ARCHIEVES OF BUSINESS RESEARCH
SOCIETY FOR SCIENCE AND EDUCATION UNITED KINGDOM
Vol. 1 Isuue 1

To The Problem of Formation of Readiness of the Future Teachers to Innovative Activity

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ABSTRACT

On the condition of informatization of education and joining the Republic of Kazakhstan to the Bologna process, H.A.Yasawi International Kazakh-Turkish University points out as one of its main problem the usage of innovation in training of the specialists of the international level in the sphere of pedagogy, increasing the quality of their professional training and formation their readiness to innovative activity because the use of innovation emphasizes practical-oriented education, its professional, pragmatic, subject-professional aspect. Including some elements of well-known approaches in pedagogical sciences such as systematic, personal-oriented and synergetic and others the significance of innovation as one of necessary base of formation of readiness of the future specialists to innovative activity is stated out. Because it has professional, pragmatic, humanistic and practical features, which show its integration and systematic advantages in educational process. Working out the pedagogical bases of formation of the modern teacher both as professional and as the creative person possessing innovative ability becomes one of key problems. Researches of reserves of perfection of professional training of the teacher are displaced in a plan of formation and development of their innovative abilities. The results obtained by the use of innovation in educational process show improvements in formation of the readiness of the future teachers to innovative activity. The use of innovative technologies in teaching system shows an increase, which points to a significant improvement and higher achievement. The improvement is also represented in higher average grades of the experimental group and it shows the effectiveness of the use of innovative technologies in formation of readiness of the future teachers to innovative activity**.**

Keywords:innovation, innovative activity, readiness of the future teachers, educational process.

INTRODUCTION

Kazakhstan has accurately defined a reference point on occurrence in world educational space and carries out modernisation of educational system in a context of the international requirements. The Republic of Kazakhstan has entered a strip of successful realization of principles of Bologna process and its adaptation to modern realities. The Bologna declaration regulates construction of uniform educational space in Europe on the basis of introduction of multilevel system of higher education and credit-modular system of training and modernization of the state system of guarantees of quality management formation, working out of new formats of documents on formation and modernization of schemes of a financing of education.

Nowadays one of the actual problems of training of highly skilled specialists on the international level and increase the efficiency of educational process at credit-modular teaching system at A.Yasawi International Kazak - Turkish University is information of education and use of information-communicational technologies in formation of

readiness of the future teachers to innovative activity on the basis of competence approach.

Information of educational system is considered as strategically important paradigm of the Governmental program of educational development of the Republic of Kazakhstan for 2011-2020, confirmed by the President of Kazakhstan, at transition to electronic training the prime problem-maintenance of an education system by highly-skilled personnel [1].

Modernization of the modern higher professional education demands essential reconsideration of structure and the maintenance of educational process in high school. Formation of readiness of the future teachers to innovative activity would allow showing individual creative abilities completely, to realize a mental potential, to apply all complex knowledge, the skills got in the course of training in high school, to solve innovative problems and would become one of directions of professional training of the future specialists. Creation of optimum organizational-pedagogical conditions for self-realization of the future specialists is an actual problem of all steps of formation, but for the higher professional education this problem demands attention and importance [2].

The modern society expects from high schools graduators who are capable confidently to be guided in constantly changing world, able competently operate with the increasing information, communicable, sociable, and ready to creative interaction; independently distinguishing arising problems and owning in the ways of their rational elimination. New ways and approaches to train professional specialists are dictated by comprehension of a problem of perfection of the conditions promoting the fullest disclosing of the person, its self-realization and professional formation [3].

It is not enough to modern teacher to have deep knowledge in the field of the studied disciplines and to own a certain set of practical skills. Working out of professional problems demands creative approach to the charged business, the organization of the professional work directed on rational transformation of the validity. Thus, formation of readiness of the future teachers to innovative activity in the course of professional training of the future specialists is one of actual directions of modern educational process [4].

At the same time, complexity and many-sided nature of etiology innovation lead to occurrence of flock of scientific approaches of its studying in different areas of knowledge. The condition of the theory and higher school practice shows that, despite occurring cardinal reforms in higher educational system, an intensification of the researches of these or other aspects of pedagogical innovative activity, the problem of the organization of purposeful process as uniform ordered system of formation of readiness of the future teachers to innovative activity was preserved [5].

Now there is a certain contradiction between the social order of a society for formation of comprehensively developed, socially active person of the graduate of comprehensive school through all-round introduction in teaching and educational process of ideas pedagogical innovation, providing productivity of training, and actual level of readiness of the future teachers to work out professionally caused functions what is pedagogical innovation.

Working out of one of especially actual for high schools activity becomes theoretical-methodological and technological problems of formation of innovative abilities of the future teacher in the conditions of integration in the educational world [6].

The problem of innovation was actual problem throughout all history of development of a pedagogical science and school. Great teachers of the past such as Y.A.Komensky, I.G.Pestalotstsi, A.Disterveg, K.D.Ushinsky and many other leading scientists and psychologists of the world paid much attention to creative, research character of pedagogical work [7].

The questions of reformative activity of the teacher were researched by P.P.Blonsky, N.K.Krupskaya, A.V.Lunacharskiy, S.T.Shatskiy, A.S. Makarenko, V.A.Sukhomlinskiy, etc. In their works they noticed that the teacher-master should possess the culture of scientific search.

Pedagogical innovation was researched by researchers N.Anisimov, S.Bogdanov, L.D.Gireva, A.V.Homerik, M.M.Potashnik, V.Lorensov, A.J.Nain, S.D.Poljakov, E.E.Plotnitsky, T.I.Shamova, A.N.Malinin, G.M.Tjulju, D.V.Chernilevsky, O.K.Filatov, I.Chechel, N.R.Jusufbekova, V.I.Zagvjazinsky, E.P.Morozova, P.I.Pidkasistiy, N.I.Lapin, A.I.Prigozhin, B.V.Sazonov and etc.

Pedagogical technologies in innovative process are considered by T.S.Nazarova, G.K.Selevko, V.P.Bespalko and etc. To the formation maintenance of innovative process is devoted works of K.P.Miroshnichenko, P.I.Samoylenko and etc. G.I.Gerasimov, A.G.Kruglikov consider innovations from methodological positions. Innovative activity in professional education was investigated by N.A.Kolesnikov, V.A.Slastenin, L.S. Podymov and V.I.Eydelnant.

The relation of subjects of an innovation to innovational activity has received illumination in works of Angelovskiy, Yu.L.Neymera, K.Ushakova. Problems of management of innovative activity in education are considered in researches of N.V.Gorbunova, V.But, V.N.Kvash, N.D.Malakhov, V.I.Rybakov. In the Kazakhstan pedagogics the innovative approach is carried out by S.N.Laktionova, S.T.Taubaeva, M.M.Zhanpeisova, T.A.Linchevskiy, N.A.Ahmetova, R.R.Masyrova, S.D.Mukanova, K.M.Nagymzhanova, K.A.Sarbasova, K.Z.Buzaubakova, A.K.Mynbaeva, Z.M.Sadvakasova, K.Z.Azhibekov, P.K.Iskakova, A.S.Uzakhova, N.A.Esimkhanova, A.B.Aytbaeva and etc.

METHODOLOGY

The theoretical analysis of the philosophical, psychology-pedagogical literature on a theme (domestic and foreign scientists), studying and the analysis of scientifically-methodical and archival documents concerning school education, the higher pedagogical education, studying of the teaching-methodical documentation of high schools (the state obligatory standard of education, typical curricula and programs, textbooks, grants, course and theses, reports on pedagogical and an industrial practice, etc.) and comprehensive school (the decision of teachers' meetings, plans of teaching and educational works, labor contracts with scientific research institute, etc.) The system-structural analysis, modelling, a method of an expert estimation, pedagogical experiment (ascertaining and forming) at which carrying out were widely used questioning, observation, timing, conversations, interviewing, quantitative and qualitative analysis of

results of practical-experimental works. Besides, the retrospective analysis of pedagogical work of authors is used.

The basic methods of research are theoretical analysis and synthesis, comparison and concluding statistical data, modeling, research of the experience of professional activity, the observation. In scientific work for the decision of tasks and verification of assumptions the following methods of research were mainly used: logical methods and techniques (the analysis of psychological, pedagogical, legal and other literature on the problems of professional education, synthesis, abstraction, generalization, analogy, structural-functional method and probabilistic-statistical methods; methods of theoretical knowledge (theory, formalization, deduction, the ascent from the abstract to the concrete); methods of empirical research: (observation, interviews, questionnaires, and bibliographic method; the experiment under natural conditions, comparison, description, monitoring, measurement); the system approach to the pedagogical and logical analysis, generalization and analysis of pedagogical experience; modeling of pedagogical processes; pedagogical design, used for the development of regulatory and program-technological support. A methodology of experimental work was developed; indicators and criteria for evaluating the effectiveness of the identified conditions were refined; pedagogical experiment was conducted; the educational-methodical support of educational process of professional preparation of future teachers, aimed at formation of readiness of the future teachers to innovative activity was developed.

The theoretical and practical importance: the complex of the organizational-pedagogical, psychological-pedagogical, didactic-methodical conditions promoting efficiency of formation of readiness of the future teachers to innovative activity and improvement of quality of professional training of the future teachers in the process of teaching by means of information technologies is revealed and proved. The system of exercises and the tasks, intended for the organization of a practical training and ingredients of formation of readiness of the future teachers to innovative activity in the process of teaching is developed by means of telecommunication technologies.

Research Problem

The conducted analysis of research work has shown efficiency and necessity of the use of telecommunication technologies for formation of readiness of the future teachers to innovative activity in the teaching process, for the decision of educational problems, formation of the professional specialist with the critical and creative thinking, capable effectively to act in changing conditions of professional work.

Nowadays one of the actual problems of training of highly skilled specialists on the international level and increase the efficiency of educational process at credit-modular teaching system at H.A.Yasawi International Kazak - Turkish University is informatization of education and use of telecommunicational technologies in professional activity of the future specialists on the basis of innovative activity.

Innovation and informatization of educational system is considered as strategically important paradigm of the Governmental program of educational development of the Republic of Kazakhstan for 2011-2020, confirmed by the President of Kazakhstan, at transition to electronic training the prime problem-maintenance of an education system by highly-skilled personnel.

According to a new Kazakhstan educational paradigm education should be directed on interests of personal development adequate to modern tendencies of social development.

One of the basic advantages of the innovation is that learner is perceived not as passive object of educational influence, but as the active subject getting information. The teacher does not impose to students' personal understanding of a material, and stimulates their independent activity on mastering. Characteristic for new model of training, cooperation lies on the basis of educational activity.
The educational environment simulated by means of innovation and telecommunication technologies, allows changing of the situation. The teacher puts the purposes, forms the informational environment creating conditions for individual work. Presence of means for realization of the purposes and problems of educational process, knowledge of ways of the organization of teaching system and control devices are making components of the computer informational educational environment, which forms independent learner [8].

Educational system of the Republic of Kazakhstan is focused on occurrence in world educational space, therefore the quality of education is considered in the context of conformity of level of received educational services by the world standard and norms.

Nowadays the priority is achievement of such quality of training of specialists which gives them the chance to compete on the international laboratory. In the conditions of market relations and complicated requirements to the education, ways of the organization of educational process searches of new reserves of improvement of quality and efficiency of preparation of the future specialists are necessary. Changes in social sphere of a society, information of social processes made a paradigm of formation which was replaced on competence the approach in formation [9].

One of actual problems in system of the Kazakhstan educational process in the course of professional training of the future specialists is formation of readiness of the future teachers to innovative activity. The suggested system of teaching helps to recognize pedagogy as an interdisciplinary science which is a necessary prerequisite for observing problem from the different angles, and it also allows students to apply knowledge of pedagogy in everyday life [10].

The organization of educational process with application of innovation, an optimum combination of information technologies and traditional approaches demands the decision of some psychology-pedagogical, methodical and other problems and carrying out of corresponding researches.

RESULT AND DISCUSSION

In order to calculate the effectiveness of use of information technologies in formation of readiness of the future teachers to innovative activity in the teaching process, the results of students who were taking part in experimental group and results of students, taking part in control group were compared.

For the proof of degree of formation of readiness of the future teachers to innovative activity in the teaching process with the use of information technologies it is necessary to show that experimental and control samples have significant distinctions on the

chosen indicator – to ability independently to analyze the task, to correlate it with professional work practice. For processing of results of experiment Student's t-criterion was used to establish similarities and distinctions of two empirical distributions

The mathematical package "Statistica" was used. By means of Descriptive statistics mode Basics Statistics/Tables of this software were the hypothesis about conformity of samples to normal distribution which was checked up. On these values for each group the mean score and a standard deviation (table 1) have been calculated.

Table 1: Means on Each Group of the Average Grade and the Standard Deviation.

Numerical characteristics	1st sample (Control group)	2nd sample (Experimental group)
N (Quantity of students)	42	44
M (Average grade)	3,14	3,8
σ (A standard deviation)	0,61	0,32

For the given quantity are trained δf =44+42=83. The received empirical value of t-criterion equal t = 3,376 exceeds critical for $\rho = 0,01$ (t =2,639), but it appears less critical for $\rho = 0,001$ (t=3,416), hence, it is possible to draw a conclusion on statistically significant distinction of average arithmetic values in two samples and about advantages of the second (experimental) methodical system of teaching .

The total test spent with students of control and experimental group, is aimed on revealing of efficiency of formation of readiness of the future teachers to innovative activity in the teaching process. The concept of factor **К** relative total mastering of knowledge by students of one group is entered. The factor **К** relative total mastering of knowledge by students of one group is calculated under the formula

$$\text{K}\frac{1\text{x } N_5 + 0,9\,x\,N_4 + 0,6\,x\,N_3 + 0,3\,x\,N_2}{N}$$

Where **К** - mastering factor, N5, N4, N3, N2 – the quantity of the students, whose answers are estimated accordingly on «5» - 90-100 points, «4» - 70-90 points, «3» - 50-70 points, and N – total of students in group. The result was estimated on the average by the following parities: "excellent", at 0.9≤К≤1; "good", at 0.7≤К≤0.9; "satisfactory", at 0.5≤К≤0.7; "unsatisfactorily", at К<05;

Results of experiment were processed and tabulated for comparison.

Table 2: The Generalized Comparative Results of Examination of Students According to Two Tests

Groups	К	
	The control test	The total test
The control	0.74	0.62
The experimental	0.88	0.93

From the received results reflected in (table 2) and the histogram (figure 1), and also the obtained results, it is possible to draw a conclusion that experimental work confirmed effectiveness of the process of formation of of readiness of the future teachers to innovative activity. in the teaching process.

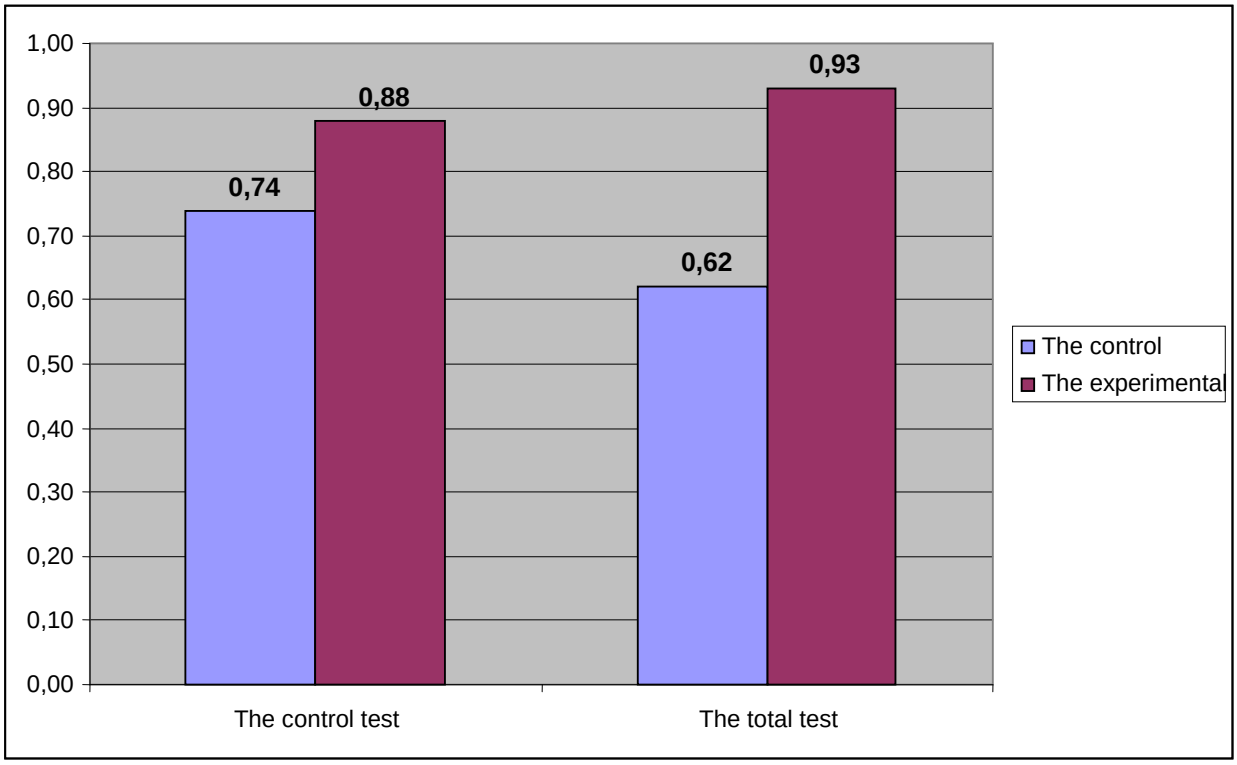

Figure 1: The Generalized Comparative Results of Examination of Students According to Two Tests

Students of experimental group have received high scores in total tests:

- improvements were observed at students who experienced difficulties in mastering of a material with the use of traditional approaches;
- quantity of students, who mastered the material on base of information technologies and used this knowledge on other disciplines raised and it influenced on the success of the group as a whole;
- students' results of experimental group were higher, than the results of control group students that proves the effectivness of the usage of information technologies in educational process;
- the usage of information technologies in educational process improved the progress of forming of readiness of the future teachers to innovative activity.

CONCLUSION

The carried out analysis of works of many researchers show that the use of information technologies in formation of readiness of the future teachers to innovative activity in the teaching process, training of the specialists with the critical and creative thinking, capable to function effectively in changing conditions of professional work, becomes the integral component of modern education. In modern educational system the tendency of displacement of accents from mastering of knowledge trained on ability to use the information is traced, to receive it by means of information technologies.

Therefore formation of readiness of the future teachers to innovative activity in the process and training of specialists should include system to use of the given technologies in the future professional work, especially in a context of information of a modern society.

In the conclusion it is necessary to notice that now in the world consecutive and steady movement to construction of an information society which urged to create the best conditions for the maximum self-realization of each person is observed. The bases for such process are intensive development of information technologies and creation of the developed information-educational environment.

Studying and the analysis of a current state of a problem of their use in an educational sphere, has shown that there are the numerous works considering possibilities, properties, functions, potential of information technology without an accurate substantiation on the basis of the fact sheet received as a result of practical activities, during experiments. The obvious lack of the researches representing theoretically well-founded methodical recommendations and pedagogical working out on their application is traced. The questions connected with development and influence of telecommunication technologies on efficiency of educational process is insufficiently worked. There are no the long and extensive researches showing degree of efficiency and expediency of support of various courses at integration of disciplines through the Internet by means of telecommunication technologies.

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