

ROLE OF TRAINING COURSES IN MOTIVATING HUMAN RESOURCES IN THE NUCLEAR RESEARCH SUBSIDIARY OF PITESTI

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Abstract: *With the globalization and industrialization of all areas of activity, it also increased the role of the individual within the organization, moving from being a mere employee to that of human resource, thus emphasizing their role and importance in the organization, which is why human resource management should pay special attention to people, to treat them professionally according to principles of human resource management. The main investment is human resource. Their motivation should be a constant concern for all organizations. Among motivating factors, an increasingly important role is training courses that are part of the extensive process of training.*

Key words: *training, professional career, training courses.*

JEL Classification Code: M21

1. INTRODUCTION

Human resource is a variable with major influence in the smooth running of the activities of the organization, so the success of an organization depends heavily on how the human factor is understood, motivated and managed because it is the creative, active and coordinating "engine" of the organization¹ having a decisive influence on the use of other resources of the organization (physical, financial, informational).

Training and development are two sides of the continuous improvement of employees' skills, establishing an important function of human resource management, determines a positive perception, increases employment, labor productivity and reduces absenteeism.

Vocational training aims to develop new capabilities, while continuing professional training aims at improving the existing professional capabilities, the latter sometimes being seen as a stage in vocational training, that of accumulation of professional knowledge additional to basic formation².

Professional training and professional development are necessary processes for the employee's individual progress and the progress of the organization and are addressed together by some experts as the training - development activity.

Many HR specialists have given various definitions for training, but it is most often defined as a systematic process of adult learning in order to acquire new knowledge, skills and abilities, necessary to perform tasks more effectively to a particular position, present or future or as any process designed to facilitate learning in an established audience.

¹ <http://ebooks.unibuc.ro/StiinteADM/cornescu/cap12.htm>

² Ticu C., *Personnel psychology*, Editura Polirom, Iași, 2007, p. 97

Along with training, other two concepts - education and development - marks a person's career. Training is the opportunity offered to an individual in order to learn.

Learning is defined as constantly relative changing of the cognitive resulting from experience and influence's individual behavior, a continuous process conducted throughout their lives.

The development is the result of long-term learning activities. Education is defined as the set of knowledge, skills and attitudes of general nature, acquired through learning activities, both within and outside the company.

In conclusion, we can say that training helps the employee to be more efficient on the job, progress is a prerequisite for his development and trainers facilitates the individual's success regardless of the work field.

Efficiency shows how far have been reached the expected standards.

2. THE METHODOLOGY OF THE RESEARCH

To achieve the objectives proposed for analysis in this article, we present a brief state of knowledge in the field, by studying literature in Romania and abroad. We also analyzed the importance of human resource within the Pitesti Nuclear Research Subsidiary, the investments made for their motivation as well as trainings made for this purpose.

3. VOCATIONAL TRAINING AND PROFESSIONAL DEVELOPMENT PROCESS

Every employee should constantly and carefully assess his skills and opportunities and to plan his vocational training and professional development activities in accordance with his needs and the needs of the organization.

This process may take place in five stages³ and should clearly define training needs and purposes of these efforts, the most appropriate methods of training and training evaluation to see whether the objectives have been achieved.

Stage 1: Determine training and development needs.

Determination of specific training needs is done through analysis on various levels of the organization, the study of objectives and strategic plans of the organization, human resource planning outcomes and targets to be met relating to job performance evaluation, performance assessment, performance ratings and individual needs of training.

Stage 2: Establishing training and development objectives.

It is necessary to establish clear and concise objectives for the development of training programs and effective evaluation of these programs.

Stage 3: Training and development methods.

There are two main types of training methods:

- training methods at work: instruction and tutorial training, apprenticeship method, position rotation, learning by assistance;
- methods of training outside workplace: case study, simulation, role play, formal courses, courses on video, computer-based methods.

Stage 4: Implementation of training and development programs

³ Stanciu □., Leovaridis C., Ionescu M., Stănescu D., *Managementul resurselor umane*, Editura Comunicare.ro, 2003, p. 279

A perfect training program may fail if the participants are not convinced of the utility of the programs on professional and personal level that is their credibility.

Difficulties in implementing the programs are:

- managers do not pay enough attention to programs,
- unavailability of qualified specialists,
- lack of feedback from the participants,
- ensuring a high level of results during the program.

Stage 5: Evaluation of training

The evaluation takes into account the organization's tangible benefits due to the implementation of programs and is done by criteria such as:

- participants opinions (with answers and suggestions),
- the scope of the training (the same tests at the beginning and end of the program),
- behavioral change,
- achievement of program's objectives.

A simple evaluation scheme was described:

< *Evaluation of reactions* - immediately assesses how students appreciate the training (topics, content, usefulness, attitude and talent of lecturers, training conditions, etc.);

< *Evaluation of learning* - testing of students at the end of the training program (questionnaires, practical tests) to see whether students have acquired the knowledge, abilities or skills expected in the program;

< *Evaluation of behavior* - is to assess whether the knowledge and skills acquired in the program are applied in the workplace.

4. TRAINING – “ACCESORRY OR NECESITY”

Amid financial crisis companies' decreased budgets and have changed their priorities and so giving up to employee training programs, which can be a mistake because a valuable employee with a better training is an asset in present context.

Some managers consider training a luxury and personal development of employees a waste of time and money, bringing three reproaches to training stages⁴:

- training is designed to distract employees from their respective daily duties according to the position held in the company.
- training does not constitute an additional value to the organization and, often, even for those who participate in these courses
- is impossible to establish a direct link of type cause - effect between investment in training and success of the company.

These reproaches are justified when trainers are less talented and prepared and employees poorly motivated, but given appropriate training can make the difference between performance and survival for an organization because the adaptability of a company depends primarily on the ability to learn and change its employees, the role of the training is precisely to foster a better adaptation to the business environment.

Companies that recognize the value of the training consider the following strategic advantages:

- quality training increases employees morale and motivates them in their daily work;
- training stimulates competitiveness, while its absence may "preserve a modest professional development;

⁴ <http://catalina.cochinescu.com/2009/04>

- specialized professional development courses are designed to make clear to the employee the priorities of the organization;
- training is a catalyst for teamwork;
- in training, employees learn from one another what are the best or most appropriate practices within the company;
- training programs help in retaining valuable human capital that will not feel the need for a "change" to develop professionally;
- as "coverage" solution (creation and training) for the lack of skills within the company, training is cheaper than recruitment and selection process;
- training is an investment that brings profit on medium and long term, increasing efficiency and maintaining high professional standards;
- training contributes to developing the quality and efficiency of the organization.

Training has results if it is thought strategically and is invested with required time and energy. So, to demonstrate effectiveness there should be aggregated some important factors such as:

1. Strategy- training must be supported by managers with power of decision and along with personal development it should be integrated into the evaluation of the employee
2. Training must match the goals and objectives of the organization.
3. Development of professional and interpersonal skills of employees should be consistent with the company's activities.
4. Training's objective is to achieve a direct correlation between the proposed package and increase performance at work that is why previously is required an evaluation of skills and existing activities and their quality.
5. The way of providing the training is very important, it may be internal, external, in seminars, computer or e-learning, according to financial possibilities, working hours and professional and psychological profile of employees.
6. Training is effective when knowledge and skills acquired are put into practice and that is why training evaluation is very important.
7. Employees should receive the training positive, to cover their professional, theoretical and practical needs.

There are widely recognized the following training benefits:

- ❖ increased efficiency,
- ❖ increased customer satisfaction,
- ❖ increased satisfaction and employee morale.

Training achieves its purposes when responding both to the needs of the organization and the employee, and only if the content and delivery focuses on the skills necessary to improve job performance.

5. TRAINING AND DEVELOPMENT OF HUMAN RESOURCES IN PITESTI NUCLEAR RESEARCH SUBSIDIARY

Carrying out their work in a top area of technology continually developing new technologies, Pitesti Nuclear Research Subsidiary (NRS) shall permanently maintain a high level of personnel training, especially in research it should be aware of all the latest discoveries and innovations in the field of activity but also news from related fields that can contribute to increase the quality of the NRB (Nuclear Research Branch). This requires conducting training sessions to inform and familiarize personnel with all that is new and

useful to unfolding a successful activity imposed by the policies and strategies of the organization.

Further, we consider the training and development activities of Pitesti Nuclear Research Subsidiary between 2008 -2013.

In the period 2008 - 2013 in Pitesti Nuclear Research Subsidiary were conducted training activities in the following fields:

- Top management - 2 people;
- General Management - 168 people;
- Human Resources Management and Social –Human Sciences - 13 people;
- Commercial Management and Marketing - 1 person;
- Accounting - 20 people;
- Informatics - 48 people;
- Legislation - 52 people;
- Technical courses - 137 people;
- Quality, environment, safety and health at work - 63 people.

As we can see the institute was concerned to cover a wide range of training in its field and in related fields of its work.

It stands out the interest in personnel training, mainly administrative, particularly in management training of new managers at all hierarchical levels to successfully cope with current and future challenges in this special field of their work but also with current economic crisis.

At the end of 2010, Nuclear Research Branch had a total number of 646 employees of which 100 administrative personnel, the number being correctly reported to the number of employees directly productive.

In the period under review were conducted trainings in various fields, thus ensuring personnel knowledge updating from all departments of the enterprise.

A particular attention should be given to courses on quality, environment, safety and health at work, as occupational hazards in this field are very large and may cause diseases such as: osteoporosis, anemia, various forms of cancer, radiation and contamination of environment and population professionally unexposed.

Environmental risks are a controversial topic in this field, as the unsuspecting population in this field supports the view that this nuclear field is a major threat to the environment and public health. In reality, the lack of information in the field and wish of media to gain audience (alarmist way in which the media covered the event at Fukushima) caused a series of unjustified fears. These are fed by events occurred both in Ukraine (Chernobyl) and in Japan (Fukushima), where causes were human error at Chernobyl and natural disaster at Fukushima, where systemic work equipment and protective systems were significantly different from those of Pitesti Nuclear Research Subsidiary.

Within the Institute can be found innovative protection systems that ensure a high safety level, supported by the fact that it does not make nuclear energy but only research activities that involve a low risk and a restricted activity.

6. TRAINING METHODS USED IN PITESTI NUCLEAR RESEARCH SUBSIDIARY

Within NRB (Nuclear Research Branch) are used two methods of training: classroom type training methods (pre-operative method, case study method and physical simulation method), methods of instruction through lectures and training methods outside and inside Nuclear Research Branch.

Table 1. Personnel distribution that attended training programs by years and level of education

Year	Educ. level	Training inside the Institute	Training outside the Institute
2008	Higher	--	12
	Secondary	--	--
2009	Higher	85	45
	Secondary	32	12
2010	Higher	--	10
	Secondary	--	4
2011	Higher	45	25
	Secondary	--	1
2012	Higher	--	11
	Secondary	--	4
2013	Higher	125	32
	Secondary	41	6

(Source: The records of Human Resources Department in the NRB)

This table shows that more attention was given to training outside the institute, thus resorting to trainers with special training (some of whom are university professors) who addressed particularly to higher education personnel.

Table 2. Training inside NRB (Nuclear Research Branch)

Year	Higher education human resources	Secondary education human resources
2008	0	0
2009	85	32
2010	0	0
2011	45	0
2012	0	0
2013	125	41

(Source: The records of Human Resources Department in NRB)

Table 2 reveals that at NRB (Nuclear Research Branch) is given significantly greater importance to the training of personnel with higher education, both in number and frequency. Although the institution has chosen to undertake such courses every two years, this policy is not beneficial and creates discrepancies and delays in active training and in time of the human resources.

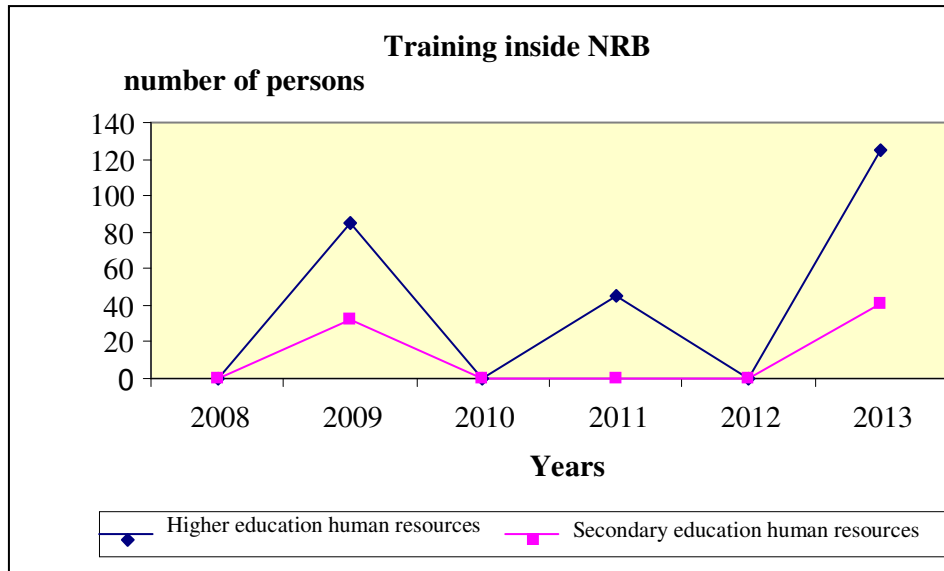


Figure 1. Training inside NRB (Nuclear Research Branch)

Figure 1 highlights the significant difference between the number of higher education people attending training courses inside the Institute to that of persons with secondary education.

Table 3. Training outside NRB (Nuclear Research Branch)

Year	Higher education personnel	Secondary education personnel
2008	12	0
2009	45	12
2010	10	4
2011	25	1
2012	11	4
2013	32	6

(Source: The records of Human Resources Department in the NRB)

Table 3 shows the same major difference between secondary education personnel and higher education, in favor of the latter, participating in training courses outside the Nuclear Research Branch, so in 2008, only a person with secondary education received training outside the institute, the widest participation of this category of employees in training courses outside the institution registered in 2009 (12 persons). In the same year and the same type of training received 45 persons with higher education, the lowest participation of this category of personnel registered in 2010 (10 persons).

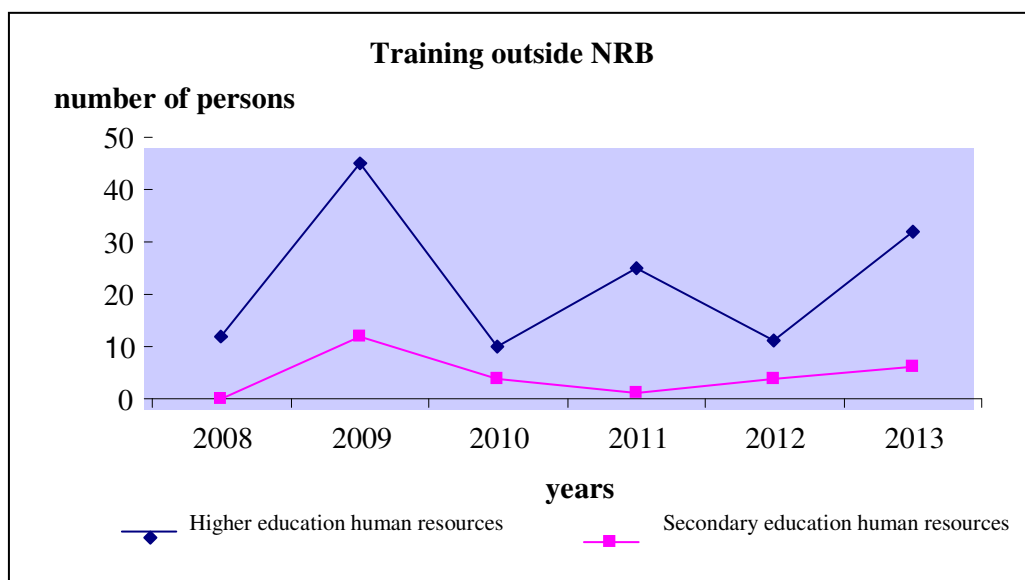


Figure 2. Training analysis outside NRB

Figure 2 highlights the situation of personnel with secondary education, not participating in trainings outside the institution only in very small numbers, except in 2009 when it reached a peak of personnel participation in training courses both employees with secondary education, as well as those with higher education, the number of the latter being significantly higher (four times higher). Since 2012, we notice a slight increase of secondary education personnel participation in trainings outside the institution, while higher education personnel is evolving inconstant, varying significantly from year to year.

Table 4. Personnel training expenditures incurred in the analyzed period

Year	Training inside the Institute (Lei)	Training outside the Institute (Lei)	Total (RON)
2005	--	288	288
2006	2340	1368	3708
2007	--	336	336
2008	900	624	1524
2009	--	360	360
2010	3320	912	4232
Total	6560	3888	10448

(Source: The records of the Financial Department in the NRB)

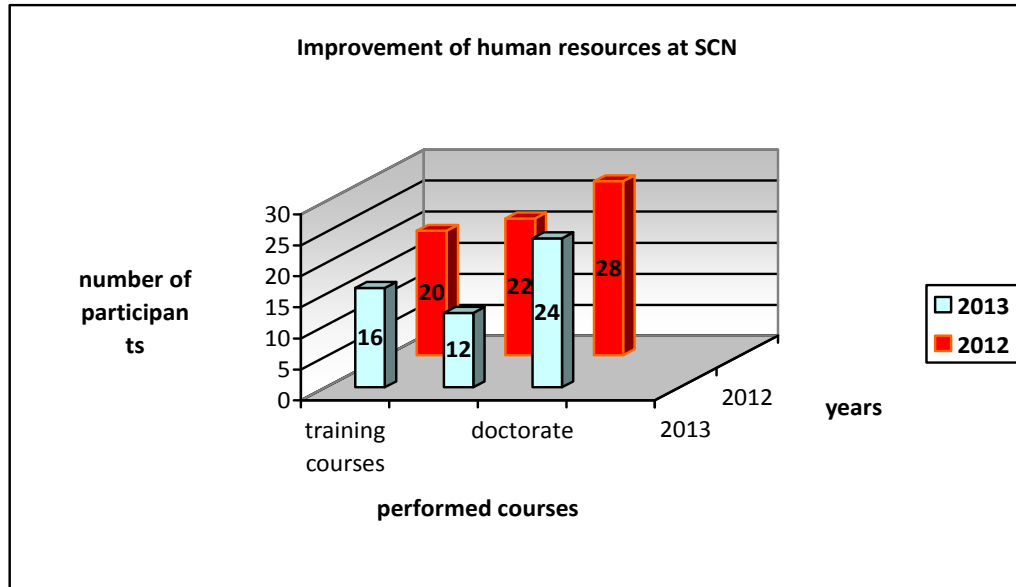
Analysis of Table 4 shows that although the amounts allocated to training outside the institution are 40% lower than those assigned to training within the organization these are annual.

One of the objectives of human resources policies in NRB (Nuclear Research Branch) is training young employees that can attend professional development courses, masters and doctorate programs in the field of activity of the department in which they work, subsidized by the employer. This goal was achieved in 2012, 2013 according to the table below.

Table 5. Participant employees in training courses

Year	Continuing education courses	Master	Doctorat
2012	20	22	28
2013	16	12	24

(Source: The records of Human Resource Department in the NRB)

**Figure 3. Employees participation in continuing training courses**

The figure shows the low number of participants, both in the continuing training courses and to the masters and doctoral courses.

7. EFFECTS OF TRAINING ON NUCLEAR RESEARCH SUBSIDIARY

The Nuclear Research Subsidiary is part of the National Company for Nuclear Activities that gives it a disadvantage in this time of financial crisis by reducing the funds granted by the government for work, but this disadvantage was overcome with competent management and activities that have brought additional funds to NRB budget.

These funds have not only contributed to the smooth running of business within the NRB, which was not affected by the reductions in wages, but also the possibility of conducting training and development activities for the benefit of employees and organization, thus ensuring the necessary personnel needed to carry out in maximum efficiency all activities.

8. CONCLUSIONS, LIMITATIONS AND PERSPECTIVES OF RESEARCH

Being an elite institution of the Romanian economy and scientific research, a particular attention should be paid to constant training and instruction of personnel, due to the fact that the entire work is subject to research and innovation especially in the nuclear field, but also in other business fields.

For the success of training programs we should take into account the fact that learning involves both mind and body. It is a conscious process, rational, verbal, but also involves emotions, senses, receptors. In trainings, students can be encouraged to:

- work in teams;
- build a model (concept, process or procedure), for example own coaching model;
- physically manipulate the components of a system or a process, for example to build models;
- create cognitive maps;
- discuss after each exercise, simulation, experience; conclusions if necessary.
- projects completed by students who require movement and active experience (an example would be field trip).

These are just a few ways to accelerate learning and allocate to students the role of creators of information. Research in this field is in continuous progress and we will soon benefit from accelerated learning methods increasingly revolutionary.

As shown in the data studied, half of employees have secondary education and some of them work in key points of the activity. Lack of concern from those dealing with planning these programs affects them from several respects. Lack of education is accompanied by wage restraints, this being a reason of stress and dissatisfaction for this category of employees, all this leading to limitation of secondary education personnel.

The institution must make serious efforts to develop organizational culture, mentioning the fact that although we found a positive understanding and appreciation for our approach on this paper at the higher level of management, we have been treated at least inappropriate. For this reason, we believe it to be important to emphasize communication and relationship skills of these employees.

In our opinion it would be necessary to use two important methods of training, namely simulation with role-play or job rotation, both meant to remind to the above mentioned that each individual is unique and that for every problem there are several points of view and several solutions, important being the willingness to cooperate in order to solve "problems".

To motivate and stimulate personnel with secondary education there should be implemented training programs for them after applying questionnaires to highlight their training needs, to build training programs with realistic goals and not an experimental training program. Training programs should answer questions like:

1. What are the ongoing activities that participants fulfill? (and correlations with the job description)
2. What types of tasks / activities are performed unsatisfactory now?
3. What elements can help improve current performance? (sometimes can be just internal issues, not necessarily insufficient knowledge or skills)
4. Among the elements that can contribute to improving the performance of the work under review, which can be acquired in a training program and to what extent? (it is necessary to define most pragmatically, by verbs of action like: *to delegate, do a report*)
5. Was there a previous training to improve performance for these types of activities? (If so, what impact did it have?)
6. What performance indicators will measure the effectiveness of training? (e.g. reducing the number of complaints, compliance with deadlines, use of tools etc.)
7. How will these indicators be measured?

The list can go on with specific questions for specific training needs.

Even if at first glance it may seem time consuming, an analysis of training needs can significantly contribute to increasing the effectiveness of implemented programs. This analysis can be developed with a training provider who has:

- a. expertise (specialized knowledge with mastery of a specific set of tools and methodologies)
- b. interpersonal skills (listening and understanding needs, clearly and concisely express certain ideas / recommendations, to be able to disagree when necessary, maintain a constructive approach, to understand and adapt to different styles of communication / learning)
- c. the ability to manage the process- stages, resources, roles and responsibilities at each stage, the purpose,
- d. professional conduct and adherence to a code of ethics (understood and accepted by the client), essential for building a partnership.

The main advantage of such an approach is that it is addressed to the cause of certain problems and not to symptoms. For example, the lack of planning tools leads to congestion of the employees, with consequences on the quality of interpersonal communication. Lack of tools can be *treated* with knowledge and implementation of those instruments rather than a single team-building). In this way, there can be identified root causes of certain problems and create a solution that will bring sustainable results and a real contribution to the development of the organization.

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