

FORMATION OF PRACTICAL CLASSES ON INFORMATION TECHNOLOGIES IN HIGHER EDUCATIONAL INSTITUTIONS

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Abstract

Nowadays, information technologies provides a clear and easy-to-perform practical task that helps students to form existing knowledge and skills, to use interesting schemes, diagrams, various charts and tables to help them understand it in practical assignments. special attention, etc. are often used. The article provided ample opportunities for students to master many basic concepts relatively easily, conveniently, and robustly. An important factor in this regard is the creation of methodological guidelines, methodological guidelines for the organization of practical training in higher education and their application in the educational process.

Keywords: Higher education, information and communication competence, information culture, professional competencies, key factors of information and communication competence, teaching technologies, the effectiveness of the use of modern teaching technologies for the formation of information and communication competence of teachers.

Introduction

Particular attention is paid to improving the content of teaching the subject "Information technologies" in higher education institutions of the country, in particular, the scientific and methodological problems of teaching the subject "Information technologies" in higher education, the introduction of information technologies in education. At the same time, in the context of practical informatization of education, there is a need to schedule the process of teaching the subject "Information technologies":

The concept of "information and communication competence of a teacher" was considered in the works of V. F. Burmakina, I. N. Falina, O. N. Shilova, O. V. Ursova, A. A. Elizarov, M. S. Tsvetkova, L. N. Gorbunova, A. M. Semibratov, F.M. Z.

Speaking about the possibilities of information and communication technologies for the educational process, many scientists cite the following aspects (L. L. Bosova, V. A. Krasilnikov, E. I. Mashbitz, I. V. Robert, A. A. Abdukadyrova, F.M. Zakirova, N. Tayloкова, etc.):

The following rules are required to organize the quality of practical training and increase its effectiveness:

- provide the student with an understandable and easy-to-complete practical assignment that will help them develop existing knowledge and skills;
- introduce interesting diagrams, charts, various charts and tables to help students understand new knowledge related to practical training;



- give practical exercises and control questions in order to use the acquired knowledge and skills,
- development of guidelines for use in practical training of teachers and professors.

Tasks for practical training are the main tool to help students to actively and consciously master the knowledge and skills set out in the state educational standard and curriculum, to increase the effectiveness of the educational process.

The problems of using information technologies in the education system are reflected in the scientific and methodological works of G.A. Kruchinina, Yu.K. Babansky, S.A. Zhdanov, V.P. Bepalko, V.S. G. Kineleva, O. A. Kozlova, A. A. Kuznetsova, M. P. Lapchik, E. I. Mashbitsa, V. M. Monakhova, E. S. Polat, I. V. Robert, N. F Talyzina, A. Yu. Uvarov, A. A. Abdukadyrov, F. M. Zakirova, N. Tayloкова and others.

Practical lessons should interrelate the basics of science with life, everyday life, help and develop students in understanding the main problems of modern times, nature and society. It should also help students to continuously improve their knowledge and open up opportunities to continue their independent learning.

In addition to imparting knowledge in a particular area, hands-on activities should serve to shape students' understanding of the natural and social sciences in terms of their understanding of the world, nature, and society. It is expedient for the authors to use the rich experience of our country and abroad in the development of assignments for practical training in "Information technologies" [2,5,7].

Materials and Methods

It is not necessary to strictly follow this sequence given in the formulation of assignments for practical training. However, most hands-on developers use this system. Let's talk about them. The creation of this system consists of defining the principles and mechanisms of their preparation.

1. Startup Process

Before creating a workshop, the creator will need to find answers to the following questions:

- what practical training should be written and for what specialties it is intended;
- get acquainted with the approved curriculum and determine the amount of hours allocated;
- who uses the practical training and its specific objectives;
- taking into account the age and social status of students;
- get acquainted with practical training in science;
- to get acquainted with the practical lessons created in other disciplines, to determine the requirements and criteria.

2. Goal Setting

After clarifying the task, the following questions should be answered:

- What specialties use practical training?
- What knowledge and skills will the student gain after using the practical training and what should they be able to do? (Expected results to be achieved by the student - identification of knowledge, skills and abilities);



- What does the practical training include? (Clarify the idea and main theme along with a clear concept, term, definition, rules).

3. Content Creation - Planning

It is usually divided into two: planning topics and topic content.

- a) topic planning - determining the general structure of the practical training and, based on it, compiling a list of departments and their parts;
- b) topic content planning - compiling a list of topic sections and fully covering their main content.

4. Formation of the Base Material

The text and materials prepared for the practical training are edited two or three times:

Initial Option (A1) - The initial text and variant scheme in creating the internal content of the topics. Its content and structure will be shown to other experts and their opinions will be studied.

The second option (A2) is an edited version of the first option. Typically, this option is tested over a period of time.

The final option (A3) is a ready-made final view of the practical training.

5. Edit

The final option is usually edited in the following two ways.

Content editing. The content of the text and the system of practical training will be changed by an expert-reviewer or an expert with in-depth knowledge of the field.

Technical editing. Technical improvement of practical training, beautiful form - interface, ie letter shape, size, content sequence, interpretation of images, clarity of diagrams and tables, multimedia - sound harmony and other necessary aspects will be edited.

The creators of practical training should try to reduce the need for technical editing as much as possible, so the technical editing process will be difficult.

6. Commissioning

At this stage, the practical training will be in the hands of the user.

The advantage of using practical training in the education system is that the student is provided with the necessary information at a convenient time. Mastering the learning materials is supervised by the teacher.

The group of authors (science experts) create methodological guidelines for better practical training than the author working individually. If it is decided to work as a group in the creation of practical training, it is useful to take into account the following:

- meet frequently to exchange ideas;
- joint decision-making;
- logically correct distribution of tasks at the level of opportunities;
- setting deadlines and strict adherence to them;
- Defining the form and content of topics and sections to maintain a uniform style, and so on.



In the process of working with methodical instructions or manuals for practical training, the authors' practical training should be based on the subject program included in the standard curriculum of secondary special, vocational education, higher education institutions. Assignments should cover the latest achievements of the science, the use of developments for new practical training in this field, created by foreign authors [1,3,4].

Assignments for practical training are based on the following criteria:

1. To compose the task in an understandable, fluent and interesting way, taking into account the age and physiological characteristics of students.
2. Appropriate use of illustrations and drawings to facilitate the process of completing tasks in an understandable and logically consistent manner.
3. Clearly apply the ideas related to the content of the practical assignment.
4. A brief description of the knowledge relevant to the assignment and a deep connection with the source.
5. Taking into account the originality and uniqueness of the assignment, the subject and the student's knowledge needs.
6. Write the practical assignment in a form that fully corresponds to the subject program and covers it completely.
7. Ensuring the accuracy and safety of the content of the assignment.
8. Make sure that the task size does not expand.
9. Student - to enable students to work independently on a given task and apply it in practice.

Tasks for practical training are the main tool that helps students to actively and consciously master the knowledge, skills and abilities set out in the state standard and the curriculum, to increase the effectiveness of the educational process.

The following tasks are set for the organization of practical training:

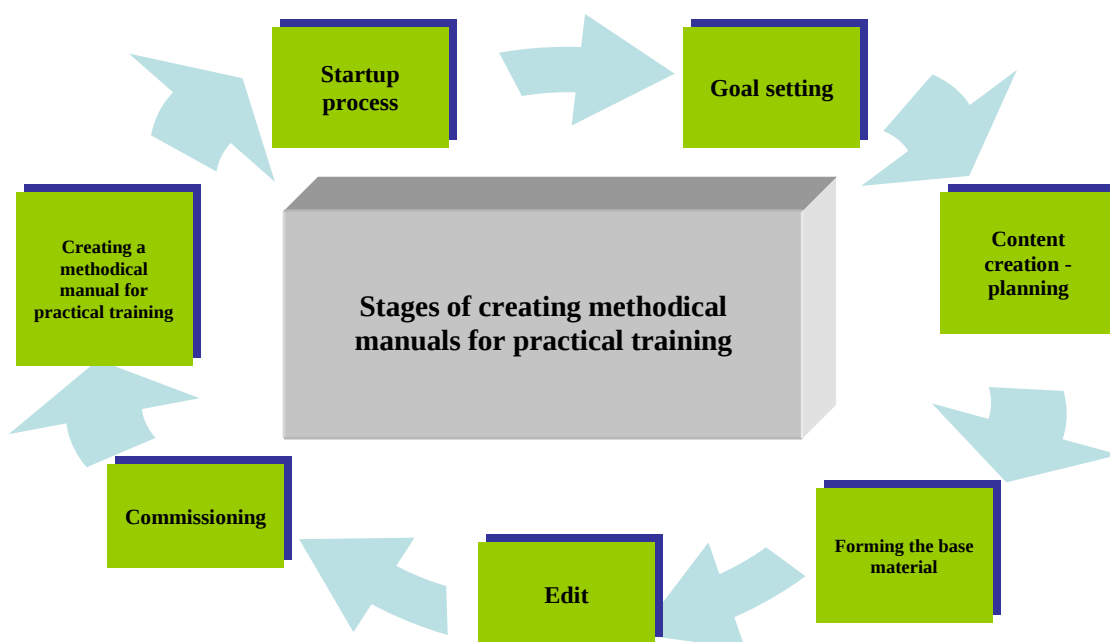
- development of students' independent work skills;
- linking the acquired knowledge with daily practice;
- strengthening the acquired knowledge;
- contain a sufficient amount of scientific information;
- Allow the student to self-assess or the teacher to assess and monitor student knowledge.

The requirements for the exercises are as follows:

- in the process of education, to revive in students the qualities of a perfect human being, the basics of morality, patriotism and national pride;
- the content of practical training should be scientifically based, reliable and accurate, events should be interconnected;
- assignments should be clear and interesting, structured in simple and fluent language;
- assignment materials are inextricably linked with everyday life;
- based on the history of science and national heritage;
- be relevant to the knowledge and life experience gained by students;
- assignment materials are logically consistent with scientific evidence, hypotheses, theories, definitions;
- the assignments reflect the ideas that will guide the younger generation to the profession;
- students understand the need to master the knowledge, problems and skills imparted through the assignment, understand their usefulness and importance for life;

- task structure is based on instructions and internal and external logic of events;
- the choice of assignments should have visual aids such as pictures, diagrams, drawings, which will help students to gather the right ideas and concepts, decorations should attract the student's attention and help the student to master the lesson material, use colors in the right place and in the right way.

The stages of creating methodical manuals for practical training can be schematically expressed as follows:



Stages of creating methodical manuals for practical training

The content of practical training should ensure that learners develop the skills of independent and free thinking, the gradual enrichment of knowledge, perfection, independent learning, the search for new knowledge.

Practical training must meet the following basic criteria:

- be interesting and engaging;
- allow the learner to develop their skills, knowledge, understanding of science and worldview;
- be based on the material required in the formal curriculum;
- be provided with sufficient materials for clear, understandable and smooth execution;
- provide examples, issues, real-life situations and practical insights;
- assignments should include pictures and diagrams to help link practice and theory;
- take into account the national and cultural traditions and values of the republic;
- designed for intermediate level students, taking into account the potential of both high and low level students.

In short, practical training should realize the interaction of the basics of science with life, everyday life, help students to understand and develop the main problems of modern times,

nature and society. It should also help students to continuously improve their knowledge and open up opportunities to continue their independent learning.

In addition to imparting knowledge in a specific area, practical training should serve to form in students an understanding of the world, nature and society. It is also advisable to use other rich experience gained in the country and abroad in the organization of practical training.

Results

During the experiment, the quality indicators of the performance of tasks by students, the gradualness of the tasks, the tasks that are difficult to perform were determined by the experimental teachers.

I. Questionnaire to determine the extent of information and computer technology use

1. Your faculty and group?

2. Your attitude to the subject of "Information technologies"?

3. Your attitude to organizing a lesson through a practical lesson?

4. What practical lessons did you like? Why? _____

5. Under what circumstances did you fully explore the new topic?

- when the teacher explains;

- when practicing independently;

- When organizing a lesson on the basis of a practical textbook;

6. Which lesson in the practical textbook "Information technologies" do you find interesting? Why?

7. Which of the science teachers do you like the way you teach?

8. Do you think that the knowledge you have acquired during the course from your teachers is sufficient?

9. How to acquire knowledge to become the most skilled, knowledgeable professional?

II. Diagnostic map of the degree of knowledge of the teacher on the topics

Surname, name of teacher	I					II							III		IV		V
	1	2	3	4	5	1	2	3	4	5	6	7	1	2	1	2	

Basic knowledge on the topics

I. Microsoft Power Point as a presentation creation tool

1. Familiarity with PowerPoint.

2. Creating a slide with a diagram and a table.

3. Inserting pictures and animations into a slide when demonstrating.

4. Creating control buttons.

5. Saving and preparing a presentation for demonstration.



II. Microsoft Word

1. Font, size.
2. Creating and editing a text document.
3. Typing and editing a text document.
4. Paragraph indents and spacing.
5. Creating and formatting tables.
6. Inserting a figure.
7. Page numbering. Printing the finished document.

III. Microsoft Publisher

1. Preparing a postcard.
2. Booklet preparation and printing.

IV. Internet

1. Internet search.
2. Email.

V. Development of outlines of lessons using information technologies.**III. Diagnostic card of the extent of teacher's information and communication technology use in professional activity**

Surname, name of teacher

Search and selection of additional information for the preparation of lessons using Internet resources	
Use of presentations, multimedia materials, etc. at the lessons with the children	
Creating a database of students and their parents of their class	
Development of lessons for children in different areas with the use of information technologies	
Use of the Internet for self-education	
Use of ready-made digital educational resources in the pedagogical process	
Own web-site (no; yes (give address))	
Experience in the use of ICT in the following areas	
Willingness to organize training for school teachers (specify topic)	

The results of experimental research, interviews with teachers and students and questionnaires in higher education institutions, tested in practice, led to the following conclusions:

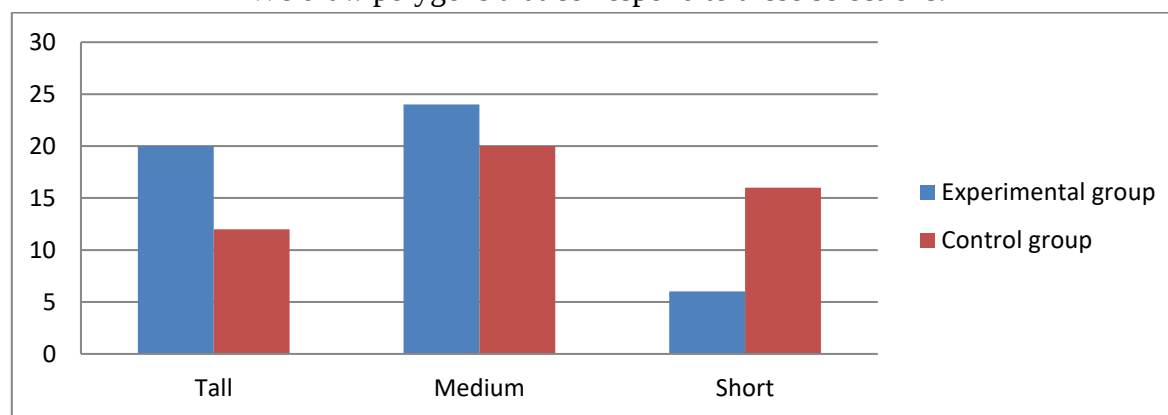
- topics are easier to master;
- basic concepts in the topics are easily remembered;
- Problematic situations and issues are easily resolved.

In short, Practical training offers a wide range of opportunities for use in both traditional and distance learning.

Samarkand State University 60310900 - Psychology, 60920100 - Social Work, 60311000 - Sociology.

№	Direction of education name	Groups	Number of students	Answers		
				Tall	Medium	Short
1.	60310900– Psychology	Experimental group	60	22	28	10
2.		Control group	58	14	24	20
3.	60920100 - Social Work	Experimental group	50	20	25	5
4.		Control group	48	12	21	15
5.	60920100 - Social	Experimental group	40	18	19	3
6.		Control group	38	10	15	13
7.	Total average	Experimental group	50	20	24	6
8.		Control group	48	12	20	16

We draw polygons that correspond to these selections:



In higher education, students study the subject of "Information technologies" at the level of direct communication with a computer, the ability to create programs to solve various practical problems in their field and the use of practical packages.

Discussion The analysis of diagnostic data made it possible to penetrate deeper into the essence of the studied pedagogical phenomenon and the processes associated with it, which makes it possible to develop and substantiate pedagogical conclusions, and also made forecasts for the further development of this quality. Namely, it allows us to state the effectiveness of organizational actions to form the information competence of a teacher in the context of a regional system of additional professional education [9].

Statistical data processing, carried out during the ascertaining and forming stages of the experiment, showed that there is a reliable relationship between the pedagogical conditions for the formation of the teacher's information competence created in the educational process and the positive growth of indicators of the development of this complex teacher education. So, in the experimental groups, there are significant increases in indicators, both average values and values for components. Comparative analysis showed that the organization of pedagogical activities has a positive effect on the formation of this quality of a teacher[10,11].

At the end of the experiment, the teachers were asked to try their hand at themselves and held a master class on mastering these programs.

Conclusion

Features of teaching the subject "Information technologies" in higher education institutions in accordance with the directions of education were identified and improved. From a pedagogical point of view, the teaching of "Information technologies" in higher education is aimed at informing students about the wide possibilities of computers, teaching them how to communicate with computers, teaching them how to use software and applications in their field and solve various specialties.

Practical training Theoretical study and analysis of social, psychological, pedagogical, methodological literature on the creation of information and educational resources revealed the need to study the pedagogical requirements, criteria, structure, forms and types of their creation as a whole system. In this regard, the pedagogical requirements for the creation of multimedia electronic manuals and resources, the criteria need to be reconsidered and scientifically improved in terms of ongoing reforms in the education system.

From a pedagogical point of view, the focus of higher education institutions on "Information technologies" is to inform students about the wide range of computer capabilities, to teach them how to communicate with computers, to teach them how to use software and applications in their field and to solve various problems. In this regard, the theoretical and methodological basis for choosing the content of practical training on the subject "Information technologies" was revealed.

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