

**INVESTIGATING CONTROL AND SCIENTIFIC PERFORMANCE OF  
EDUCATORS IN UNIVERSITIES**

***INVESTIGANDO O CONTROLE E O DESEMPENHO CIENTÍFICO DE  
EDUCADORES EM UNIVERSIDADES***

***INVESTIGAR EL CONTROL Y EL DESEMPEÑO CIENTÍFICO DE LOS  
EDUCADORES EN LAS UNIVERSIDADES***

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**ABSTRACT:** Academic practice showed that the control work in an advanced instructive foundation gains an articulated scientific direction, which permits us to discuss a solitary control and insightful action of instructors. The point of this exploration is to consider the control and logical movement of educators as the intentional, educated cycle regarding acquiring data, contemplating the status and improvement patterns, recognizing the need to change the course of the instructive interaction, to guarantee the outcome - the nature of understudies' schooling. The work depends on perception, investigation of the control and scientific movement of educators, speculation, systematization, amalgamation, educational test, master appraisal technique, quantitative and subjective examination of exploration results, and testing. The adequacy of the control and insightful movement of educators is guaranteed by the execution of the fundamental elements of the instructive cycle throughout control and scientific action dependent on refreshing the abstract situation of a person. Also, the usage of focused preparing of educators for the excellent execution of control and logical exercises.

**KEYWORDS:** Scientific performance. Educators. Instructive cycle. Teacher. Educational test.

**RESUMO:** A prática acadêmica mostrou que o trabalho de controle em uma base instrutiva avançada ganha um direcionamento científico articulado, o que nos permite discutir um

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*controle solitário e uma ação perspicaz dos instrutores. O objetivo desta exploração é considerar o controle e o movimento lógico dos educadores como o ciclo intencional e educado de aquisição de dados, contemplando o status e os padrões de melhoria, reconhecendo a necessidade de mudar o curso da interação instrutiva para garantir o resultado - natureza da escolaridade dos alunos substitutos. O trabalho depende da percepção, investigação do controle e movimento científico dos educadores, especulação, sistematização, amálgama, teste educacional, técnica de avaliação mestre, exame quantitativo e subjetivo dos resultados da exploração e teste. A adequação do controle e da movimentação perspicaz dos educadores é garantida pela execução dos elementos fundamentais do ciclo instrutivo, usando do controle e da ação científica dependente da atualização da situação abstrata de uma pessoa. Além disso, o uso de preparação focada de educadores para a excelente execução de exercícios de controle e lógica.*

**PALAVRAS-CHAVE:** *Desempenho científico. Educadores. Ciclo instrutivo. Professor. Teste educacional.*

**RESUMEN:** *La práctica académica mostró que el trabajo de control en una base instructiva avanzada adquiere una dirección científica articulada, lo que nos permite discutir un control solitario y una acción perspicaz de los instructores. El objetivo de esta exploración es considerar el control y el movimiento lógico de los educadores como el ciclo intencional, educado en la adquisición de datos, contemplando el estado y los patrones de mejora, reconociendo la necesidad de cambiar el curso de la interacción instructiva, para garantizar el resultado - el naturaleza de la escolaridad de los estudiantes suplentes. El trabajo depende de la percepción, la investigación del control y el movimiento científico de los educadores, la especulación, la sistematización, la fusión, la prueba educativa, la técnica de valoración maestra, el examen cuantitativo y subjetivo de los resultados de la exploración y las pruebas. La adecuación del control y el movimiento perspicaz de los educadores está garantizada por la ejecución de los elementos fundamentales del ciclo instructivo a través del control y la acción científica dependiente de refrescar la situación abstracta de una persona. Asimismo, el uso de la preparación focalizada de los educadores para la excelente ejecución de ejercicios de control y lógica.*

**PALABRAS CLAVE:** *Desempeño científico. Educadores. Ciclo instructivo. Docente. Prueba educativa.*

## **Introduction**

The introduction of innovations in various fields of educational activity, often carried out spontaneously, requires evaluation and analysis not only by managers, but also by teachers. Determination of innovation effectiveness involves the establishment of feedback, which increases the importance of control and analysis as management functions. The object of educational institution update and development is not only individual components, but the entire educational process as a whole. Innovations are introduced both in the educational process content and technology, and in the management system.

However, we are forced to state that there is a mismatch between the development of educational institutions and the level of their conscious, focused, scientific management. The control function in innovative educational institutions acquires a pronounced analytical orientation since it involves the recognition and evaluation of innovations. The unity of the main features (object, methods, principles, etc.) of control and analysis as management functions allows us to talk about a single control and analytical activity in an educational institution. The subjects of control and analytical activity at a university are leaders and teachers. And this, in turn, presupposes a new content of professional and pedagogical activity, in particular, there is importance increase concerning the control and analytical skills of not only managers but also teachers. Educational practice indicates that most of the teaching staff of educational institutions is not ready for the implementation of control and analytical activities.

### **Problem relevance**

The urgency of the problem concerning the control and analytical activity organization among university teachers is determined by the contradiction between the objective need to increase the effectiveness of the control and analytical activity of teachers and the existing insufficiently effective system of control and analytical activity, as well as the contradiction between the social order, which implies the development of the educator's ability to control and analytical activity and their insufficient preparation for its implementation.

### **Problem study**

The educational process of a higher educational institution and control and analytical activity as a type of management activity that ensures the implementation of the educational process is in the scope of our research. The main approaches to the definition of 'management' concept are reflected in the works of foreign scientists A. Berg, A. Newman, F. Taylor, G. Emerson and others, in the works of domestic researchers V. I. Zvereva, Yu. A. Konarzhevsky, Serikov (1994), V. P. Simonov, M. M. Potashnik, P. I. Tretyakova, and T. I. Shamova. In the management system, one of the promising approaches is the desire to integrate management functions, which allows to ensure the effectiveness of management in general. The combination of two managerial functions into a single control function is presented in the works by V. G.

Afanasyev, Yu. A. Konarzhevsky, M. M. Potashnik, V. P. Simonov, T. I. Shamova, N. V. and V. A. Yakunin and others.

The comparative analysis of two control and analysis management functions makes it possible to isolate a single functional relationship in the control system - the effectiveness of control is provided by analysis. Pedagogical practice shows that the control function in a modern educational institution acquires a pronounced analytical orientation, which allows us to talk about a single control and analytical activity of teachers.

In our study, we understand the control and analytical activity of teachers as the purposeful, informed process of obtaining information, studying the status and development trends, identifying the need to adjust the course of the educational process, to ensure the result - the quality of students' education.

## Hypothesis

The effectiveness of the system of control and analytical activity can be ensured if the following set of organizational and pedagogical conditions is fulfilled:

- the implementation of the basic functions of the educational process (training, development, upbringing) is ensured by control and analytical activities based on the actualization of the subjective position of an individual;
- within the framework of an educational institution, the targeted training of teachers is carried out for the quality performance of control and analytical activities;
- control and analytical activities are carried out in the course of monitoring the quality of student education.

## Methods

The development of the idea of organizing the control and analytical activity of university teachers was built by the authors taking into account systemic, technological, personality-oriented and reflective-activity approaches. The work is based on the following methods: observation, analysis of the control and analytical activity of teachers, generalization, systematization, synthesis, pedagogical experiment, expert assessment method, quantitative and qualitative analysis of research results, and testing.

## **Main part**

Based on the works by V. P. Bespalko, Yu. A. Konarzhevsky, M. M. Potashnik and other researchers, the system of control and analytical activity is a set of interrelated functions of educational process control and analysis. The system of control and analytical activity is a relatively independent part of the process of intra-university management, contributing to the streamlining of a higher educational institution activities in its transfer to a better state, corresponding to the public idea of a university graduate preparedness.

The authors of the article are convinced that the control and analytical activity of the educational process is a pedagogical system, and this means that it is characterized by the following signs:

- mandatory focus of control and analytical activities;
- the principle of the unity of training, development and education in the implementation of control and analytical activities;
- mandatory professional readiness of teachers for the process of control and analytical activities;
- the presence of relative independence, the specificity of control and analytical activity trend.

1. Goals and objectives. The purpose of control and analytical activity system is to ensure the quality of education among university students. This common goal is divided into private ones, which are achieved by three units of control and analytical activity: operational, tactical and strategic. Each of the selected units within the system under consideration has its own goals that determine the relative autonomy of its existence. And the goals defined by the system in which it is included, i.e., the goals of the lower levels act as the means to achieve the goals of the highest levels. The names of the subsystems are determined by the main features of control and analysis type classification. The goal of control and analytical activity can be achieved by solving the problems determined by the characteristics of the educational process:

- the study of the managed system state, its subsystems, and the elements for a certain period of time;
- determination of the educational process development based on the results obtained as the implementation of control and analytical activities in an educational institution;

- decrease of the difference between the actual state and the intended one;
- prevention of negative trends in the development of pedagogical activity on the basis of the effective implementation of control and analytical activities;
- determination of the educational process development trends based on the results obtained after the implementation of control and analytical activities in an educational institution;

2. Functions. Based on these tasks, the functions of control and analytical activities can be distinguished:

- indicating - determining the result of control and analytical activity;
- training - preparation of teachers for the effective implementation of control and analytical activities;
- corrective - elimination of possible and committed errors during the implementation of control and analytical activities;
- motivation - the development of the value attitude of a team to the tasks and control and analytical activities in general;
- educational - the development of conscious discipline among team members;
- stimulating - the motivation of the educational process participants to implement control and analytical activity actively, to overcome difficulties, to find reserves in the course of its implementation (V. P. Bespalko, V. P. Vishnevskaya, P. I. Tretyakov).

3. Content. During the study of control and analytical activity system, we single out several levels of system decomposition.

The first level is the system units. A unit is a subsystem that is distinguished by its content and structural specificity, relative autonomy, and functional integrability. As the first unit, we single out the set of control and analytical actions, by which the first type of control and analytical activity is carried out: operational; the second unit is tactical and the third unit is strategic. Each of the selected units has its own goals within the system under consideration. These goals determine the relative autonomy of its existence. And the goals defined by the system in which it is included, i.e., the goals of the lower levels act as the means to achieve the goals of the highest levels.

The second level of decomposition is the allocation of unit elements. The units are allocated by us considering the principle of complementarity (GRANATOV; GRANATOV, 2013). The principle of complementarity is manifested in unity, mutual conditionality,

integration of the selected unit content and creates the conditions to determine the subjective position of all participants in the educational process. The operational unit provides the daily analysis of the educational process main indicators, the tactical unit allows you to study more deeply the phenomena of the educational process and reveal their causes. When they solve the tasks of the tactical unit, there is the possibility of the heads of department involvement in the control and analytical activity. The strategic unit is aimed at studying the whole complex of key factors, as well as reasons. The purpose of this unit is to evaluate the educational institution performance over the past period, formulate goals for working during the new planning period, and develop recommendations. The interconnection of control units and analytical activity is as follows. Each of the units has a meaningful specificity, performs only its inherent tasks. The units have a structure that corresponds to their intended purpose, i.e., have structural specificity. Along with the fact that each unit in the system of control and analytical activity occupies relative independence and performs only its inherent tasks, each unit can fulfill its functional purpose only if it interacts with other units.

4. Stages. The complexity of the control and analytical activity dictates the need to divide it into a number of stages, that is, time periods that encompass one or another completed process:

Stage 1 - preparation for the implementation of control and analytical activities. At this stage, there is an understanding of the problem, subject to control and analytical activity, as well as the process of goal setting, and a program development for this purpose.

Stage 2 - implementation of the program for control and analytical activities.

Stage 3 - data analysis. At this stage, cause-effect relationships are revealed, penetration into the mechanism of the final result development is underway.

Stage 4 - generalization and formulation of conclusions. When they estimate the final result of control and analytical activity, we consider the totality of the real end results of each stage interacting with each other. This stage ends with the documentation of conclusions and suggestions.

It is necessary to comply with the abovementioned steps for the effective implementation of control and analytical activities.

5. Methods and forms. The first condition was implemented through the implementation of control and analytical activities using technological maps for the control and analysis of



training sessions, the final certification of students; the promotion of study groups by the main indicators of the educational process.

The implementation of the second condition was to prepare teachers for the quality implementation of control and analytical activities, which took place during consultations, theoretical seminars, and workshops; problem laboratories, organizational and activity games.

During the implementation of the third condition, the system was developed to monitor the quality of education among university students, and technological monitoring cards.

6. Results. The analysis of experimental data allowed us to highlight the positive dynamics of changes in the level of control and analytical activity of teachers, as well as the main positive indicators of educational activities among students. Thus, the effectiveness of the control and analytical activity of university teachers is determined by the indicators of education quality among university students. This goal can be achieved through the implementation of control and analytical activities, considering the operational, tactical and strategic units and four stages.

In our opinion, the control and analytical activity of teachers will be effective subject to a set of the following organizational and pedagogical conditions:

- the implementation of the basic functions of the educational process is provided by control and analytical activities based on the actualization of the subjective position of an individual;
- within the framework of an educational institution, targeted training of teachers is carried out for the quality performance of control and analytical activities;
- control and analytical activities are carried out in the course of monitoring the quality of education among students.

Let's consider them in more detail:

1) Control and analytical activity should ensure the implementation of the basic functions of the educational process (training, development, education) based on the actualization of the subjective position of an individual. Each function, having its own content, is closely connected with others, they interpenetrate each other, and form a single whole in the educational process. For our study, it is important that in the process of monitoring the course of training and its result analysis, the course of the implementation of all three functions (and not one of them) is assessed simultaneously. Our study showed that the development of the personal position of teachers, the increase of their experience significance in the implementation of control and analytical activities is possible if, during the implementation of



control and analytical activities, their subjective position is activated by stimulating the personal achievements of each participant in the educational process. The personal significance of one's own achievements is one of the characteristics of a person subjective position in relation to himself and reality. It is the subjective position that forms the basis for the development of readiness to implement control and analytical activities.

2) During the consideration of the second condition, we define the concept of “readiness for the implementation of control and analytical activities” as dynamically developing personality traits of a teacher. They are characterized by the presence of a system of theoretical knowledge necessary for the implementation of control and analytical activities; a set of skills, a reflective position of a teacher, expressed in positive motivation, encouraging them to master knowledge, in understanding the meaning of preparation for control and analytical activity as a necessary condition for further professional and personal development. We include the following in the process of preparing a teacher for the quality implementation of control and analytical activities:

- a substantial component that reflects the system of theoretical knowledge;
- the activity component, represented by control and analytical skills and the types of activities in which these skills are formed and developed;
- a technological component that determines the specifics of teacher training process organization for the implementation of control and analytical activities in an educational institution through a system of appropriate methods, forms and means.

3) Control and analytical activity cannot be carried out without the presence of a specific database collected in a specific system. Such data is collected over time according to certain criteria and indicators that make up the subject of analysis based on pedagogical monitoring. The results of the monitoring system for the quality of student education serve to identify the parameters that are characteristic and essential for the educational institution and create a comparison mechanism (control subsystem); evaluation of deviation effectiveness from the planned indicators (analysis subsystem).

The experimental work aimed at checking the selected set of organizational and pedagogical conditions was carried out in vivo during the educational process of a university in 2016 - 2019. The participants in the pedagogical experiment were the students of 1-5 courses studying the following fields of professional activity: 44.03.05 “Pedagogical education” and 44.03.02 “Psychological and pedagogical education”. About 200 people took part in the experiment, including 16 teachers.

## Conclusions

Summing up the study, the following can be noted.

The novelty and theoretical significance of the study consists of clarifying the content of the concept “control and analytical activity of university teachers” and of its component analysis.

The practical significance of the presented study lies in the fact that it systematizes domestic and foreign experience concerning organization the control and analytical activities of teachers in a higher educational institution, on the basis of which a set of measures was developed and implemented to achieve positive indicators of the educational activities among university students. All of the abovementioned allows us to draw the following conclusion: the effectiveness of the control and analytical activity of teachers is ensured by the implementation of the basic functions of the educational process in the course of control and analytical activity based on updating the subjective position of an individual; the implementation of targeted training of teachers for the high-quality implementation of control and analytical activities; the implementation of a system for monitoring the quality of education among students, which confirms the hypothesis put forward by the authors.

## Conflict of interest

The authors confirm that the presented data do not contain a conflict of interest.

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