

## Training Methods for Generating Ideas in Innovative Organization

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**Abstract:** This paper examines the role of methods for generating ideas and features of training them in the innovative economy. The determining factors for the increased demand for trained professionals in the field of idea generation: the increasing in demand for new ideas; the shortage of skilled labor; the high cost of training and remuneration of such professionals; the need to concentrate a large number of professionals to solve complex, large-scale tasks in a limited time frame. The generating ideas training is effectively implemented on the basis of case studies using and reinventing and TRIZ. The active application methods should be interdisciplinary in nature, as a result, employees develop skills solutions non-standard tasks, trains thinking, learning to work as on individual and collective projects. Methods for generating ideas are actively used in quality management as aimed at achieving perfection, finding ways to meet the needs of consumers. Today creativity is given high priority - in assessing the qualities of the worker, it determines the possible future contributions to the work and in occupations regarded as part of the competence of the staff. In addition, the creativity of employees is one of the major competitive advantages of the organization so in the new economy is a transition to knowledge management and new knowledge is based on the new ideas.

**Key words:** Management • Creativity • Idea generation techniques • TRIZ

### INTRODUCTION

The use of non-standard creative ideas and solutions to business and management - a direct result of increasing the intensity of competition, which requires new marketing ideas to improve advertising, increasing the use of unconventional tools - tools for BTL, mosquito and event marketing, etc.

In the field of management creative approach is solving the problems of traditional management based on the use of information technologies to increase productivity and develop new methods for predicting market conditions needed to adjust the strategy of companies.

If previously viewed creativity as a property of the individual, but now there is actual control of collective creativity. The development of creative management is aimed at e human capital management decisions, the motivation of creativity, efficiency of project teams, thereby making it necessary to consider creativity as a manager and subordinates.

Basic problem is that creativity is based on irrational (random) thought processes and management is based on

rational processes, so the management of creativity to develop such management styles that would combine these two opposite in the process structure.

Methods for generating ideas can now be viewed as a system training sessions, allowing to develop their intellect, develop skills, learn how to solve non-standard problems.

When training is necessary to take into account the possible increase in range of problems that may be outside the competence, but It is need in a professional activity.

Zorin S.S. [1] on the basis of the research works of students from different faculties provide the following levels of creative style of:

- Reproductive and algorithmic level of creativity, at this level, students gain skills by copying and imitating the masters, this stage are virtually all young artists, composers and writers.
- Structural and modular level of creativity, at this level, students who have attained success in the reproductive rate, are trying to create and pass on their structural and composite level. At this level, an

attempt to create something new combined method of the previously created works to create a new combination.

- Analog level of creativity, the author creates a similar product, but at a higher level or more advanced, i.e. modify, processes, transforms.
- The productive level of creativity occurs when an author creates a new work, which has no analogues.
- Heuristic level of creativity - this is the highest level of creativity, where the author works creates essentially new works, unparalleled and at a higher level that surpasses all previous work..

The level of creativity, first of all, depends on the individual style of creative activity that is based on reflection.

Index of reflection (introspection, evaluation) is essential for self-enhancement of creativity, this characteristics was investigated by Guilford J.P. [2]:

- Critical thinking, is the quality of the individual, which is now becoming a significant social and formed into specific learning situations that require peer review, evaluation, statements of personal opinion, etc.
- The quest for evidence to support its position on the basis of objective scientific material.
- The ability to raise questions, the ability to see the problem.
- The desire and ability to lead the discussion, as the reflection - this debate with himself, when he poses the question and he answers it.

Very important from a practical point of view are the results of studies Kirton M. [3], showing that creative styles do not change, but change their perception, depending on the situation. The differences in the styles are stable, they do not change with the accumulation of experience, knowledge, or change the position value of the differences in the styles of decision problems is that no one organization can only develop adaptive or only on an innovative style. A wide range of "adapter - innovator" is essential for a variety of problems for a long period of time. Solutions for private (specific) problems may be more useful or adapters, or innovators. A variety of problems requires a team of divers, but enhances the difficulty of management, since it increases the likelihood of conflicts in a team. Adapters provide organizations with sustainability innovators - development. Microwaves tend to stick to the existing paradigm for too long,

innovators tend to destroy the existing paradigm is too fast. "Weakness" in solving one problem can turn into a "force" in dealing with the other. Evaluation of the creative style can help you better learn and use their own "strengths" and "benefits" of the other members of the group (team) for mutual benefit, to improve the efficiency of the group.

However, to maintain an employee in good shape, you need to conduct regular training system, in order to both adapters can operate in information flow, strengthen the fight.

During the course, staff are introduced to the methods based on case studies.

The idea generation techniques can be classified as follows[4]:

- Methods in which the leading role of collective forms of creative work. These methods are based on the premise that the collective thinking, organized according to certain rules, in a favorable psychological climate is much more effective than the sum of individual thinking. Said property is used in the methods of brainstorming ideas of the conference, the collective notebook, synectics.
- Methods based on the systematic analysis of complex solutions, streamlining the signs of particular solutions. Such methods include modification of the morphological analysis and synthesis methods.
- Methods in which the central point of associative thinking, the use of analogies, metaphors and semantic properties of concepts(method of focal objects).
- TRIZ is an algorithm for inventive problem solving and a library of heuristic techniques, principles and matrix of eliminating technical contradictions, main parts was developed by Altshuller G. S.[5].

To increase the effectiveness of the training necessary to come up with cases that introduce you to a number of techniques are possible in accordance with the chosen subject area(see Mann D.L. [6]).

The training staff consistently acquainted with the possibilities of methods (as in the individual assignments) and in the collective, in order to choose the most suitable method of working.

The most popular method today is TRIZ, as it allows you to organize search solutions, trains thinking, fund contains methods to eliminate contradictions, matrix algorithm, foundations of physical, chemical effects, standards of solving inventory problems [5].

If the technical sector sources of information are magazines, Internet portals, on which you can find relevant examples and further use of reinventing and the procedure is an important control on the exit right solution, analysis of the causes of deviations from the reference result, the search for possible causes of deviations, as well as options for modification of the solution in that case provided a higher quality version of the identified possible or design flaws.

For the ordering of the search for new ideas appropriate to use TRIZ tools as they help, increased demands to solve the problem, the use of a larger number of methods (matrix elimination of technical contradictions, the algorithm).

TRIZ is one of the most developed techniques of creative thinking, which has the following advantages. Livotov P. [7] considers that:

- increases the productivity of thinking;
- fast search of inventive and innovative solutions;
- evidence-based approach for the prediction of the evolution of systems, products and processes.

The products are designed to meet the needs, characterized by many features: efficiency, reliability, ergonomics, aesthetics, patentability, transportability, safety, environmental friendliness, adaptability, etc. For some products are very important indicators of the structural mass, density, layout, power consumption, power, performance, response time mechanisms, etc.

All these parameters can be divided into two groups: indicators of the degree (level) of the technical object of the main consumer functions and indicators of the factors of reckoning for the implementation of the main functions of the consumer.

The desire to improve some characteristics of the products often leads to a deterioration in others. At least at the stage of problem analysis and formulation of the problem is not visible ways, so it is necessary to apply special training, during the training, the following types of tasks[9]:

- to find examples of inventions methods of eliminating technical contradictions;
- the inverse problem, analyze what combination of methods will be more effective;
- the use of morphological analysis and synthesis to produce new combinations of products;
- analysis of the procedure of reinventing, the course of the solutions obtained options.

The economists can use the application of this technique to advertising and management, then there can be a great help to provide software products for the synthesis of advertising slogans [9], as well as a set of techniques to eliminate contradictions that are adapted to the economy, but do not replace the human thought.

The ideas generating technique are closely related to quality management and is, in this sense, this philosophy for the organization of the process employed and the company must keep track of the changing needs of customers, expanding the production functions, analyze the changing needs of the market (Kano diagrams), zero-defect production, FMEA, QFD(Deming W.D[10]) in the design, ecology, management (see Dubina I.N.[11]).

## RESULTS

Innovation processes are in need of new ideas, they must be accompanied by the emergence of innovation, its design, the development of production, promotion, therefore there was a need for teaching students skills to generate ideas for new solutions in unusual situations, which will eventually increase its intellectual capital, to acquire new abilities and skills, the ability to self-learning, information search, navigate trends in technology.

As a result of applicable cases the employees learn to work in substandard conditions, build competencies and learn to make decisions in a lack of information, carry out a patent search, they know how to deal with the inertia of thinking, developing individual elements of creative behavior, acquire skills to work in a team on a project that is constantly seeking improve their results.

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