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Conducting training and research, problem solving, creative thinking

Abstract

Training is a process of social, pedagogical activity aimed at developing and improving the behavior of individuals. Training is a purposeful process for the organization and development of active educational and cognitive activity in the development of creative abilities and moral-ethical worldview in mastering knowledge and skills. Training is a type of human cognitive activity, during which the subject's knowledge and skill elements reach the required level in terms of quantity and quality. After the training process, if the quantity and quality of the material in the product reproduced by the subject corresponds to the training goal, the training process is considered successfully completed. This process is achieved on the background of the interaction between the trainer and the learner, and the learning process contributes to the successful realization of the goals by both. Thus, we can call training a two-way, conscious and purposeful process of action that brings development in form and content to human activity. Training is a specific type of social activity, a process of transfer of social experience. Thus, training is primarily an integral part of human activity. Conducting training and research in investigative work, problem solving. Innovations related to creative thinking have been revealed.

Keywords: *Concept of training, ability to conduct research, problem identification and solutions creative thinking*

Eğitim ve araştırma yapma, problem çözme, yaratıcı düşünme

Öz

Eğitim, bireylerin davranışlarını geliştirmeyi ve iyileştirmeyi amaçlayan sosyal, pedagojik bir faaliyet sürecidir. Eğitim, bilgi ve becerilerde ustalaşmada yaratıcı yeteneklerin ve ahlaki-etik dünya görüşünün geliştirilmesinde aktif eğitimsel ve bilişsel faaliyetin organizasyonu ve geliştirilmesi için amaçlı bir süreçtir. Eğitim, denegin bilgi ve beceri unsurlarının nicelik ve nitelik açısından gerekli seviyeye ulaştığı bir tür insan bilişsel faaliyetidir. Eğitim sürecinden sonra, denek tarafından yeniden üretilen üründeki malzemenin miktarı ve kalitesi eğitim hedefine karşılık geliyorsa, eğitim süreci başarıyla tamamlanmış sayılır. Bu süreç eğitmen ve öğrenen arasındaki etkileşimin arka planında gerçekleşir ve öğrenme süreci her iki tarafın da hedeflerini başarılı bir şekilde gerçekleştirmesine katkıda bulunur. Dolayısıyla eğitimi, insan faaliyetlerine biçim ve içerik açısından gelişim kazandıran iki yönlü, bilinçli ve amaçlı bir eylem süreci olarak adlandırabiliriz. Eğitim belirli bir sosyal faaliyet türüdür, sosyal deneyimin aktarılması sürecidir. Dolayısıyla, eğitim öncelikle insan faaliyetinin ayrılmaz bir parçasıdır. Sorgulayıcı çalışmalarda eğitim ve araştırma yapmak, problem çözmek. Yaratıcı düşünme ile ilgili inovasyonlar ortaya çıkarılmıştır.

Anahtar Kelimeler: *Eğitim kavramı, araştırma yapma becerisi, problem tanımlama ve çözümleri yaratıcı düşünme*

Introduction

Training, as a type of cognitive activity, is organized according to certain methods, it is communication organized on the basis of mechanisms of culture transmission. Researcher is a specialist in creating new knowledge. It is the driving force of scientific progress and has a direct impact on the development of all mankind. At the same time, the researcher is an individual with a social status who carries out the process of increasing the amount of available information about any problem, acquiring new knowledge, and determining regularities. The main purpose of the research is hand and research, problem solving, the ability to think creatively to identify and compare its main categories and targets.

1. Discussion of the issue

Research is the process of researching, conceptualizing and testing theory related to the acquisition of new scientific and empirical knowledge. Research is an objective and thorough study of any phenomenon and process using the methods and principles of already known knowledge (Hsia, Lin, & Hwang, 2021). The main purpose of conducting research is to obtain results that will benefit all mankind. Doing research requires a lot of perseverance and hard work. Because, the

researcher should consider even the smallest points thoroughly. At the same time, the researcher should concentrate on the subject, keep it in mind and not be distracted. Depending on the object of the research, the research is divided into classifications:

Fundamental-theoretical research - here the researcher is not interested in using the results of the research. He simply selects a research topic to theoretically justify his findings. 2. Conducting applied research - in this process, the main purpose of the research is realized by the practical use of the results. At the same time, it should be noted that applied research is carried out on the basis of theoretical research (Ismayilov & Khudiyeva, 2022). The object of the research is the issue to which the researcher's research activity is directed. At this time, any situation, process or phonome, problematic situation can attract the researcher to act. The same object can be the subject of different studies.

The research cycle includes three main stages:

1. Project
2. Technological stage
3. Do not apply

At the first stage, the idea of the research is created, specific tasks are determined. The first phase of research is based on the following interrelated processes (Vazufa, 2022).

1. Idea
2. Defining the problem
3. Setting the problem
4. Determination of the research object and subject
5. Formulation of the purpose of the research
6. Building a scientific hypothesis
7. Research planning

In the second stage, the technological aspect of the research is determined and the results approval (quality assurance) processes are carried out. In the implementation phase, the research results are summarized, evaluated and accompanied by self-evaluation.

To prepare the research program at the first stage of research, we need:

1. Defining the scientific research problem - description of the problematic situation, existing problems related to the researched area. Identifying the problem can be a very difficult process.

Therefore, it is necessary to think carefully about the text of the research topic that reflects the existing problem (Ismailov, Mukhamadli, Khudiyeva, 2022).

2. Determination of the object and subject of the research
3. Determining the purpose of the research
4. Determination of the means necessary to achieve the goal of the research, justified scientific hypothesis (it should be noted that the hypothesis can be either confirmed or refuted in the research process).
5. Explanation of concepts used

In addition, when classifying research, let's pay attention to the main nuances of Pilot research and Simple sociological research (Zhao, He, & Su, 2021). Pilot study - aims to collect primary sociological data and check its quality. In the pilot study phase, we test all elements of the main work we plan. This allows us to improve research tools and methods.

Simple - sociological research - the main feature of this research is that it is carried out in natural conditions, primary data is collected about the problem that is the subject of the research. Information preparation and processing stage (Ismayilov and Khalafova, 2022). Secondary information is created by giving a form to all the information collected as a result of scientific research on any problem. Thus, at the stage of information preparation and processing, secondary information is created on the basis of primary data and presented in the form of tables, graphs, equations, coefficients or similar indicators. At this stage, the main process is to summarize the information and put it in a suitable form for the next process (Kazimi, Abdullayeva & Ismayilov, 2020).

Data analysis and final document preparation:

The methods used for data analysis depend on the type of research, its aims and objectives. During the analysis, conclusions are made about confirmation or refutation of pre-defined scientific hypotheses, social relations, trends, contradictions, paradoxes or new problems are identified. The results of the research are given in the form of a report.

Research methods:

There are several types of methods:

1. Empirical (experimental) method
2. Experimental method
3. Theoretical method

Empirical methods are a set of various methods that carry out the study of concrete phenomena that allow forming hypotheses. This method includes observations, interviews, questionnaires, surveys, tests, measurements and comparisons.

Experimental method - necessary to collect, verify, systematize facts, determine dependencies, determine cause and effect. The methods of this method are: experiment, laboratory experience, analysis, modeling, synthesis (Ismailov, Bayramova, 2022).

A collection of experimental methods

Theoretical research methods are a set of methods that allow to study all collected facts, develop concepts and opinions, draw conclusions and theoretically summarize information. Analysis and synthesis is an important element of theoretical research methods.

Theoretical research methods

To conduct scientific research, one must understand and accept that everything is logically interdependent and interconnected. It is not possible to move to another process without doing the previous process. Although it does not seem easy and fast, we must work purposefully and consciously to get the result we want until the end. Possessing research skills is not only about scientific activity, it also challenges individuals to think creatively.

Creativity is the creation of a new object. Creative thinking is the cognitive process or generation of ideas that change our world relationships. Creative thinking, in most cases, does not create innovation and tends to create new connections between existing concepts. With the help of creative thinking, we can create new ideas, act differently, and find ways out of difficult situations. In addition to using standard thinking, individuals also have the ability to think creatively. The only question that arises is how well we have developed our creative thinking skills. Creative thinking is the ability to solve problems beyond the standards, as well as the ability to achieve goals, find a way out of difficult situations, and use the environment, objects and conditions in an unusual way. The main principle of creativity is to use an already existing object in a different way (Stofkova, Poliakova, Stofkova, Malega, Krejnus, Binasova & Daneshjo, 2022). The standard thinking most people refer to is like a well-known smooth path and helps conserve brain resources. Creative thinking covers many areas of the brain, and professionals with this thinking are highly valued. It is important for an expert not only to come up with a new idea, but also to implement it. Creative thinking finds non-standard solutions, ways out and is mainly focused on business goals. Regardless of life circumstances, creative thinking can be developed at any age. Creative thinking

means having unique analytical and organizational skills, looking for non-standard options to get out of a difficult situation. We come to the conclusion that creative thinking is the ability to think creatively, which creates unique options for solving any problem, and the resulting practical skill.

There are many ways to break stereotypes and generate new ideas:

1. Change the viewing angle
2. Synthesis - creating a new one from old elements
3. The principle of Aikido (turning the opponent's energy against himself).
4. Using dreams
5. Contrast method
6. Brainstorming (creating many ideas in a short time) method

Thus, we determine that the demand of modernity is not to equalize everyone under certain standards, but to train specialists who have creative attitudes to business and are able to find non-standard solutions to problems. In order to develop creative thinking skills, it is necessary to be persistent, develop positive thoughts, control sensitivity, and overcome meanings. Wanting to avoid conflicts and not being able to say no hinders the development of creativity. Creative thinking is a complex process that cannot be described in words. Albert Einstein wrote: "I am not sure that man really understands the miracle of thinking." Both social and psychological factors affect the formation of creative thinking. Increase and strengthening of self-confidence, democratic environment, creative nature of activity, lack of stress, mutual trust and dialogue ensure the development of creative way of thinking (Ismayilov, 2022). A problem is a complex theoretical or experimental problem that requires study and solution. It is a contradictory situation that appears in the form of opposing positions in the explanation of any event, object, or process in science and requires an adequate theory for its solution. A problem is a question with a solution.

Conclusion

At the same time, the problem is to determine the impossibility of solving the difficulties and contradictions that arise in a certain situation through existing knowledge and experience. Humanity has faced many problems since its inception. A sharp violation of the ecological and demographic balance, new threats to health - an increase in pandemics, food shortages, an increase in criminality, uneven development of regions, an abundance of information and the resulting problems in information provision, and integration problems caused by a sharp increase in the

speed of digitalization are the most pressing problems for today's people. are very disturbing problems.

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