CREATIVE LEARNING IN ICT-PROFESSORS' TRAINING PROGRAM

КРЕАТИВНОЕ ОБУЧЕНИЕ В ПРОГРАММе ПОВЫШЕНИЯ КВАЛИФИКАЦИИ иКТ-ПРЕПОДАВАТЕЛЕЙ

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Abstract: *The main issues are considered in this article: urgency creative learning in the system for retraining and improving of pedagogical staffs' professional skills in the Republic of Uzbekistan, specificity of ICT-professor's activities, pedagogical conditions and content of ICT-professors' creative learning, pedagogical model and stages of organization classroom for ICT-professors' creative learning.*
KEYWORDS: *CREATIVE LEARNING, INFORMATION and COMMUNICATION TECHNOLOGies, higher education, system for retraining and improving of pedagogical staffs' professional skills, pedagogical model, curriculum, innovative TRAINING technologies.*

"Imagination is more important than knowledge"

A. Einstein

1. Introduction

In modern conditions of innovative education, creativity is considered as one of the main professional qualities of a teacher, since in a dynamically changing world the success of teacher's professional self-realization depends on his ability to find and make effective original decisions in a timely manner, be well orientated in the new context of education.

Effective forms, methods and means, on which possible to develop the creative potential of the teacher, in practically, the teacher of the Higher education (hereafter reoffered to as "a professor") is definition of the problem.

It should be noted that this problem is defined not only as socio-economic and socio-cultural changes in the society, but as well as the methodological problems. With a great interest of researchers to the concept of "the professor's creativity" there is still no clear mechanism for his development.

Each person has creative abilities and this idea is important for pedagogy.

In our opinion, any teacher is creative, moreover, the professor, who works in the field of information and communication technologies (hereafter reoffered to as "ICT-professor") is more creative, due to the innovative nature of information and communication technologies (hereafter reoffered to as "ICT") itself.

The purpose of the article is to examine the content and methods of developing the creativity of ICT-professors in the context of the system for retraining and improving of pedagogical staffs' professional skills in the Republic of Uzbekistan.

2. Preconditions and means for resolving the problem

2.1. Legal basis for the system of professional development of academic staffs in the Republic of Uzbekistan

The Law "On Education" and "On National Training Program", adopted in 1997, became an important factor in creating a national model for the training of personnel in the Republic of Uzbekistan.

In these basic documents, the system for retraining and improving of pedagogical staffs' professional skills is an independent type in the system of lifelong education, it that demonstrates the importance of this field in Uzbekistan.

The advanced training and retraining of pedagogical staff of the Higher educational institutions is carried out by *the Head Scientific and Methodological Center for professional development for academic and executive staff in Higher education*, as well as 16 branch centers for various fields of training programs in Tashkent and regional centers in the regions of our country.

The decree of the First President of the Republic of Uzbekistan No.91 from June 2, 2005 "*On improvement of the system of training in the field of ICT*" [1], *Tashkent University of Information Technologies* has been determined as a responsible university for a preparation of ICTs' specialists. Five branches of the university in the cities Nukus, Karshi, Samarkand, Urgench and Fergana provide training for ICTs' specialists in the regions of the country. In Mart 2017, Tashkent University of Information Technologies was named after Muhammad al-Khorazmi [2].

The decree of the First President of the Republic of Uzbekistan No.4732 from June 12, 2015 "*On measures to further improve the system of retraining and improving of pedagogical staff's professional skills of the Higher education*" [3] sets out the goals and tasks, as well as the structure of this system.

The main task of these branch centers for the system for retraining and improving of pedagogical staffs' professional skills is to disclosure of the creative potential of each academic staff, based on innovative and modern teaching technologies.

Achieving this goal is possible only with the use of adequate, purposeful, content and teaching technologies that involve each person in an active creative information and communication process, allow creating conditions for the awareness and effective application of acquired knowledge.

It is important to understand that techniques and skills of creative activity do not fit the traditional model of teaching and learning.

2.2. ICT-professors' training program

Changing the goal of learning primarily leads to change a content and a curriculum of the system for retraining and improving of pedagogical staffs' professional skills.

The new curriculum was developed for the system for retraining and improving of ICT-professors' professional skills, which includ the following training modules:

1) The legal and regulatory framework for Higher education,
2) Innovative training technologies and creativity,
3) ICT in education,
4) Practical English language,
5) Fundamentals of system analysis and decision making,
6) ICT-subjects,
7) Practice,
8) Attestation.

The percentage of these training modules in the curriculum is shown in the diagram (Fig. 1).

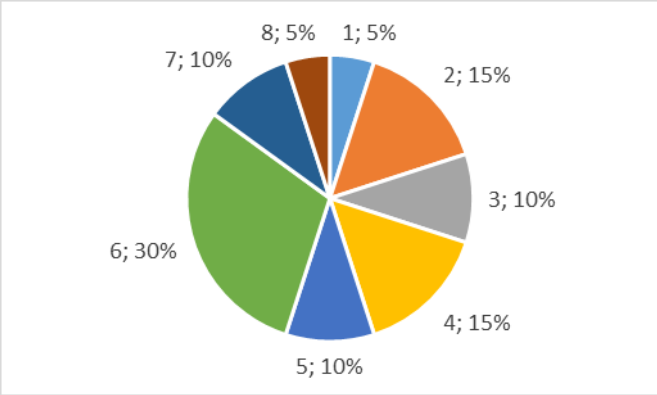

Fig. 1. *The curriculum of ICT-professors' training program*

Creativity has become one of two interrelated components in the program of the system for retraining and improving of ICT-professors' professional skills:

1) an independent training module;

2) a creative learning: "A form of education that develops people's potential for original ideas and actions" [4].

3. Problem-solving

3.1. A creativity as a training module

As an independent educational module, a creativity is presented the theoretical and practical point of view in the program of the system for retraining and improving of ICT-professors' professional skills.

The core of the module "Innovative training technologies and creativity" is consists of a familiarization and practical application with the basic approaches for development of creativity, as a necessary condition for the emergence of a creative personality, ability to go beyond the available knowledge, views, opinions and create a new one.

The module assumes the development of the creative potential of ICT-professors by reducing the share of reproductive activity and increasing the share of productive and creative activity.

In the classroom, ICT-professors solve situational tasks on methodological problems on the basis of methods of creativity development [5]:

- "10 discoveries",
- "Disney's Creative Strategy",
- "Plus. Minus. Interesting",
- "Novelty. Attractiveness. Exercise",
- "Simply. Complicated. Unrealistic", etc.

Additionally practical skills help to disclose the specific of the professional activity of ICT-professors, spastically, to use modern ICTs not only as an object of study, but also by means of innovative forms, methods and tools teaching and learning.

ICT-professors pioneer in introducing in innovative technologies into the educational process – an electronic learning systems, distance learning technologies, interactive electronic boards, 2.0/3.0 web-technologies, SMART-rooms, etc.

On the other hand, modern ICTs make possible to reveal the creative potential of the person [6].

3.2. The model of ICT-professors' creative leaning

The creative teaching is the creative education-research activity where both professors and listeners create the atmosphere where new innovative products are born.

Pedagogical conditions was developed for the effective development of ICT-professors' creativity:

1. Use a motivation of ICT-professors for scientific and innovational pedagogical activity.

2. Orient on a specific product in forms of a new pedagogical ideas, sites, blogs etc.

3. Competent-oriented work with the real pedagogical projects.

4. Use interactive forms, methods and tools for developing ICT-professors' creativity.

5. Use pedagogical innovations and results.

Since we are dealing with practicing ICT-professors, we need to make maximum use of their experience and innovative knowledge in the field of information and educational technologies, for we created the model of ICT-professors' creative leaning for the system for retraining and improving of pedagogical staffs' professional skills (Fig. 2).

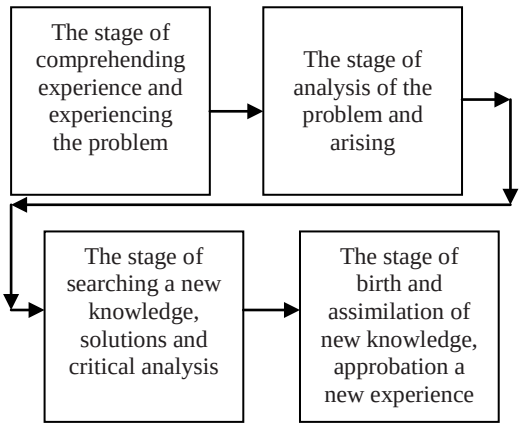

Fig. 2. The m*odel of ICT-professors' creative leaning*

In such creative teaching environment the main place is occupied by a group of interacting ICT-professors who, while discussing issues of interest and participating in discussions, stimulate and activate each other in statements and actions.

In order to implement creative ideas, ICT-professors, working in the group, carry out pedagogical projects, presenting their methodical products in the form of presentations (PowerPoint, Ispring, etc.), mental maps in MindMap, videos, blogs, educational and methodological software products, etc.

4. Results and discussion

The experiment was conducted at the branch Center for retraining and improving of ICT-professors' professional skills of Tashkent University of Information Technologies in November 2016, and also in January 2017.

In total, 103 participants of the system for retraining and improving of ICT-professors' professional skills (Table 1) in the areas:

- "Informatics and Information Technology" (IIT),
- "Computer Engineering" (CE),
- "Software Engineering" (PE).

Table 1. *General data*

№	Category	IIT	KE	PE	TOTAL
1	Without a scientific degree	48	14	22	**84**
2	Candidate of Science	8	3	5	**16**
3	Doctor of Science	2	1	0	**3**
4	Total**:**	**58**	**18**	**27**	**103**
5	Of them: -men; - women.	**40** **18**	**13** **5**	**24** **3**	**77** **26**

At the beginning of the experiment, a survey was conducted to determine the basic concepts of creativity development technologies.

The main questions and answers are reflected in the diagram (Fig. 3).

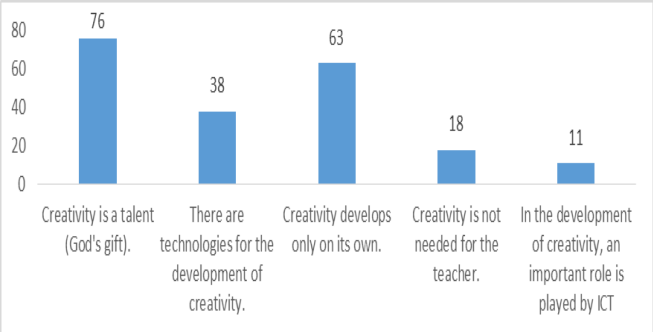

Fig.3. *The scheme of the analysis of the phenomenon of the ICT-professors' creativity*

The data of the questionnaire do not require comments and, in our opinion, reflect the insufficient awareness of the problem in question.

At the beginning of the study module "Innovative training technologies and creativity", testing was conducted to reveal the level of creativity according to the method of E.Torrance [7].

The analysis revealed that (Tabl. 2):

1.The factor of the flexibility is 56%;

2. The factor of the fluency is 31%;

3. The factor of the accuracy is 24%;

4. The factor of the originality is 23%.

Table 2. *Data of Torrance's testing*

№	Category	IIT	KE	PE
1	The factor of the flexibility (%) Of them: -men; - women.	55 54 56	51 49 53	62 61 63
2	The factor of the fluency (%) Of them: -men; - women.	31 29 35	29 26 32	34 33 35
3	The factor of the accuracy (%) Of them: -men; - women.	22 23 21	24 24 24	27 28 26
4	The factor of the originality (%) Of them: -men; - women.	25 27 22	21 22 20	22 25 19

The data of the testing are consistent with the fact that ICT-professors are creative by their nature and by the rapid development of modern ICTs.

It was also noted that female ICT-professors (and about 25% among ICT-professors) have a higher level of fluency and flexibility; however, they possess relatively lower originality; whereas the ICT-professors of the male gender have opposite characteristics.

This is consistent with the fact that women are more plodding and solve problems by existing methods, and men are trying to use non-traditional methods in order to do quickly.

After going through the training courses, ICT-professors noted that the followings were new for them:

- Creative abilities are widely used in pedagogical practice;
- Creativity manifests itself not only in individual activities, but also in collective activity;
- Creativity is developed through practice: participating in the processes of creative production thought: create programs for computer, computer diagrams and figures, sites, and so on;
- New technologies provide new opportunities for creative thinking, as well as new forms of access to ideas, information and people;
- Creative is not the subject of a curriculum; it is the general functions of education.

5. Conclusion

In conclusion, this article reveals the model of ICT-professors' creative leaning in the system for retraining and improving of pedagogical staffs' professional skills and its specificity.

The creative leaning is a main condition for the maximum development of ICT-professor's professional abilities that will enable to see, find, effectively solve and correctly evaluate solutions to creative problems in his activities. The model of ICT-professors' creative leaning consist of the four interrelated stages: comprehending experience and experiencing the problem, analysis of the problem, searching a new knowledge, solutions and critical analysis, birth and assimilation of new knowledge, approbation a new experience. This model corresponds with models of creative leaning by A.Osbrn [8] and K. Rossman [9].

The data of the experiment show that ICT-professor is a creative person, whose professional activity relat to ICT's innovation and ICT-professors' creativity able to be developed.

6. Literature

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