be given to practical skills, the recommendations of staff and acquaintances and others. On average for all 36 companies, this criterion had the order of significance of 1.3. In companies with 100-250 employees with the value of 3.2.

It is also interesting that in most cases it was true that the shorter the average duration of employment in the company, the less educational activities the enterprise offered and vice versa. Roughly half of the companies financed T&D only for selected trades or positions; others do not restrict any target groups in the company.



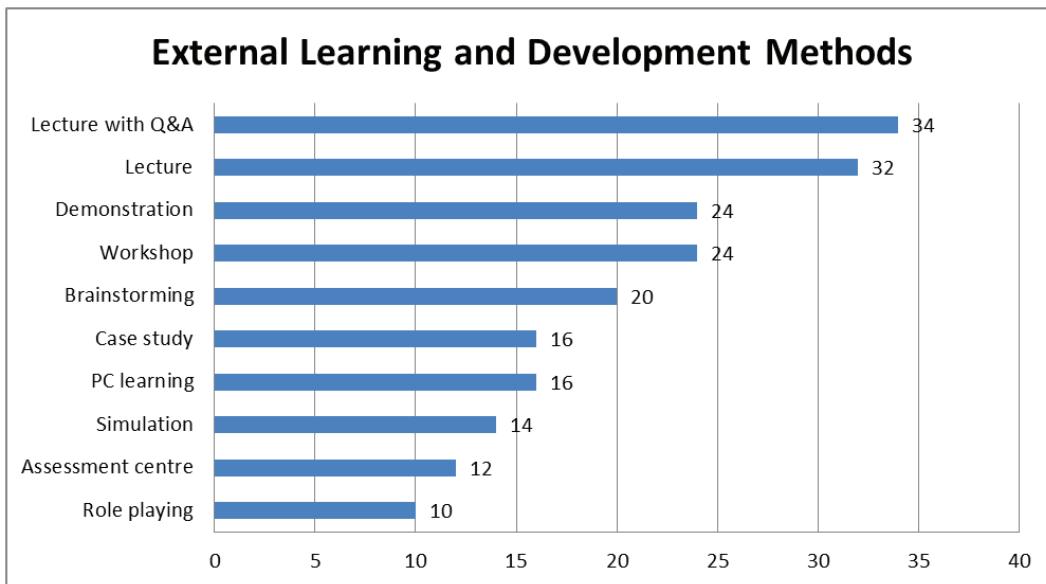
**Figure 1** Internal learning and development methods

All the companies use both internal and external T&D. Here again a different approach according to the company size has been demonstrated. Companies with up to 250 employees use external services for 40 % of T&D activities and the largest companies with over 700 employees for 65 %; the average for all businesses was 48 % for external T&D. This percentage also reflects the choice of training methods. As expected, training and workshops, which are necessary for job performance regardless of the identification of training needs, prevailed for the internal methods. For the external methods, most companies use lectures with or without discussion. A more detailed view is in **Figures 1 and 2**.

From the survey of selected companies, the strengths as well as the weaknesses of their approach to staff training and development emerged. The positive and inspirational outcomes include:

- All the surveyed companies educate their employees in some form, while 89 % of them create plans for this area. Smaller companies maintain their flexibility and create plans for shorter periods than the larger ones. The portion is higher in metallurgical enterprises than in other branches especially for the fact that ever less potential employees graduate from professional high schools and university branches focused on metallurgical industry. Therefore these companies have no other option than recruitment of unqualified workers and training and development them according to own specific needs.

- All the companies use both internal and external educational methods. One way of diffusion of new ideas, knowledge and experience from outside the organization is to accept a new employee or to send the existing ones for external training and to ensure the sharing of new knowledge across the enterprise according to the principles of the learning organization.



**Figure 2** External learning and development methods

The following outcomes indicate areas where a change would be appropriate:

- Less than half of the companies (44 %) use coaching. Yet, it is an essential style of leadership, which increases their responsibility, motivation and strengthens the good relationship with the leaders. Effective coaching by superiors makes people more creative and more motivated; their know-how is utilized to the maximum extent. People are more relaxed, perform better and much faster than if they were not coached, they are happier and more loyal to the company. Coaching is a crucial element of modern management not only in metallurgical industry. Nevertheless, especially in metallurgical plants which are known for mentally and physically exhausting work environment the active, understanding and individual approach of the coach to his subordinates often more effective motivation tool than an insignificant financial reward.
- A similar and even less used method of T&D in the surveyed enterprises is mentoring (used only by 28 % of enterprises). If the enterprises supported the role of mentors more, i.e. if they motivated them somehow, financially or with promise of career advancement and defined some space to lead the colleagues who have chosen them during working hours, the benefits would be similar to coaching. Mentoring is an analog to coaching. In the environment of learning organization there it represents a essential tool of knowledge and skill transmission between experienced workers and new employees. In metallurgical enterprises there managers usually have more subordinates than managers in other industries and so they cannot give as much attention to them as they require. Therefore a support, motivation and training of mentors from experienced workers could be a possible effective but not expensive way to employee training and development.
- Only 67 % of companies assess the benefits of the T&D activities. Specifically, mostly during the final annual evaluation of the trained worker or through the testing of new skills in production and rarely through the testing of the acquired knowledge. Considering how expensive these activities are, it's a surprising finding. Without feedback, businesses cannot tell whether the costs were spent effectively, i.e. whether or to what extent the employees acquire new knowledge or skills, or whether it is not better

to choose a different method or educational agency next time. In any case, it is essential to first have clearly defined requirements for the given educational activity so that the achieved outputs can be compared with something and its benefits subsequently evaluated. In accordance with the previous item, well trained mentors could participate in the T&D evaluation process. This would notably simplify work of foremen as line managers because, as it was already mentioned, they have many subordinates and relatively short time for managerial activities such as employee evaluation process is. Therefore any competent assistance would help them to evaluate benefits of T&D activities a lot.

- The enterprises use the attractive teaching techniques only a little, such as simulations, role-playing or assessment center (a max. of 40 % of them). Yet this is a world-wide trend which brings demonstratively better results in the acquisition of knowledge and skills. However these are more expensive and perhaps more time-consuming methods of teaching, which are therefore used more for managerial positions. However, given the broad competition of the training companies "more playful" courses are also likely to be found for blue-collar workers who are prevalent for the surveyed group of enterprises and it is known that they take the mostly compulsory trainings as a necessary evil and take only minimum knowledge away from them. Even in these positions, the work performance may be encouraged by e.g. training for teamwork or possibly mentoring, which invites playfulness. The skilled workers represent the key positions for the enterprise and through such innovative and attractive educational techniques with demonstrably better outcomes, the enterprise invests in their motivation, loyalty and willingness to pass on their experience to younger and less experienced workers.

## 5. CONCLUSION

Surveys show that companies that invest more time and money in staff T&D have lower turnover rates and a higher performance of workers; they frequently occupy leadership positions from their own ranks and achieve greater overall satisfaction and commitment of their corporate employees. In addition, enterprise training is developing and it is essential to monitor the trends and technologies in this area, because these activities represent an important motivational element that helps the ambitious and knowledgeable staff to decide whether to work in the company or find a job elsewhere, where these activities are more attractive.

The authors focused on staff training and development in Czech metallurgical and cooperating companies. They identified some positives, e.g. that most of the studied companies systematically planned these activities, but also weak points, e.g. that they do not evaluate their benefits and use attractive and efficient education methods such as coaching, mentoring and role playing only a little.

According to recent trends presented and comparison with practices of metallurgical companies, metallurgy is not a very progressive in modern methods implementation, as it is quite common in automotive and IT industry. Based on these findings, the authors point out some of the trends and techniques that should be taken into account when planning educational activities not only in the questioned companies.

In the companies of the metallurgical and cooperating industry, the blue-collar worker positions dominate. The companies should form the educational activities to make them more attractive, and therefore more interesting, playful and above all more efficient, not only for managers but also for these positions. These professions are hardly available in the labour market and so it is necessary to seek other motivational factors that not only acquire and retain quality employees, but will also increase the value of the enterprise's human capital through their increased efficiency.

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