Monitoring: Predictions of the Effectiveness of Educational Processes in Higher Educational Institutions

Askarov Abror Davlatmirzayevich

Abstract: ***In the period of globalization new requirements of the level of teachers' preparation for their pedagogical career have significantly increased. Consequently, it demands higher educational institutions the necessity to draw special attention to enhance the efficiency of educational processes in preparing future teachers. In this article, the mechanism of implementation monitoring processes on improvement of the system of preparation teachers for pedagogical career in the high educational institutions has revealed. In this monitoring the distributional parameters of the corresponding processes according to the direction has taken into consideration and provided prognoses of them on the basis of interrelation and impact between indicators. On this purpose, the algorithmic model of interrelations between indicators of argumentative, procedural and productive directions of a process has developed. This model gives the chance to obtain the predicted information on educational process based on certain evidence, to define necessary organizational and pedagogical measures by comparison with the expected results, corrections, specifications and modernizations of teaching and learning processes.***

Keywords: effective training, monitoring of the educational process, quality of education, predictions, an indicator, algorithmic model, ratio of interrelations, ratio of impact.

I. INTRODUCTION

In the higher educational institutions in the worldwide, the training of the professionals is carried out with the aim of integrating the science and manufacture in accordance with educational standards. The scientific-methodical support of the organizational-pedagogical stages of the educational process depends on their system of monitoring. These two elements are the factors, which improves the quality of education.

The essential of monitoring based on the scientific-methodical support entails in meeting the education with world standards, creating an open educational environment, varieties and flexibility of teaching materials, due to the qualified customer demand, and in creating feasible conditions for joint preparation of teacher-specialists, which can be achieved by application of modern educational technologies and concordant interaction. On the base of the results of the monitoring come management decisions, which allows improving the process of education, that is, they act as a feedback mechanism between a higher educational institution and the society [1].

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In my opinion, the monitoring of the educational process in a higher educational institution is an activity, which provides for not only offering valuable recommendations on making new decisions, but also supporting the higher educational institution on various organizational and pedagogical stages.

Simultaneously, the basic monitoring service of higher educational institutions acts on the basis of existing procedures, norms and analyses for offering solutions to eliminate the potential problems, likely to arise out of the process of preparing the students with scientific-technical and organizational-social backgrounds for teaching activity. This process offers a complex approach to the solution of the problem of correcting, modernizing and upgrading the system of education management.

As observation shows, in-line system of monitoring consistent parameter values, further used in comparative analysis and data used – in most cases, once. The indicators of carried out monitoring become just statistical data for subsequent (dynamics of) monitoring and conclusions carry a subjective character.

The aim of the research is to offer a system of monitoring, which steps forth at the level of a basic factor and influences the quality of education by eliminating the defects mentioned above. Within this system, it is planned to create the method, which allows defining the values of its essence, adopted by specific monitoring parameters, to determine the forecast value of other indicators. This method also provides for the extension the period of use of the results of a monitoring of higher educational institutions, the enhancement of objective and correctional characters of confinements.

II. MATERIALS AND METHODOLOGY

The scientific conclusions of the scholars as R. Akhlidinov, Sh. Kurbanov and E. Seytkhalilov, whose investigations in the field of organization and delivering educational process and monitoring the quality vividly reflects the concept and the content of monitoring [2], [3] ([4]).

Alyushin M. V., and Kolobashkina L. V., points out that monitoring, as a vehicle of improving the efficiency of educational process, possesses a multidisciplinary, complex character and includes objective and subjective factors[5]. In the researches of A. Oduaran, monitoring considers as a part of accreditation and conformance the evaluation of the functions of the service program.

In addition, it has considered the essential for achieving educational goals; the reception of the results of the gained knowledge and skills of students, their continuous improvement becomes an essential element of accreditation of the program as well as the process of permanent improvement [6].

At present, among the scientific researches the special attention has drawn to various trends of monitoring of educational processes. Including:

-The model analysis of the cognitive control of mental capabilities [7];

-Problems and perspectives of using the analysis of large quantities of information in data system [8] [9];

-Forming unique organizational-pedagogical conditions of academic and methodical support of educational processes on the basis of development of instruments and tools, educational programs of monitoring and assessment [9];

-Defining the content of complex diagnostics of components of testing competency of the students of pedagogical directions, developing and validating the choice of its measurement technique, developing a complex specific procedures for all-round, exact and overall estimate of the research competency of future teachers, homogeneity between the theoretical constructs (research competency) and the operationalized constructs (a psychological phenomenon, estimable in diagnostic procedures) [10];

-Researches on the possibilities of improving the efficiency of the control the quality of education of the students in higher educational institutions; proposals on the optimization the system of the quality control of the students acquiring knowledge and skills; optimization of automated verification procedures by means of the mathematical simulation and using the methods of sequential control of the quality of knowledge [11], [12];

-Self-regulation, definition area for the enhancement of educational measures, self-evaluation of efficiency [13];

-Comparison of a certain aspects of European and Russian education, identification of the root-problems of the present-day-world in preparing qualified personnel [14].

N. V. Seregin studies versions of control of reclamation of educational programs from traditional value systems as one of the most important components of monitoring. He researches the possibility of refining the indicators of research, diagnostics and prognoses of educational process, as well as the result of learning, which is the basis for making pedagogical decisions and optimal functioning process of professional development, important qualities of relatively concrete conditions and the teacher personality, and specified the indicators of forecasting and monitoring in musical-pedagogical process [17].

P. P. Gusev considers that, the biggest achievement in education can be achieved by means of elaborating educational-methodical complex of the educational process by acquirement of computer hardware and software [18].

T. M. Litvinova, N. A. Kasimovskaya, V. N. Petrova, M. M. Volkova and others worked on the problems of creating a system of estimation of quality of education in a medical institutions.. Authors analyzed various interpretations of the notion “quality of education”, and analyzed the principles and criteria of the quality of education [19]:

- Conceptual component (forecasting, planning the strategic directions of the development of the educational process for the achievement the quality of education, mission and objective),
- The component of the procedural content (monitoring at the initial and the final evaluation phases of the quality of education),
- The component of the self-analysis (analysis of the performance of students, teachers and department staff);
- Analytical constituent (visualize of the information, received on the basis of transparency, informational openness of the results of education and nurture, analysis and elimination of revealing defects, application of the advanced educational experience into the educational process).

P. Kislyakov, E. Shmeleva, T. Karaseva and O. Silaeva in their works paid particular attention to the theoretical-methodological basis of monitoring of social-psychological safety of the students in higher educational institutions. At the basis of the analysis of the theoretical-methodological material the personal qualities of the students were defined, which determines the nature of interaction of subjects and their psychosocial welfare; revealed the positive correlated connection between the level of subjective well-being and overload of personal qualities, which determines the socio-psychological safety of the educational environment [20].

In the works of S. V. Khokhlova the possibility and necessity of the estimation of the quality of education based on complex criteria with the indicators of educational results (educated, well-mannered, and maturity of students, their social adaptions, with their awareness of national and universal values) is well founded. Along with it, her works also include the essential characteristics of the vary process of education: its content, organization, method of teaching and educating, material and technical, educational-methodical, personnel, sanitary-hygienic and other conditions for its realization [21].

According to E. Y. Gorkaeva, innovative pedagogical technologies enable to find successful solutions to professionally significant problems. They must have their bases on a stable scientific foundation, that guarantees the optimal combination of fundamental and practical knowledge, usage of interactive methods and techniques of teaching, getting on to the new strategies and techniques of applying knowledge, and the implementation of the gained knowledge and skills with daily life [22]. Educational technologies create an opportunity of improving the quality of education. However, there exists limitations of using the presented methods and techniques, and also the absence of solid methods of monitoring of the usage of educational technologies [21].

Monitoring, in the context of our research, as in others, is directed to identify the most efficient (or, conversely, the ones with the least effect) factors in assuring the quality of education. It means the attainment of the final aim, accordance of the results of the educational process with the demands of the state and the society, requirements of the customers and conditions of the education.

It signifies to conduct monitoring in a higher educational institution in form of a large-scale project, organized at the highest level, which is able to make accurate analysis, well-grounded conclusion and proposition. Process of monitoring offers a complex of measures, including in it a sharp conception and estimation of the situation by means of collecting and processing large amounts of data, aligned to the possibility of search, reinforcement of resources, which is not used in the system.

Researches, we conducted in the National university show that we can identify three types of factors – **argumenta, procedural** and **resultant**. These factors have strong relationships with particular educational curriculum, programs, syllabi, educational-methodical, normative-legislative and technical maintenance, its techniques, structures, and human resource issues, educational processes and reflection of the results. The aim of the study is the content, principles and techniques of the organizational-pedagogical stages of the monitoring of educational process in the university.

The National University of Uzbekistan is one of the main higher educational institutions in preparing professionals with higher educational background. Therefore, it is very important to organize education process effectively and provide a regular monitoring of that process. For that purpose, the department of the control the quality of education and internal and external monitoring was organized at the administrative structure of the National University. The whole teaching-professorship contingency of the university (approximately 900 university staff), having teaching positions on over 76 departments in 14 faculties of the university, and also the whole student bodies (more than 10 thousand students) have involved to the monitoring of the above mentioned department annually.

In accordance with the aims and purposes of the research, the methods, which have been chosen for use, are as follows: pedagogical observation, electronic questionnaires and testing, algorithmic modelling, comparative analysis, and experiment. Suitable information has formulated by means of the study of the reports and normative documents, observations, interviews, testing, and conducting various questionnaires as well as surveys.

The preparation phase of the study (March 2018 – November 2018) included collecting, seleccting and analyzing the approaches to the organization, and also the settings of applying the monitoring of the educational process in the university. During the analysis of the conditions of applying the modern approaches to the existing processes of monitoring has identified the parameters, their correlation, and the forming of the indices have clarified; the level of internal and external influences of the control values have studied.

In the next phase (November 2018 – June 2019) based on the factors, influencing the effectiveness of the system of monitoring the higher educational institution, a conceptual model was formulated and tested in practice. The possibilities of automatization of the processes will study in near future.

III. THE RESULTS OF THE STUDY AND THEIR DISCUSSION

The parameters of **argumenta directions (Ar)** form on the basis of the standard of actions of a higher educational institution, system status, established order and requirements, also the data which explains the existing situation. They can be divided into the following:

- *Planning of quotas (Ar-1)* – planning on the basis of order; the quality of fulfilling the orders; completeness and assuredness of the data; analysis of periodical plans; availability of long-term plans and so on;
- *The topicality of the content of curriculum (Ar-2)* – accordance with the state standards, their approval; the proposals of the customers; internal proposals, proposals of various organizations; public offers; studying the content of the acting curricula and syllabi; the availability of the variation and others;
- *Educational-methodical materials (Ar-3)* – the concordance of educational programs and syllabi; the concordance between teaching-learning materials and the general principles; substantial-methodical and technological support and others;
- *Documents on personnel problem, working conditions (Ar-4)* –knowledge of specialty; academic degree and title; the competency of the professional and teaching staff; the system of further training; scope of scientific research; academic loads; the necessary conditions for the careers of professional and teaching staff and others;
- *Normative documents (Ar-5)* – the establishment of order and requirements for organizing and maintaining the process of preparation to teaching activity; techniques of system monitoring; the support of teaching practice and others;
- *Information exchange systems (Ar-6)* – demands for informational environment; virtual teaching communication; teaching-organizational information system; the level of equipment with computers and their appliances; with the Internet, with laboratory equipment and so on.

The parameters of **procedural directions (Pr),** which represent the status of realization of a certain processes on organizational-educational stages of the process of education in a higher educational institution, can be classified according to the following features:

- *The process of working with the customers (Pr-1)* – the process of the generalization of the requirements and demands; studying the addresses of the customers; conducting the dialogues of co-operation; campaigning for educational work; organization of collective discussions; the optimal decision-making process;
- *The process of the formation of the content (Pr-2)* – the process of identifying and systematizing the occupational needs; activity arrangement of the authors and experts on the development and updating of the instructional material; the drafting processes; grouping the proposals of the main customers, various organizations and the public, and also collecting of the internal proposals concerning curricula and teaching programs;

the generalization of the analysis of the acting instructional content; defining the obsolete subjects;

- *The process of selection and preparation of the personnel (Pr-3)* –organization of the selection of personnel (recruiting); the definition of the adequate level of competency for the professional and teaching staff; contractual relations; the processes of continual training and self-development; the scientific works of the faculty; the conduction of educational seminars;
- *Securing the necessary conditions and mobilization (Pr-4)* – arranging and registering the students; defining the level of orientation; grouping; development of working curricula; comparison of the schedules of subjects; guidelines on scientific magazines and corresponding papers; the work on the level equipment with computers and their appliances; with the Internet, with laboratory equipment and so on;
- *Conducting the lessons (Pr-5)* – preparation for the lessons; designing the lesson; preliminaries of a lesson; applying the basics of teaching to the lessons; the process of studying the quality of a lesson; organization of independent education and so on;
- *The education and adaptive process (Pr-6)* – organizing the process of teaching of students; the acquaintance with organizational-educational stages of the process of education; following and analyzing the academic activities of the students; the arrangement of the instructional material for the independent works; organizing a help in the processes of virtual forums and record retrieval and so on;
- *Progress Check (test) (Pr-7)* – organization and generalization of current, interim and final control works; estimated work on the students' progresses; the computation of instructional load; the support of the post-educational activities of the students; informational support and others;
- *Scientific research (Pr-8)* – the self-development processes; conduction of the scientific research activity, publication of scientific conclusions, co-operation in the domain of science and others.

The parameters of **resultant directions (Re)** which represent a certain facts, collected on the conduction on the organizational-educational stage of the teaching process in a higher educational institution and include following:

- *Purpose-oriented results (Re-1)* – the results of the testing the level of the students' preparedness for professional activity; the level of competency of the professional and teaching staff; the results of scientific works;
- *The level of orientation (Re-2)* – the level of student interest in teaching activity and its realization (on the basis of teaching practice);
- *The level of satisfaction (Re-3)* – the student attitude towards educational processes;
- *The level of acknowledgement (Re-4)* – the attitudes of the customers, educational establishments and participants towards the level of preparation of teaching staff and others.

For each direction (argumenta, procedural and resultant) there will be organized a separate process of monitoring, the parameter values will be determined in terms on qualimetric scale, and the analysis of the results will be conducted. The estimated results of the argumenta direction allows to define the system status of the organizational-educational stages, and procedural indices – realization of these stages, and the resultant directions – show the final level of goal attainment. On the basis of the indicators, which provide objectivity, we can make individual conclusions concerning each direction. This kind of conclusion is attached to the subject for focusing the parameters with low and high value.

Generally, the low-effect parameters are enumerated in these conclusions, and they are compared with the previous results. But the factors, which have an influence on the results, fixed in general arrangement. For instance, given conclusions can be like these: "created conditions had a positive effect on the process of education", or "the cause of the failure of the plan to comply is that it was not formed on the basis of vertical upward orders".

These kind of general conclusions are insufficient because of the multi-subjectivity of the education process in a higher educational institution. Conclusion, directed toward multi-subjectivity, must meet following requirements:

- Objectivity – accordance of the parameter values to the real condition, the minimum level of mistakes, reliability;
- Completeness and sufficiency – the full informational coverage;
- Systemic – generalization of conclusions, arising out of different parameters;
- Value – preparing and maintaining the actuality and the timeliness of the conclusions, till the reform or during the reform;
- Orienteers – the directedness and addressees of the conclusions toward the participants of education.

By means of conclusion, meeting the above mentioned requirements, we can define factors, which have positive (or negative) effect on the quality of education in a higher education institution.

In facilitating the value and systemic of the conclusion, the prediction of the values of parameters related to the directions of the higher educational institution is of paramount importance. Forecasting the matchable parameters appears to be the preliminary definition of an expected result with the utilization of the real parameter values of other direction, which have been attained at previous phase of monitoring.

One of the results of the forecasting will be the opportunity of identification of defects, related to yet incomplete processes, the surgical analysis of emerging factors, error recovery, acknowledgement of effective factors, acceleration of work in that direction, alteration and padding of the made decisions, forms, methods of the activity arrangement.

The importance of the forecasting can be seen from the fact that, the complicated features of a higher education institution system and the results of the activities in there will be known in accordance with the flow of a certain amount of time and with the finish of corresponding processes.

The most focused attention throughout our research is given to the interrelation between the directions and the parameters, the influence one parameter has on the other, their origins, the scales of influences, the significance of these interconnections in optimizing the process of monitoring a higher educational institution and improving the reliability of attained results.

This kind of forecasting model is constructed on the interconnection of each parameter in three directions (Figure 1).

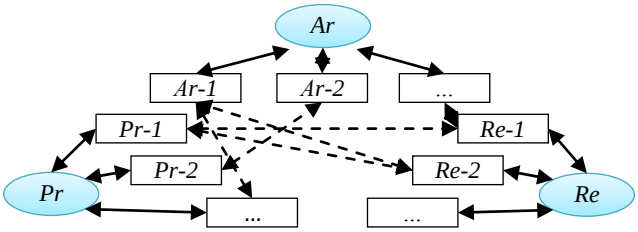


Figure 1: The scheme of interrelation of parameters of monitoring in a higher educational institution

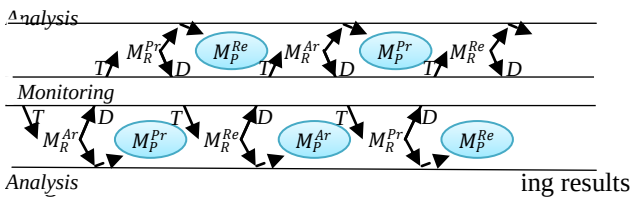
Here, *Ar* – is argumenta direction, *Pr* – procedural direction, *Re* – resultant direction, *Ar-1, Ar-2..., Pr-1, Pr-2 ..., Re-1, Re-2...* – are the direction parameters.

Analysis of parameters in argumenta, procedural and resultant directions shows that, a certain parameters, relating to a specific direction, leads to the alteration of the parameter indicator in other direction. For example, the parameter indicator "planning of the quotas on the basis of the customer proposal" along the argumenta direction has an immediate influence on the parameters of procedural direction, such as "the process of identification and systematization of occupational needs", "the generalization of the analysis of the acting content of education", among others. If the state of two parameters, not pertaining to a single direction, is the cause of the change of each other, then this kind of parameters may be called **correlated**.

The characteristics of correlated parameters can be enumerated in the following way:

- Any parameter in one direction has at least one correlated parameter in other direction (*Ar-n <=>Pr-k*);
- One parameter may be related to several parameters (*Pr→n<=>Re→k, Pr→n<=>Re→s*);
- The value of the one of the correlated parameters can influence the forecasting indicator of other;
- Parameters, not correlated with each other immediately, that is, related via the parameters of the other (the third) direction, will not be sufficient for defining the forecasting indicators.

To sum up the foresaids, we can conclude that, the forecasting indicators of the parameters of one direction can be determined in advance, with the help of the real parameter values of other directions, which have been revealed by means of analyses and continuous monitoring. The graphic illustration of this kind of forecasting is shown in Figure 2.



Here, M_R^{Ar},M_R^{Pr}, M_R^{Re} are the real aggregate values of the results of the monitoring in directions. M_P^{Ar}, M_P^{Pr}, M_P^{Re} - are the aggregate forecasting indicators of the directions. T – the current stage of monitoring, D – the previous stage of monitoring.

Resting on the real values, emerged at the end of the previous stage of monitoring, the algorithmic model of the process of obtaining forecast can be outlined.

Real value (RZ) of each direction in T stage of monitoring is formed on the basis of evaluation of the parameters belonging to it ($\{RZ_a^y(T)\}, a = \overline{1,m}$, m-number of parameters).

The correlation of the outlined indicator (I_i^x) of the parameter i of the forecasting direction x, with the sum total of fixed indicator (I_a^y), and interrelated parameters of other directions y form "coefficient of association" (KS_i^x) of given parameter *(i):*

$$KS_{x_i}^y = \begin{cases} \frac{I_i^x}{\sum_{a=1}^{v} I_a^y}, if\ a \text{ correlated with } i\ (a \to i) \\ 0, otherwise \end{cases}, i = \overline{1,n}, v = \overline{1,m} \quad (1)$$

Here, x – forecasting direction, y – other directions. $x \neq y$ ($x = \overline{1,3}$, $y = \overline{1,3}$), i – number of parameter x, n – quantity of parameters x, v – quantity of parameters y with the correlated parameter i, m – quantity of parameters y.

The forecasting indicator (PP_i^x) of the parameter i in the x direction equals the product of sums of corresponding coefficient of association (KS_i^x) with the real values RZ_a^y of the correlated parameters of the y direction:

$$PP_i^x = \begin{cases} KS_{x_i}^y \cdot \sum_{a=1}^{v} RZ_a^y, \ if\ a \to i \\ 0, \ otherwise \end{cases}, i = \overline{1,n}, v = \overline{1,m} \quad (2)$$

The present formula, after the conduction of the monitoring in two directions, defining the corresponding parameter values, facilitates the forecasting of the parameters of the third direction.

At the same time, on the basis of the results of the subsequent monitoring we can analyze how much the forecasting indicators were close to the actual process state, to the real value of the correlated parameters. This tells about the necessity of the systems study of the causes of emergence of the following uncertainties (mistakes), which require elimination:

- In the course of regular monitoring one can state that, the real value will get larger than its forecasting indicator. This uncertainty indicates the systemic overcoming of the mistakes by means of raising real values of correlated parameters, which took part in the forecasting;
- Results of the regular monitoring can indicate that its real values take less value from the forecasting value of a certain parameter. So, it is necessary to reduce real value of correlated parameters down to a certain coefficient, participating in the forecasting.

Above-mentioned situation leads to the necessity of achieving the periodic reduction of difference between the forecasting indicator of the parameter PP_i^x and its real value RZ_i^x. With this purpose in mind at the end of each monitoring, there will be determined "influence coefficient" *(KV)* on the basis of the forecasting indicators and real values of a parameter. Influence coefficient presents the level of suitability of the actual values to the forecasting parameters, revealed as results of carried out monitoring:

$$KV_i^x = \frac{RZ_i^x}{PP_i^x} \quad (3)$$

As we can see from the above-said analysis, the influence coefficient will not be identical for all correlated parameters. Besides, the influence coefficient must be reduced or, conversely, increased for the proximity of the forecast to the real value (Figure 3 and 4).

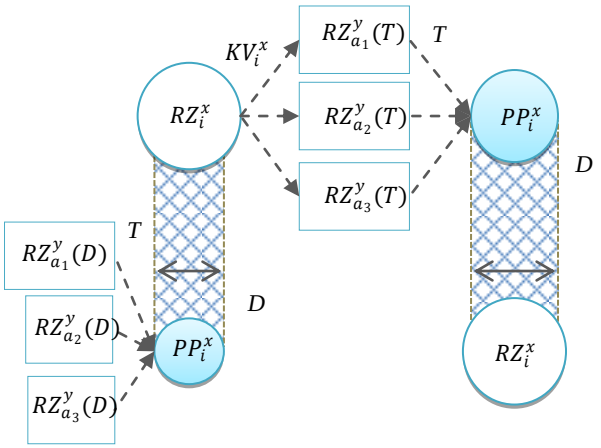


Figure 3: Scheme of application of the influence coefficient, increasing the forecast indicator

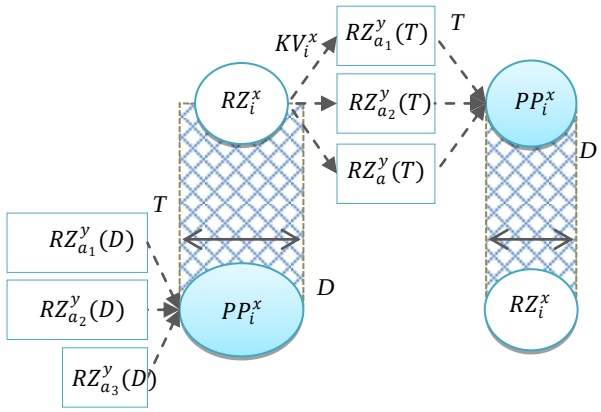


Figure 4: Scheme of application of the influence coefficient, reducing the forecast indicator

As a result, the above-said formula (2) expands in the following way:

$$PP_i^x = \begin{cases} KV_i^x \cdot KS_{x_i}^y \cdot \sum_{a=1}^{v} RZ_a^y, \ if\ a \to i \\ 0, \ otherwise \end{cases}, i = \overline{1,n}, v = \overline{1,m} \quad (4)$$

Systems study and analysis of the influence coefficient are required during each conducted monitoring. If the influence coefficient of a parameter is $KV_i^x < 1$, then it is reasonable to expand the circle of requirements for the criterion of parameter or to add a supplementary parameter to the direction of monitoring at the expense of the division of this parameter into 2 or 3 parts. Let us suppose, the maximum value of the parameter in 3 units (depending on the written requirements), at the process of forecasting the indicator of this parameter was estimated at 83,3 %, in the following forecast the real value of this parameter amounted to 80 % ($KV_i^x = 80{,}0/83{,}3$). In that case, till the next process of monitoring, with the aim of expanding the accuracy level of the forecast of this parameter, we must increase the value of criterion (for instance, mark the value as 4), reinforce the content of requirements (conditions) or divide given parameter into 2 parts (for instance, a parameter with 2 and 3 values).

Conversely, if the influence coefficient is $KV_i^x > 1$, then we will be required to reconsider the ratio between parameters and criteria. Maximum value 3 in the instance cited above is estimated as 70 % in the monitoring process, but if the forecast indicator amounted to 60 %, then the content of the conditions would be simplified. At the same time, the search of other indicators, influencing the forecasting indicators is administered.

Hence, above mentioned approaches provide the validity and completeness of applicable indicators, optimization of the coefficients of effect, the increase in the objectivity and value in the forecasting process, and also raise the influence the monitoring process has on the system.

IV. SUMMARY AND CONCLUSION

The above mentioned technological model determines and summarizes the factors, which lead to productivity, high results, and also points out the identification of faults and low rates. Step-by-step exercise of the functions, relating to the processes of given model, can be illustrated in a following way (Figure 5).

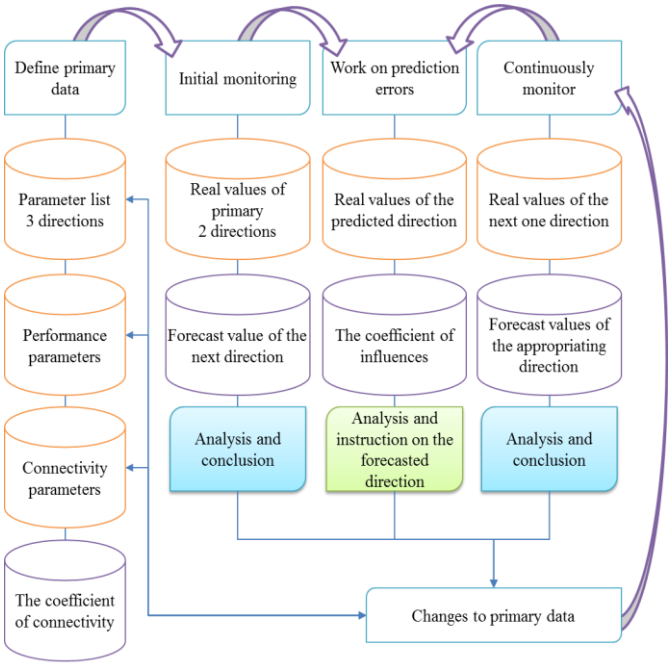


Figure 5: Scheme of monitoring and forecasting processes

The table illustrated above shows the possibility of automatization of the definitions “coefficient of association”, “forecasting indicators” and “influence coefficient” indicates the necessity of creating a corresponding digital interface for implementing the functions in the processes such as: “Determine the raw data”; “Primary monitoring”; “Work on erroneous forecasts”; “Continuous monitoring”; “Alteration of raw data”; the need of digital software platform, allowing to track the data movement; providing the precision and quality in executing the elements of “Analysis and conclusion”; “Analysis and instructions on forecasting directions”.

Basic functional value of the programs is consisted in the following:

- Formation of corresponding online or offline databases via either internet or local network;

- Increasing of the effectiveness of input and synthesis of data on the basis of autopatch and interactive elements;
- Addition (or removal) of parameters, alteration of the indicators of parameters;
- Coordination of interrelationship and influence of parameters;
- Achieving the stability of monitoring and forecasting throughout the directions;
- Division of work into several parts and completing them in a period that is suitable for the user.
- After the program launch one can receive important information, such as :
- Information about the directions, installed parameter indicators, previous real values and forecasting indicators;
- Information on the dynamics of the coefficients of association and influence;
- Information about the following monitoring and forecasting directions and parameters;
- The account of carried out work and others.

We can count two peculiarities of this model: 1) highlighting – reporting in full about any situation throughout each indicator, explanation of factors, which have influence on the parameters; 2) commencement, estimating of the future positive or negative consequences, or predicting of the oncoming dynamic changes.

On the basis of corresponding conclusions and analyses, a proposal is prepared on further reinforcement of the positive situation in a higher educational institution and elimination of negative situation on following conditions:

1) alternatives (several proposal options, creating choice);
2) advantage (justification of a proposal and proof on the basis that it is better than the previous one);
3) riskiness (relating to the cost of proposal, labor resources and instruments, and the timelines and so on).

Therefore, by means of optimization of functional obligations of the employees of the monitoring service we can objectively neutralize the defects of the education process in a higher educational institution and correct the consequential activities of the subjects.

REFERENCES

1. L. N. Khilchenko et al, Monitoring of the higher professional education's quality: issues and prospects. Modern Research of Social Problems. (2015) №9 (53), pp. 757-770.
2. R. Sh. Ahliddonov, The art of school management. Monograph. Tashkent: Fan, (2006) Page 303.
3. Sh. E Kurbonov, E. A. Seytkhalilov, Control the quality of education. Tashkent: Turon-Iqbol, (2006) Page 592.
4. A. D. Askarov, Enhancement distance learning professional development system of public education personnel. Abstract of the dissertation of doctor of philosophy (PhD) in pedagogical Sciences. (2017) Page 50.
5. M. V. Alyushin, L. V. Kolobashkina, Monitoring of the current status of students as a means of increasing the effectiveness of educational process. The Education and science journal. (2019) № 21(2), pp.176-197.
6. A. Oduaran, Influence of Students' Feedback on the Quality of Adult Higher Distance Education Service Delivery. Turkish Online Journal of Distance Education. (2017) № 18, pp. 160-176.
7. Yu Chen et al, Testing a Cognitive Control Model of Human Intelligence. Scientific Reports. (2019) № 9:2898.
8. O. Müller at al, Utilizing big data analytics for information systems research: challenges, promises and guidelines. European Journal of Information Systems. (2016) № 25, pp.289-302.
9. Shahbaz at al, Investigating the adoption of big data analytics in healthcare: the moderating role of resistance to change. Journal Big Data. (2019) № 6:6, pp. 289-302.
10. Zh. V. Smirnova, Teaching Package Development for Engineering Training Programs. IOP Conf. Series: Materials Science and Engineering 483 (2019) №01.
11. O. S. Andreeva at al, Comprehensive Diagnosis of Components of Pedagogical Students' Research Competency. The Education and science journal. (2019) № 21(1), pp. 37-58.
12. E. Y. Levina et al, Quality Control Optimization of University Students Training. Asian Social Science. (2015) № 2:11.
13. E. V. Petrova at al, Diagnostic Methodics of Personal Development of University Students in Studying the Humanities. Journal of Sustainable Development. (2015) № 3:8.
14. Sh. Rama, Professor's performance for effective teaching (Kosovo case). Procedia - Social and Behavioral Sciences. (2011) № 12, pp. 117-121.
15. M. H. Sagasser at al, How do postgraduate GP trainees regulate their learning and what helps and hinders them? A qualitative study. BMC Medical Education. (2012) № 12:67.
16. S. U. Zalutskaya at al, A Lecturer and New Quality of Russian Professional Education. Mediterranean Journal of Social Sciences. (2015) №3:6.
17. N. V. Seregin, The Basics of Monitoring the Process of Musical Pedagogy. Problems of musical science. (2018) № 3, pp. 144-148.
18. P. P. Gusev, Methodical readiness of teachers to create an integrated educational and methodological support of the educational process. Secondary professional education. (2013) № 3, pp. 22-25.
19. T. M. Litvinova at al, The internal system for quality assessment of education results at a medical university. Electronic Journal of General Medicine (2018) № 15(4):em70.
20. P. Kislyakov at al, Monitoring of Education Environment according to the Social-Psychological Safety Criterion. Asian Social Science Archives. (2014) №17:10, pp.285-291.
21. S. V. Khokhlova, Monitoring the quality of school education. The author's abstract dis.kand. ped. sciences. (2003). Page 27.
22. E. Yu. Gorkaeva, Features of teaching and methodological support in college. Young scientist. (2014) №18, pp. 538-539.
23. R. K. Johan at al, Upper Secondary School Teachers' Digital Competence: Analysed by Demographic, Personal and Professional Characteristics. Nordic Journal of Digital Literacy. (2016) № 3:11.

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