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THE DEVELOPMENT OF SCIENTIFIC AND CREATIVE ACTIVITY OF FUTURE TEACHERS OF VISUAL ART IN THE PROCESS OF RESEARCH WORK

Abstract

We consider the system of preparing future art teachers for scientific and research activity providing the students with the knowledge and skills of individual scientific work in the field of artistic creation as well as reveal the possibilities, which the university possesses, to form an active creative personality by tested and effective scientific and research curriculum and extra curriculum students' work.

Key words: creative personality of a teacher; individual research work of a student; methods and means of scientific research in an institute, students' scientific research work.

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РАЗВИТИЕ НАУЧНО-ТВОРЧЕСКОЙ АКТИВНОСТИ БУДУЩИХ УЧИТЕЛЕЙ ИЗОБРАЗИТЕЛЬНОГО ИСКУССТВА В ПРОЦЕССЕ ЗАНЯТИЯ НАУЧНО-ИССЛЕДОВАТЕЛЬСКОЙ РАБОТОЙ

Аннотация

Рассматривается система подготовки будущих учителей художественно-педагогических специальностей к научно-исследовательской деятельности, вооружение студентов знаниями и навыками самостоятельной научной работы в области художественного творчества, а так же раскрываются возможности, имеющиеся в вузе для формирования активной и творческой личности, формой для которой остается испытанная и эффективная научно-исследовательская учебная и внеучебная работа студентов.

Ключевые слова: творческая личность учителя; самостоятельная исследовательская деятельность студента; методика и средства научного исследования в вузе; НИР студента.

Changes taking place in modern society and in the education system require constant selfeducation from the future graduate of pedagogical high school, as well as the ability to apply the latest achievements of the social, scientific, technological and cultural processon practice.

Successful training of students in pedagogical universities is characterized not only by the appropriate level of knowledge in a particular culture area, but also by a number of qualities which should be learnt by the future teacher - researcher: the ability to analyze the practice and search for new approaches of its improvement. The research work of students becomes particularly important in a Pedagogical University, because science defines the specific of the university type of education. It is the integration of science and education process that allows the direct transmission of science into practice, preserve and develop science schools, update the process of research ideas generation constantly, to form creative abilities of the individuals.



Among the opportunities available at the university for forming an active and creative personality, proven and effective way is the research work of the students, conducted both during curriculum and in extra curriculum hours.

The universities has been given a task – to teach students beginning with the first courses to think and act by the categories of science, to look at the area of their expertise and professional activity through the eyes of a researcher.

The problem of forming a research focus in the process of future teachers training is considered as one of the necessary conditions in training of teachers who work creatively, who is capable to solve on their own complex theoretical and practical problems of education and children upbringing.

The main purpose of research work is arming students with the knowledge and skills of independent research activities. Its main objectives are: an in-depth and creative understanding of educational program; student training of learning strategies and means of self-scientific research, skills of working in a scientific team, contribution to the successful solution of urgent scientific and educational tasks.

During his student years the future teacher form generalized techniques individual style of mental activity, the ability to build reasoning by deduction, induction, analogy; to determine the sequence of actions performed in an activity; to build and to test the hypothesis; develop a program of observations, experiment; establish connections relationships and between objects and phenomena: to handle and systematize the gained facts, interpret and make conclusions; to make independent scientific decisions; clearly, to express thoughts accurately and concisely. Education and scientific creativity of students converge not only in its mechanisms, but also in the ultimate goals and outcomes. By the scale of coverage of scientific information, the level of its specialization and the degree of students autonomy the higher education more « fits» the research process.

The participation of artistic-pedagogical student in research work contributes to the development of scientific intuition, depth of thought, form socio-psychological and functional readiness for professional creative work. Professional creative activity includes a number of elements the main ones are:

- the ability to analyze the situation existing at the moment in the system of education;
- the ability to solve professional tasks finding their relationship with other pedagogical objectives as well as the ability to simulate their decision based on modern psychological and pedagogical sciences;
- the ability to master not only the existing teaching methods but also to identify them in order to solve contemporary issues;
- the ability to replace existing educational technology timely with more flexible, modern and with self- developed ones;
- the ability to maximize the inclusion of students in the scientific and artistic works;
- the ability to extract and process the necessary information in the analytical -synthetic activity;
- the ability to plan their own learning and cognitive activity, and the ability of self-control.

The organization of scientific and creative activity of students in the course of their training has a special role in the development of the above stated skills. The elements of social culture can be grafted to the students while solving systems of problems with the gradual complication in the process of scientific research, the ability to analyze scientific literature can be formed and developed, as well as the ability to observe phenomena of the real educational process at school.

The research work acts as a mean of overcoming a certain contradiction between the mass character of the university training and the need of development independence and initiative in each student individual professional style and creative abilities.

Knowledge of organizational and methodological aspect of research allows a teacher to interpret the experience of his work properly, efficiently organize labor, identify defects and to find ways to improve practice.

The research work is constantly faces in practical activities related primarily to the creative search for new ways and means of better solving of pedagogical issues, study and summarize the



best practices, when a teacher is not just borrows something new but much being checked and verified by him and moreover he is constantly engaged in the analysis of his work. Creative work of a teachers will be more effective and will produce the results sooner in case a teacher starts to learn the skills of research in a University. The establishment of research abilities of a teacher is possible only in the process of constantly organized research work which should be common and serve the settlement of school problems.

The scientific search makes the work of a teacher more interesting, richer, develops the mental ability, creates curiosity, desire for constant improvement of their knowledge, it brings the greatest satisfaction. Consequently the pursuit for scientific analysis and generalization of the experience of teaching practice is normal for everyday work of a teacher.

An important issue in the admission of the students to the scientific research is to define the terms: when this work should begin. Experience shows that the most active time in research on topics that are more interesting is during 3-4 courses. But experience shows something else: if the students are attached for research work, it gives the opportunity to get some experience of discussion, the ability to listen and express their opinions and have their own point of view that is included in the list of specific conditions of research.

The research work in a university includes a number of specific objectives:

- 1. Helping the student in fulfilling coursework and final qualification (diploma) work which is a mandatory part of the program at the university.
- 2. Giving students the knowledge that would enable attending graduate school and continue engaging in research work.

Involving of students in research work should be carried out from the first year and till graduation.

Due to the fact that the systematic study of the course of theory and methods of teaching the fine arts starts at the 2 course, on the first course it is appropriate to focus on the psychological and pedagogical training of future teachers by including students in different types of research: implementation teaching and research assignments in pedagogy and psychology, writing different kinds of summaries, abstracts, reviews, theses, drawing up plans to deliver a presentation, quoting, abstracts preparation, participation in special courses and special seminars, working in student research groups at the chair and etc.

First-year students' mastery of research skills is directly related to the development of general educational skills. Therefore, to our mind, the first year at a university, should be aimed at improving of general educational skills and development of students' basic mental operations.

During the second year it is important through a system of special courses to acquaint the students with the methods of pedagogical research and with the techniques of its conducting. It is important hereto to attract the students to creative tasks, conducting mini researches.

Studying disciplines of psycho-pedagogical unit, of methods of teaching basic disci-plines, conducting seminars and workshops are aimed at developing students' research skills.

Provided there is focused and systematic research during the 1-2 years, the students acquire the necessary prerequisites for the successful implementation of coursework and final qualifying work as a methodology of scientific research knowledge and research skills.

Acquisition of knowledge of methodology and methods of scientific research is carried out in the framework of the a special course «The basis of research in pedagogy and methodology of fine arts teaching», establishment of research skills of students is complemented by the systematic use of the method of problem presentation during lectures, research and heuristic methods in the self-study, on seminars and in practice. Pedagogical practice creates the necessary prerequisites for mastering research skills in the field of psycho-pedagogical sciences.

Experience shows that the involving of students in real scientific activity is a factor of improving the quality of future specialists training only when there are certain external and internal (psychological) conditions. The external conditions include: forms of SRW in high school (clubs, problematic groups), a place of a student in this system; SRW quality plans that provides



research training of students; selection of scientific leaders, material resources, etc. An important reserve is course work and final qualifying work of students of pedagogical universities. The internal conditions are awareness and acceptance of the general purpose of the study by a particular student; disclosure and awareness of the overall study hypothesis; the level of formed research skills; existence of motives. The last effectively influence the development of students' creative abilities needed to perform independent tasks, leading to significant results (solving of educational problems, creating a communicative situations in collaborative search, creating of teaching visual aids).

As our experience of SRW of students shows, cognitive abilities as an integral component of their creative activity successfully develop only when supervisors stepwise involve students in performing tasks requiring comparison of scientific concepts of the phenomena being investigated, solving problem tasks, enhancing perceptual search and thinking but not only mnemonic action, of independent creative imagination, the ability to assess adequately as well as the result the process of their search activities.

Student participation in research helps to train a specialist who solves educational tasks like a researcher, who is resourceful and proactive, who is self- minded and loves his profession. Experience confirms that students participating in SRW develop a deep and constant interest to his profession, significantly expands his outlook, deepens his knowledge. In the future, this should be provided by writing a course and a graduate qualification (diploma) student's work.

Considering the formation and development of creative, erudite personality of a modern teacher of fine arts as one of the most important goals of high art- teacher education one should assess the effectiveness of students research, primarily from the position of priority of creative and professional potential development of student's personality, of breeding of the scientific creativity and self-learning activities needs, of future teachers professional interests, of originality of a completed research.

Currently, at the department of fine arts research work of students is held under the direct supervision of the leading teachers of the department. The leading teachers are not only giving students the appropriate setting on the optimization of the process of scientific creativity they teach them how to build the research process clearly and to present the material logically, to argue their point of view to formulate the basic provisions of the study, concise and at the same time on a fairly good level but they themselves conduct active research practice.

Of particular interest is determination of the degree of awareness by the students of the importance of research as an essential element of the process of training the contemporary artist teacher in high school. The obtained in questionnaire of the students (The educational interest of the students diagnostic)[5, p. 152] evidence suggest that in choosing between reproductive and creative activities under the same conditions 24% of students of the first course are prone to self-employment with elements of creativity. At the same time 68 % of the students of the department note insufficient development while learning of research and artistic-creative activity skills.

As the main motives of scientific and artistic activities respondents noted: the possibility of acquiring research skills (56%), getting to know about their favorite questions on the theory and methods of teaching PDI, visual arts (15%), the desire to combine research teaching activities with pictorial ones expressed only 5.2% of students. The main reason that prevents the active participation of students in research work, respondents noted congestion on overall humanitarian, socio-economic, natural sciences. In this regard, in the organization of scientific-research work of students the following conditions should exist:

- one must consider the presence of students needs in research work as a source of motivation for this type of activity. Knowledge in this case should serve as a means to meet the needs in the works;
- the importance of cognitive activity both personal and professional in the research should



be reveal to the students, while recognizing the fact that the effectiveness of skills development and of independent cognitive activity depends on the presence of the internal needs of the student in cognitive and artistic creative activities;

- coincidence in need-motivational sphere of a student personality engaged in research work such motivations as interest in the scientific and creative activities and educational interest in the visual arts, it is also needed to have an active attitude to the subject of study. It is also important to have inner urge of students to become highly qualified specialists, understanding the importance of being included in the process of continuous professional self-education;
- having the ability by the future teacher of fine art to search for necessary information sources, to extract and analyze scientific knowledge on their own, to compile the best practices connected with the developed problem, as well as being able to transfer the received information to their own artistic practice and teaching activities.

In unity with the above stated internal conditions of scientific and creative activity of a future teacher in the course of research work must be met and so-called environmental conditions, the main ones being:

- influence of the supervisor's personality on the student;
- presence of favorable psychological climate in the student group, the presence of an atmosphere of mutual help, common creative search, dedication by research work;
- SRW popularization and promotion of the best scientific works authors;
- the use of research results in the education process with the obligatory reference to their authors.

At the same time the scientific director receives an opportunity to stimulate, organize and coordinate the relationship between the subjects of creative learning involved in research work.

In the context of consolidation of creative activity supervisor also has get an opportunity for more optimal forming of artistic and creative activity and independence, forming the creative team working on a common problem with the position of the dialectical unity and interrelation of individual and collective creativity.

Thus only when the above stated conditions of active scientific and creative activity of students a continuous process of knowledge acquisition of scientific and professional skills is possible. The implementation of the research work related to the problem of modern education and training allows a future teacher to understand the current problems of the modern secondary school, contributes to the improvement of cognitive activity and independence, maximum involvement of students in the creative process of continuous professional and cultural self-improvement.

The participation of students in conducting of research work contributes to the for-mation of creative thinking, the ability to read scientific and educational literature, to conduct studies, to draw conclusions, make out the study results in the form of reports, theses; development of individual abilities, scientific intuition, proactive approach to gaining knowledge, their practical application for solving complex educational problems in school.

Participating in the research work, the students do not only acquire the necessary knowledge and skills, but also develop their creative abilities, breed the need for constant and continuous education in the creative solving of practical problems, in the use of their work of everything new that appears in Science and practices. The basis of the system of scientific - research work of students is formed by the following principles:

- systematic and ongoing training;
- -constructive interaction between teachers and students.

The systemic nature of students preparation suggests that all kinds and forms of cognitive activity building ideological system, special psychological, educational, cultural and aesthetic training (lectures, seminars, independent work, practical training, teaching practice, special courses and seminars, term papers and theses) must include in their content a system of cognitive and research tasks that will provide the preparing of almost all students for creative work in the school. Students must complete the system of research tasks with gradually increasing



complexity: writing an essay on a single topic, writing a review and synthesis essay on 2-3 articles on a specific topic, essay prepared using a variety of research methods, scientific paper, term paper, graduate qualification (diploma) work performed by all the students.

In lecture courses on the theory and history of art and methodology of its teaching in secondary schools should be included information about the results of scientific research in art of recent decades, artistic creation as well as in child psychology and theory of art education, creating an atmosphere of creative discussion of scientific issues these branches of science.

In all kinds of classes, students should be offered the job of problem- exploratory na-ture, requiring in-depth analysis of knowledge gained not only during lectures, seminars, practical and laboratory classes, but also while working with basic and additional scientific literature.

This type of job must be planed on the first year and gradually complicated in each individual case while learning special disciplines of pictorial art course. A students as a future teacher of fine art can be offered:

- to define the artistic image of a particular work of fine art, to characterize its emo-tional and artistic content;
- to analyse the expressive and descriptive means that the great master of a brush or chisel used to create a specific artistic image;
 - define the stylistic features of a creation;
- to conduct a comparative analysis of works of the same theme.

Skills of creative search, scientific thinking are realized in while mastering the course of theory and methods of teaching the fine arts, where problem- exploratory tasks are being given in line with the pedagogy for building skills related to the implementation of an integrated approach to education of students by means of art.

For example students can be offered:

- to determine the cognitive and educational value of a particular creation;
- to analyze the content of the art works from the «Fine Arts» curriculum in terms of implementation of the tasks of moral-aesthetic and patriotic education of students;

- to analyze programs in all subjects in order to identify the possibilities of using interdisciplinary connections in the educational process and etc.

At this skills formation stage of teaching and research work of students connection between the course of art disciplines and of psychology should be strengthened (the observation artistic development of students, identification of the main components of students artistic interest and studying the process of its formation through art in an individual case, a comparative analysis of the artistic development of two students of the same class taking into account their individual abilities and etc.

Scientific information as part of the content of the lectures, the creation of problematic situations in all types of lessons contributes to the formation of students' interest to research work during extra curriculum hours. This work is being concentrated in the groups of art history and methodological directions.

Problem-research groups on art history may include students of different courses and can plan work, designed for different levels of students' scientific training and include the following options of such activity:

Formation of abstract making skills. It can be historical and art, historical and theoretical overview essays or general essays. Paying attention to the ability of working with literature, making a list of references, allocating the main idea, making conclusions.

The formation of skills to perform monographs. It is meant here studying the work of one artist, exploring the history and analysis of his single work. To do this, the student must be able not only to do the work of the abstract nature, but also to analyze specific works independently, make the appropriate conclusions.

Developing of texts of lectures and interviews to promote the visual arts. Such kind of work requires not only skills to summarization of the relevant literature but also the ability to choose the illustrative material, to conduct analyze independently of a number of works.

The condition of effectiveness of the research work is it's up to date, their focus on the resolution of conflicts in teaching practice; scientific and



methodological support; great number of techniques of performing studies which are taking into account the peculiarities of the cognitive activity of the future teacher.

Pedagogical process in pedagogical high school must be focused on the development of students' creative pedagogical thinking, mastering of skills and abilities of conducting pedagogical research.

The main components of the research as a form of cognitive activity are: the isolation of the problem and the task setting, a preliminary analysis of the information available of the conditions and methods for solving problems of this class, the making of the initial hypotheses; theoretical analysis of hypotheses, planning and organization of the experiment; conducting of the experiment; analysis and synthesis of the results obtained; checking of initial hypotheses on the basis of the facts gained; the final wording of the new scientific explanations or science predictions; development of recommendations for practitioners.

The whole educational process of the university helps in formation of research abilities of future teachers, every training session that teaches and trains to perceive pedagogical paradoxes; to give definitions to pedagogical events; to understand the nature of analogies; to detect inconsistencies and discrepancies; to systemize pedagogical facts and events; to form the ability to express intuitions on how to resolve contradictions; studying experiences of other teachers.

However none of the traditional forms of education (lectures, seminars and work-shops) neither individually nor in the complex not fully develop research skills in the future teacher. This requires special work such as direct involvement of students in research work. The involving of students of pedagogical specialties into research work is carried out with the first course till graduating from high school. Before turning to creative research students of junior courses are included in the independent research work. The first step to the research work is the ability to make a plan of his speech during practical classes, the ability to ask a supplementary question on the topic.

On the second year it is rational to acquaint the students with the methods of the pedagogical research and with the technique of its realization by means of the system of special courses. Moreover it is important to involve the students to do the creative work, to make a small analysis.

Research work on the third year takes on more purposeful character. Study of peda-gogic, holding of seminars and practical training in such aspects as theory and methodology of art teaching are aimed at developing students' research skills. Students are offered individual research issues. At the fine art department students do their projects and diploma thesis while studying the courses of theory and methodology of art teaching. To do these works students choose the topic of their future research (which are offered in advance), give the substantiation of the topic independently, point out the object and the subject of research, put forward the working hypothesis, formulate the purpose and research tasks, make out the plan of the work, define the system of methods. After that students conduct research: they study the psycho educational literature, collect empirical material, refine it, make some conclusions and generalization, make the object models, analyze the pedagogical practice.

The students defend the results of the research work publicly in front of all the stu-dents of learning group. The results of the work done are carefully analyzed during the defense, also all the strengths and weaknesses of the work are found out. Such introduction of the students to the pedagogical research favors the:

- more deep generalization of the theoretical material;
- search the opportunities of realization this or that psycho educational regularity on practice;
- students' grasp of modern psycho educational concepts of teaching and up-bringing;
- interpretation of the modern problems of pedagogic and the best teaching practice;
- -introduction of the students to the pedagogical research;
- development of the students' interest to the pedagogical profession and their creative opportunities;
- forming of professional and pedagogical orientation in the process of study-ing of special courses.



On the 4th year in the process of pedagogical practice, students become proficient in the observation skills, collection and processing of the empirical data, abilities to make conclusions and generalization. The mastery of research skills directly related to the development of the general

educational skills. That's why, to our mind, it is important to pay attention to the improvement of the general educational skills and to development of students' basic intellectual operations on the 1st year of the university.

Deliberate and systematic work at the university on the formation of students' research skills is the key to their mastery of methodic and technique of pedagogical research and the use of acquired knowledge and skills in practical work.

One of the methods of improvement of teaching process is the students' research work during their pedagogical practice. For this purpose in the preparation to the pedagogical practice students are offered a number of topics for scientific research. Together with teachers students make the detailed research plan, specify some methods, familiarize yourself with the literature. To help to the educational organizations to solve urgent problems it is necessary to take into account ability, the level of preparation of each of the students and the means of the teaching practice bases as well.

The aim of the undertaken research is to define the opportunities to improve the process of forming students' abilities to conduct pedagogical research in terms of pedagogical practice. This is the difficult form of learning activity. First of all, it requires from the student to use his knowledge and skills in courses of special disciplines, methods of teaching fine arts, pedagogic and psychology, secondly, interference in the educational process in the experimental verification of the working hypotheses.

The object for research can be some points of the teacher's teaching activity, evaluation of pedagogical efficiency and introduction of new methodological developments, search of methodological findings, which improve the quality of the teaching process etc. Inclusion of the research task is only justified if it is feasible, if it is interested for the student and helps him to gain goals and objectives of pedagogical practice.

Students are offered the tasks: to learn from the experience of teachers at the school in the aspects of usage artistic and pedagogical tasks to achieve the goals of learning, training, upbringing and development of students. In a study using the pedagogical observations students revealed teaching methods used by teachers in work with students in class and after school, etc.

The study of mass teaching experience suggests that many pedagogical problems arise from the lack of ability to apply the methods of educational assessment in practice. The most common diagnosis is a pedagogical method of observation and, as shown by the ongoing research, one of the most accessible and applicable in practice teaching in school. Theoretical analysis of the functions of this method showed that:

Observation is the selective process, that is the researcher selects something for which he must observe the subject studied problem;

Observation is the perception, search and discovery of facts in accordance with the intended purpose;

Observation is fixing the existing state structure of the object being studied.

Scientifically based observation suggests fact-finding, description, compulsory the registration, analysis and interpretation. In pedagogical literature distinguish of descriptive study based on observation: a) observational studies, b) research aimed at identifying the links, b)exploratory research and development.

The most wide spread method in educational process is the direct observation which is composed of perception, recognition and measurement of phenomena, facts. In terms of teaching practice students may use active observation where a researcher is involved in the study process. If the object of research is not directly observable, in this case indirect observation is provided. For example, in the personality traits research the ability to observe indicators of the external demonstration of behavioral responses to the questions in the performance of the proposed tasks. Practice proves that visiting lessons and using their observations, students draw conclusions of the availability of educational material, the affordability of the



proposed tasks, effectiveness of the visibility, awareness of learning about the effectiveness of selected training methods, etc. This let you to comprehend deeply the mechanism for teaching methods, to understand their essence, to prepare students for future educational activities. During the passing of teaching practice should be organized observation of the behavior of the teacher for organizing students' activities in the classroom. For this purpose we offer students to analyze one of the lessons using this algorithm:

- a) observation of the beginning of the lesson;
- b) observation of checking pupils' knowledge;
- c) observation of studying of a new material in the classroom;
- g) monitoring the procedure of explaining homework;
- d) monitoring the end of the lesson, summarizing its results.

Our studies which were carried out confirm that mastery of the monitoring mechanism is an effective factor in helping students in their practical teaching activities, in improving skills in the scientific organization of activity.

Students inform on the scientific and practical conferences and the final scientific conferences University courses of the results of their research conducted in the period of teaching practice.

A number of papers are presented and discussed in the classroom and in academic groups. Pedagogical activity is inherently creative activity, research. This provision has been quite firmly established in psychological-pedagogical science (V. A.Kan-Kalik, V. I.Zagvyazinsky, N. V.Kuharev). Implementation of its competent teacher activity observed when he formed important professional and personal qualities, as well as individual groups of pedagogical skills:

- 1. Gnostic skills.
- 1) To give out the main text, the message of the teacher, use brief notes.
- 2) Allocate connection between these phenomena, to portray them in the diagrams, figures, tables, graphic symbols.
 - 3) Using the bibliographies, reference books.
- 4) Involving the study material from additional sources (professional literature, documents and observations).

- 5) Using the techniques of speed reading.
- 6) To formulate hypotheses, to propose ways of checking.
- 7) Perform analysis, synthesis, generalization, transfer of the central ideas in the study text.
 - 2. Engineering skills.
- 1) Formulate the purpose of their stay in the university and to realize the requirements of professional activity of its graduates.
- 2) Formulate goal of independent work on different cycles of academic disciplines.
- 3) Formulate, to what results and by what methods of self education students come to the end of the school year, the end of the semester, in the coming months.
 - 3. Constructive skills.
- 1) to outline briefly, concisely, in their own words and with elements of citation.
- 2) Produce a plan for the upcoming posts and seminar plan responses.
 - 3) To constitute the outline of his message.
- 4) To produce a report citing elements, annotating reviewing.
- 5) Justify the correctness of the chosen system of logic and presentation.
- 6) Self-created charts, tables, drawings, pictures, argue their construction and application logic in the message.
- 7) Draw conclusions and generalizations based on someone else's and their own presentation.

Communicative skills.

- 1) Formulate questions to the teacher or the text being studied.
- 2) Active, take verbal reports for their classmates and teachers; analyze and evaluate them.
- 3) Himself actively participate in the seminar; formulate verbal story your message.
- 4) Build a complete logical message with an introduction to him, the findings and conclusions
- 5) To express his/her attitude to facts and events, to formulate their value judgments and arguments.
 - 6) The report proved to use visual aids.
 - 5. Organizational skills.
- 1) Organize your time, your activities: the workplace, the means of action, follow and included in the rate independent work.



- 2) Organize your behavior: control actions, movements, facial expressions and emo-tions.
- 3) Organize their public activities, acquiring knowledge and skills necessary for future professional activities.
- 4) Organize your research activities, acquiring the qualities necessary for future professional careers.
- 5) Organize information to accumulate in high school so that after graduation it can be referenced.

To our mind, research skills take a special place among all groups of pedagogical skills. The study of the essence of research skills and their formation in the learning process of teacher training Universities showed that these problems are currently not resolved fully.

In the course of our research work to solve these problems a special course has been designed «Methods and methodology of research.» Special course consisted of a series of lectures and seminars.

In the course of these studies the following research skills were being formed that are essential for the future teachers for the implementation of the main stages of the research activities.

The theoretical investigation phase: the ability to formulate a research topic, the ability to identify the problem, the ability to hypothesize, the ability to identify the object and subject of the study, the ability to set the goals and to formulate a research problem.

The research conducting stage: the ability to determine the optimal number of re-search methods and techniques, the ability to determine the audience of the test, the ability to organize and conduct educational experiment.

Stage of analysis, discussion and presentation of research results: the ability to process mathematically the results, the ability to determine the statistical differences, the ability to analyze and discuss the results, the ability to draw conclusions, the ability to make a list of references, the ability to get a scientific paper.

Research activities (like any other human activity) are characterized by such features as objectivity, subjectivity, rationality, activity, focusing, awareness, etc. This activity can and should be considered as systemically determined

process, having personally driven, phase-controlled, creative and probabilistic character.

Psychological structure of research activity repeats (in common features) the structure of human activity in general. It includes such components as the needs and motivations, research (creative) tasks, means, mental and practical actions and operations, including actions and operations of monitoring and evaluation. In accordance with such a structure in the research activities of a student the following three components can be named:

- 1) motivational and approximate component;
- 2) central working (executive, operational) component;
 - 3) monitoring and evolutional component.

Full scientific activity is always a unity and interrelation of all of the above stated links and components.

Speaking of organic unity of links and components it should nevertheless be noted that the success of the research activities is determined primarily by its motivational component, which is based on the guidance system of rules, principles, methods, means and conditions of activities performed about its expected outcomes as well as of those typical of the difficulties and disadvantages that arise in the course of its implementation.

The main direction of the research activities formation is the development of a com-plex of increasingly difficult tasks undertaken by the students during the execution of projects and dissertations, during their teaching practice. In general, it is needed to rebuild the educational process in pedagogical high school so that problematic situations which require students conducting their own research and teaching researchcan arise.

In the psychological aspect the formation of research activity involves:

- 1. The development of sustained motivation aimed at knowledge of the essence of socio-educational processes and phenomena manifested in cognitive needs in a comprehensive interest in the phenomena of scientific and practical artistic pedagogy.
- 2. Mastering special mental and practical actions and operations (the students should



be able to mark the object and subject of study, their essence and the universal (legitimate) connections and relationships; hypothesize and expose its experimental verification, to plan forthcoming study process; be able to anticipate (predict) the final result, to choose the means and methods appropriate to the goals and objectives of the study, monitor and evaluate the process of their activity).

3. The development of the needs and ability to reflect and to act.

The formation of the research activities of a student means a gradual transformation into a «generic activities» (Davydov, etc.) which will determine his future teaching career, his pedagogical thinking and serve as the main source of professional development and personal growth of a future teacher.

Coming to the leveled system of higher education updates the in-depth study and development of students research training as training a bachelor intendeds including into the content of education of a research unit and training a Master must rely entirely on independent teaching and scientific research.

Considering the features of SRWS in terms of its activity potential we concluded that it is a set of basic forms of activities that define the development of the student's identity.

The first and main function of SRWS is that the research work of students is primarily teaching as is an activity aimed on the solving of educational problems of various complexity classes under the guidance of a teacher. Students acquire knowledge, skills and abilities, gain experience of creative activity as a result a transition to a systematic understanding of the world, the mastery of scientific truths comes. The analysis of experimental data has shown that the students who are actively involved in research tend to show good and excellent academic achievements, give reasoned, unconventional answers on exams and tests.

The second important aspect of the SRWS is the process of cognition, gnostic activities aimed at self-comprehension of scientific truth. The handling of methods and techniques already acquired happens and mastery of more advanced research skills. SWRS as knowledge includes such mechanisms as foresight, imagination, intuition, compilation, carrying an endless process of becoming more deeply involved into the objective reality, from phenomenon to essence.

Our observations have shown that if the job ends in useful and tangible result then the students show a special attitude to work -related research. The more important result for society, the university, the department, the student the stronger the educational impact.

The research work has significant communicative abilities. This allows us to consider SWRS as communication defined by the interaction of students and teachers in the scientific team. Being engaged in the process of communication and research each participant brings his own social and communicative experience. Relations between students, students and teachers which occur being involved in making joint activities - business, collective and personal become the objective factors that influence the effectiveness of SWRS. Communicative function is closely associated with the didactic since the formation of intersubjective moral relations such as cooperation, mutual aid, and interchangeability, responsibility for the common business, the co-creation helps to exchange the experience and knowledge, to development the cognitive interests and to stimulates both learning and cognitive activity.

SWRS activity aspect study allowed finding elements such as business game where every student can present themselves performing professional duties. In simulation game such professional activities as planning ways to perform research tasks and style of relationship; labor discipline; discussing the results with colleagues and others can be modeled.

Adding an element of the game into NIRS makes it emotive, stimulates creativity, reduces fatigue and animates the process of cognition.

The axiom proven by the experience of practice is the thesis that the scientific activity of the student in the whole is a mean of becoming a creative initiative teacher. The intellectual horizons, the overall spiritual, moral level of young professionals and other features required in professional activities are founded and perfected in the process of active scientific creativity.



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