

Student training in pedagogical practice in subject “Methodology of Biology Teaching”**Gulshan Nadir Hajiyeva¹**

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This article is devoted to the issues related to the student training in pedagogical practice in subject “Methodology of Biology Teaching”. Recently, a number of radical steps have been taken in the direction of improving the education system, substantial work has been done and is being done in the field of organizing a new education system that resonates with the requirements of the current era. This education system is based on national and international human values and democratic principles. From this point of view, several changes were made in the structure of higher education, curricula were updated, students' knowledge was assessed by means of a multi-point system, and the credit system was introduced. There is a great role of the correct organization of the pedagogical process targeted to the students' acquisition of their chosen specialty for being good, influential teachers and educators of the future; for having national-moral values, general and pedagogical culture, exemplary behavior, broad outlook, deep and comprehensive knowledge, skills, theoretical and practical training.

The efficiency of the pedagogical process depends to a great extent on the effective establishment of teacher-student relations, the ability of the teacher to skillfully manage the educational process. At the same time, this allows students to grow up as individuals who are loyal to the traditions of freedom and democracy of our people, who absorb the spiritual, humanistic and cultural values of our nation, who love their native land and its inhabitants, who protect the honor of our country, who are able to think independently and creatively. The training of initial pedagogical personnel depends very much on the level and quality of teacher-student relations. In order to properly establish teacher-student relations, first, the teacher must acquire high moral qualities, behave in an exemplary manner, and justify himself/herself as a specialist, an employee and a human being.

Methods: The article is based on the method of comparative analysis.

Application importance: the material can be used in lecturers and seminars in higher education institutions (HEIs).

Keywords: pedagogy, pedagogical practice, methodology, teaching Biology, student training.

Introduction. Pedagogical experience for students in higher education has a unique advantage because it is usually determined by the curriculum. A deep interest in the pedagogical practice of the curriculum should be aroused and its performance in this field should be regularly evaluated.

From Confucius's saying, "I hear and forget", "I see and remember", "I act and understand" it is understood that pedagogical experience is the main means for a student to have excellent knowledge and skills in the chosen specialty. The student studies the theoretical part of the specialization in the teaching methodology of Biology. But during the pedagogical experience, the student stays alone with his/her specialty and practices it according to Confucius saying "does and understands." It is very interesting for the student to work together with students and teachers. School experience aims to form students' independence in gaining knowledge, skills and habits. Carrying out independent activity on learning Biology Teaching Methodology forms the student's ability to perform certain educational activities. One of the sources that make students interested in learning is the organization of the learning process. This process can be organized in such a way that students are active participants in it, willingly acquire knowledge and skills. Knowledge and skills become stronger when they are acquired through the active participation of the student himself (Aliyeva, 2004).

Educational activity in psychology is a system of actions performed by a student in which they acquire new knowledge, skills and habits. A number of these training activities are defined: the determining (analysis of situational conditions, its interaction with one's own capabilities), executive (explanation of the material and its processing, application in practice), corrective (making corrections, feedback on errors and failures in corrective and executive actions determination and changes based on it), assessing (analysis and control of personal activity) ones. Pedagogical practice has a great role and importance in developing the student's practical knowledge and skills.

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Formulation of the problem. The organization and management of students' (self) education of organizational skills during the pedagogical experience is a completely real task. In the secondary specialized schools involved in the experiment, during the training process and extra-curricular events, before undergoing the pedagogical practice, students get acquainted with the methods and principles of performing social tasks, and acquire skills and habits for drawing up a plan of educational work. Students and their teachers-methodologists exchange their ideas regarding the distribution of social work at school, the nature of supervisors' and students' work within pedagogical practice and other related issues.

Pedagogical experience is the beginning of active professional activity of students - future teachers, a field of practice and self-examination. Pedagogical experience plays an important role in the formation of organizational skills.

During the period of pedagogical practice, the skills of the parties related to the learning process are often under focus: teaching, reviewing, writing a diary, preparing visual aids, etc. The student should have a clear idea of the final outcomes of the pedagogical practice, why the practice itself is organized as a continuation of the educational process in secondary school: what he/she should learn, what he/she knows deeply, what qualities of a teacher (s)he develops in himself/herself, etc. It is necessary to treat the content of pedagogical practice as a means, not as a goal of the future teacher's professional training.

This means that the evaluation of the results of pedagogical practice should be done not according to the quantity and names of the implemented measures, but according to the quality of knowledge, skills, how the student grows as a teacher.

Literature review. While conducting the research, several books of Azerbaijani authors which are indicated in the section of references were studied.

The main part. In the process of acquiring organizational skills, students gradually acquire the levels as follows:

Reproductive. The student acts according to the instructions or imitates the organizational activities of the teacher or other people.

Adaptive. The student tests the transfer of previous experience of organizational activities to new but typical situations.

Modeler. On the instructions of the teachers, the student plans and implements activities that ensure the implementation of this or that collective activity of students or individual schoolchildren.

Creative. The student organizes the life of students purposefully from a pedagogical point of view and shows enough independence and initiative: he/she is able to determine the perspective, goals and tasks; to organize their implementation to the end, and evaluate the results.

In the experimental groups of secondary schools, the issues of self-education of students were in the center of attention. For this purpose, teachers used the possibilities of the educational process, especially Pedagogy and Psychology, as well as extracurricular activities.

Self-education does not occur without determining what to change in oneself and how to do it. If self-awareness and self-evaluation prompt the student to actively work on himself/herself, then this has a certain meaning and benefit, and teachers have great responsibilities to familiarize students with the issues of self-education. The information provided in various forms about professional self-education and its possibilities should be supplemented with practical advice on planning this process, at least for a certain short period of time, especially for the period of pedagogical experience. The basis for the design of the plan can be a scientifically based program of self-education.

Drawing up an individual plan of self-education is the student's own personal creative work. But the student needs some help. Advising, giving an approximate plan, sharing one's own experience, exchanging experience in a group, helping to formulate tasks, ways and methods of self-guided work - these are within the teacher's ability.

Student's self-education is not limited to pedagogical skills. It is necessary to work on improving the mental qualities of one's personality, as well as its characteristic features. It is also necessary to pay attention to the differences in self-education of students from different departments and specialties. These areas of self-education are focused on:

Intellectual self-education. This direction covers the issues as follows: acquisition of learning habits and skills independently; development of one's mental powers and abilities (thinking, attention, memory, observation, etc.); creation of research and development of creative qualities, self-education.

Spiritual self-discipline. This direction includes these items: mastering positive qualities (hard work, justice, honesty, fairness, truthfulness, humanism, etc.), struggle against moral shortcomings (egoism, arrogance, laziness); conscious actions according to the positive examples of elders and peers (at the same time, the struggle with the missing aspects and the formation of positive habits also take place); management of daily personal life (along with other qualities, intellectual, voluntary, noble qualities are also formed).

Aesthetic self-education. The criteria of this direction refer to: getting familiar with different fields of art in accordance with the plan (aesthetic self-education); formation of aesthetic knowledge and skills, appropriate

aesthetic activity; acquisition of aesthetic culture; formation of aesthetic attitude to work, education, art, household, recreation, environment.

Labor self-education. The tasks of this direction are: to acquire appropriate labor knowledge and skills (in order to prepare oneself for the appropriate activity); to form labor skills (tidiness, demandingness, building and planning of one's own work, etc.); to eliminate defects that hinder labor activity; to gain work experience according to the example (as the best engineer; as a father, brother, sister).

Physical self-education. This direction includes: planned strengthening of the body according to a certain system; acquiring the qualities of athletes, physical self-preparation for the chosen specialty; regular exercises with sports equipment in the prescribed manner; acquisition of knowledge and skills about sports in a planned way; the training of the body in order to defend the motherland.

Self-discipline of the will. This direction is usually carried out in connection with mental, spiritual, physical, labor self-discipline. Self-discipline of the will deals with: having the ability to finish the work started; creating the habit of doing any work in a planned, honest and high-quality manner, the ability to overcome difficulties; it refers to the training of individual voluntary qualities (motivation, patience, activity, independence, etc.).

Events outside the auditorium also play a big role in the student's self-education and his/her development as a bona fide specialist. Extracurricular activities can be attributed to the student's biological education, which is the main part of the system. Extracurricular activities are a form of Biology teaching and are related to additional biological education of students. Pedagogical experiments carried out in secondary schools also refer to extracurricular activities.

Pedagogical experience is important for the student training in teaching activities in pedagogical higher educational institutions. The ability to apply the theoretical knowledge gained in the majors and the formation of teacher's specific qualities, the acquisition of the skills and habits necessary for the realization of professional functions is carried out through pedagogical experience. The positive result of the pedagogical experience and the practical training of the student in the teaching profession depends on how the pedagogical experience is organized and how responsibly the students approach it.

The main goal of pedagogical practice is to form the professional habits of the teacher and to inculcate the main functions of the pedagogical activity in the intern student in the framework of the school subject under focus.

While obtaining pedagogical experience, students learn to ensure the uniformity of the educational process in order to educate students in accordance with modern requirements.

During pedagogical practice, students enter the circle of real problems of the teacher-educator's professional activity, get acquainted with the main content and scope of his/her work. Hence, students are trained in these areas: psychological-pedagogical study of the collective and individual students, work planning, conducting lessons and fulfilling optional exercises, extracurricular activities in the subject, working as a class teacher, parents, teachers, cooperation with socio-pedagogues and school psychologists and others.

The task of pedagogical practice is to strengthen and deepen the theoretical knowledge that students received in higher education institutions, to use them creatively in the training and educational work conducted within school practice, to instill in students the ability to observe and analyze the training and educational work conducted with children and adolescents, Psychology, Pedagogy, Methodology, Physiology, It consists of teaching students how to conduct educational work, taking into account the knowledge of hygiene subjects and taking into account the age and individual characteristics of students, forming the ability to apply modern teaching methods and new pedagogical technologies in the field of specialization.

Students who undergo pedagogical practice become members of the school's pedagogical team for a certain period of time, guide students with uniform requirements, adapt to the work plan, educational environment of the school, obey labor discipline, take a single principled line in relation to students, learn to communicate. As a member of a collective, they take part in pedagogical councils and subject method combinations, classroom parent meetings, seminars and conferences held at the school, study and summarize the work experience of advanced teachers. The relationship between students and teachers is based on mutual respect, understanding, creative discussion of pedagogical problems.

In addition to the "Concept of general education in the Republic of Azerbaijan (National Curriculum)" and the principles adopted for the organization of the pedagogical process in the framework of this curriculum, it is important to consider the requirements for the effective implementation of pedagogical practice and the achievement of significant tasks to achieve the common goal.

Realizing that teacher training is a more practical field of activity, the pedagogical practice serves to form the teacher not just as a classroom teacher, but as an independent and creative thinker, who can identify and solve their own problems, and who has pedagogical mastery and research skills.

Pedagogical practice is based on the principles as follows:

1. Pedagogical practice should be a learning space for all participants.

Pedagogical practice is aimed at improving the results of the activities performed by all participants of the learning process. While being trained at school, the future teachers who have passed initial teacher training and the employees of the school-training-educational institution where work-placed practice is organized conduct joint research under different training conditions. Pedagogical experience ensures that students enter the world of independent and collective experience.

2. Standards-based pedagogical practice.

Principles that clearly reflect the teacher's professional competencies are considered when developing the pedagogical practice program.

The employees of the educational institutions where the pedagogical practice takes place create various opportunities for the students undergoing initial teacher training to achieve the intended goals.

3. Connecting (integrating) pedagogical experience with the training process in a higher education institution.

Pedagogical experience and training at a higher educational institution are closely integrated, allowing future teachers to gain both deep professional knowledge and practical experience.

4. Implementation of pedagogical practice in different educational environments.

Students undergoing initial teacher training have professional experience in various teaching environments. This allows us to critically analyze not only that professional experience, but also the differences between students' and individual teachers' experiences through discussion.

4. Pedagogical practice represents a continuous professional development environment.

Pedagogical practice program serves to gradually assume pedagogical responsibility and gain pedagogical independence for students undergoing initial teacher training. This allows future teachers to move from a controlled environment to an independent, and at the same time, collective environment.

5. Pedagogical practice requires joint responsibility and cooperation.

General education and staff training institutions, where pedagogical practice is organized, are jointly responsible for the professional experience component of teacher training. Accordingly, all aspects of the professional experience programs are prepared in cooperation with the program design, implementation, training of participants, evaluation of educational institutions and schools where profession-oriented practice is held. This cooperation is carried out through various commissions, formal agreements, working groups and joint meetings.

A student who has successfully completed pedagogical practice:

- connects all taught subjects with the learning process;
- demonstrates that he/she is able to relate the subject to events in nature and society;
- demonstrates that he/she has mastered the teaching methodology of subjects;
- demonstrates that he/she can create intra-disciplinary and inter-disciplinary communication in the training process;
- applies his/her knowledge of the subject in the teaching process;
- acquires skills in the field of ICT teaching and related technologies in teaching the subject under focus;
- demonstrates that he/she can understand the way children think and feel by observing;
- demonstrates the ability to determine in which ways Biology is easier to learn and uses different teaching approaches accordingly;
- plans lessons;
- demonstrates that he/she can consider the needs and individual characteristics of learners when planning;
- demonstrates that he/she can choose appropriate training methods, training materials and resources, as well as the acquired skills to prepare training materials and tools;
- demonstrates that he/she can organize an effective teaching-learning process, has the ability to connect the lesson with everyday life and experiences, to observe the time allocation, to carry out the lesson according to the plan;
- demonstrates mastery of modern teaching methods and new pedagogical technologies;
- cooperates with students;
- is able to customize the training considering the students' special needs in the training process;
- gains experience in understanding the cause of controversial and conflicting processes occurring in the classroom, being able to find the right solutions to them;
- demonstrates that he/she can create an active and democratic learning environment;
- follows the school and class rules during the internship, and encourages students to follow these rules;
- treats all students with respect and fairness, builds confidence and respect in students;
- communicates with students;
- clearly expresses the purpose of the lesson, gives a clear and comprehensive explanation to the questions, demonstrates that he/she can ask appropriate and properly structured questions at the appropriate time to develop critical thinking in students;
- listens carefully to the questions and suggestions of the students and gives them a sincere attitude;

- demonstrates that he/she has acquired skills and habits to effectively use physical characteristics in the classroom;
- determines relevant indicators, selects and prepares appropriate assessment tools;
- objectively evaluates the proficiency level and development of students, analyzes the evaluation results;
- based on this, he/she makes certain changes in the training process;
- demonstrates that he/she is able to cooperate with his/her future colleagues, school staff and parents;
- participates in various events held at school, expresses his/her opinion on the discussed issues, gives relevant suggestions and recommendations;
- demonstrates the values and behavior patterns he/she expects from his students;
- is acquainted with the rights, duties and functions of the school staff, the class leader and methodologist associations, possesses some experience by following their activities;
- demonstrates that he/she can improve the quality of teaching biological knowledge by analyzing his/her own activity, observing his/her colleagues and giving advice;
- demonstrates the ability to improve the teaching-learning process by conducting small researches;
- has mastered the ways of participating in school management involving students in this process;
- demonstrates that he/she knows prominent scientific tendencies, state and public figures who have made a great contribution to the teaching of Biology and is able to effectively use their ideas in the teaching-learning process;
- demonstrates that he/she has a general and pedagogical culture;
- speaks, writes and communicates fluently in the Azerbaijani language, uses the necessary spelling and punctuation rules, and the etiquette of the Azerbaijani language correctly and appropriately (Aliyeva, 2014).

Pedagogical practice of students in pedagogical higher education institutions is carried out according to approved rules. In order to get acquainted with school life in more detail, students of pedagogical higher education institutions undergo work-placed practice in the methodology of teaching Biology at general education schools (the 4th year of study). The official pedagogical practice is carried out in the VIII semester and lasts not less than 14 weeks. In the first week of pedagogical practice, students do not have trial lessons but observe the lessons of advanced teachers at school. Students get acquainted with school documents, documents of educational work conducted at school, organization and management of the pedagogical process (lesson, lesson overview, plan, lesson analysis, planning and psychological characteristics), hygienic requirements to school and pedagogical process.

Pedagogical practice is organized by the base educational institutions where the pedagogical practice will be carried out, together with the departments (faculties) of Pedagogy, Psychology, and the Dean's office of the faculty. Before the beginning of pedagogical practice, representative teachers participating in the experience process of higher education and base educational institutions hold an introductory meeting and at the end of it – a final conference. The Dean's office holds a guiding and final conference with the participation of intern students together with the relevant departments. At the orientation conference, the purpose, tasks, and content of the work-placed practice are explained to the students. Information is provided on its organization forms, conduct and reporting rules. At the final conference, the results of the pedagogical practice are analyzed, summarized and suggestions for its improvement are made.

The head of a higher education institution is responsible for the organization and conduct of pedagogical practice. The appointed head of a higher educational institution performs general management of pedagogical practice.

The person responsible for the organization of pedagogical practice at the faculty is the dean, and the general management of the faculty is carried out by the faculty head of pedagogical practice.

Teachers of Pedagogy, Psychology, and methodologists in separate subjects are appointed by a higher educational institution. Heads of departments for Pedagogy, Psychology and specialty are also responsible for the organization and implementation of pedagogical practice.

In the section "Organization of pedagogical practice and its role in teacher training" in terms of the subject "Biology Teaching Methodology", students are informed about the management of pedagogical practice, its main purpose, task, and principles. A high school Biology teacher is invited to the lecture. He/she also talks to students about more interesting topics, approaches to students, answers questions. As a result, students are ready for practice.

Pedagogical practice at a base educational institution is led by the head of a base educational institution and his/her deputy assigned to this task, the head of the class and the subject teacher.

While being trained at school, a group representative is appointed in each student group. He/she reports the attendance of intern students, organizes their general work, informs students about counseling hours, seminars, meetings, fulfills the tasks of the intern supervisors.

Pedagogical experience is considered as a natural component of students' acquaintance with school life. Students practicing at school are jointly evaluated by a methodologist-teacher, psychologist, who leads

pedagogical practice, according to their ability to achieve learning outcomes and perform the processes described below:

1. to behave according to the teaching profession, act like a teacher;
2. to understand students;
3. to organize the teaching process;
4. to manage a class;
5. to implement the teaching process;
6. to use education resources;
7. to use methods correctly;
8. to prepare a lesson plan;
9. to evaluate students, analyze the tasks they perform;
10. to enrich school life with extracurricular activities;
11. self-evaluation.

Approbation of research result. The article was explored on the basis of the relevant literature and the survey personally conducted by the author. The author created a table, concerning the subject of the research. Several articles regarding this subject were presented in local and international conferences.

During pedagogical practice on the methodology of teaching Biology, the activity of students in the lessons they teach can be evaluated according to the requirements in Table 1 given below. (Aliyeva, 2004).

Table 1.

Organizational activity of the teacher	Score	Educational activity	Score	Upbringing activity	Score	Pupils' activity	Score
1. Planning activity		Scientific level of the lesson, adherence to scientific principles. To be able to separate the existing basic concepts and explain them correctly to the student.		Determination to form pupils' vision at the lesson		The level of intellectual activity of students	
2. Creation of effective feedback, creation of conditions for working together with students. Creating interest to the topic.		The correct choice of methods and ways according to the students' proficiency level. Creating integrative connections in the topic.		Using opportunities in the classroom for the spiritual education of the student		The level of independence and freedom of students	
3. Implementation of basic psychological requirements at the lesson		Appropriateness of the course load according to the student's potential (differentiation and individualization).		Using opportunities in the classroom to educate students in the spirit of national tradition and patriotism		The ability to select the main ideas and concepts from the teaching material	
4. The teacher's clear, fluent, artistic, emotional speech		The 3 forms of thinking and assignments are reflected at the lessons		Aesthetics, the emotional impact of the student on the lesson		The level of students' knowledge and skills during analysis and communication	

5. Productive usage of the lesson		Formation of teaching and learning at the Biology lessons		Interactive work of teachers and pupils		Paying attention to the accurate speech of the pupils	
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A teacher-methodologist who is the head of practice can evaluate the student's lesson with the help of this table. Student evaluation should be a natural and realistic process. In this process, it is necessary to treat the student as a teacher. The intern student, in turn, must demonstrate the ability to perform the teaching duties assigned to him/her in accordance with the standard. At the school, the student begins his/her activity with a two-three-week observation experience, and in the following weeks he/she teaches as a teacher with school life and more active participation in the classroom.

In some cases, if it is felt in advance that the student will fail in this field, he/she may be advised not to continue the course and to change his/her art. A higher education institution is responsible for conducting all processes related to students' internship, and for fulfilling the obligations of schools at the appropriate level.

Conclusion. To sum up, we can review recommendation regarding pedagogical practice:

Thus, it is better if the teaching experience started from the 1st year. It is possible to apply "role playing", which is very relevant to students, in the teaching methodology of biology. That is, during the lesson, one of students can be a teacher, and the others can be students. At the end of the lesson, students can discuss different issues with the teacher.

Secondary school Biology teachers can also be invited to the Biology teaching methodology subject. They guide the students with their knowledge and skills, provide interesting information, and answer students' questions.

Students should be interested in school experiences. Students' initiative should be given ample opportunity during pedagogical practice. Students' independence should be the focus of attention while organizing and implementing pedagogical experience.

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Підготовка студентів до педагогічної практики з предмета «Методика викладання біології»

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Останнім часом було зроблено низку радикальних кроків у напрямі вдосконалення системи освіти, проведено значну роботу в галузі організації нової системи освіти, яка відповідає вимогам сучасної епохи, що базується на національному ґрунті і людських цінностях, демократичних принципах. Через це було внесено відповідні зміни у структуру вищої освіти, оновлено навчальні плани, оцінювання знань студентів за багатобальною системою, запроваджено кредитну систему. Водночас велику роль відведено правильній організації освітнього процесу в засвоєнні студентами обраної спеціальності, становленні сучасних, впливових учителів і вихователів майбутнього, національно-моральних цінностей, загальної та педагогічної культури, зразкової поведінки, кругозору, глибоких та ґрунтовних знань, умінь, теоретичній та практичній підготовці.

Ефективність педагогічного процесу залежить від ефективного налагодження стосунків учитель-учень, уміння вчителя вміло керувати освітнім процесом. Водночас це дає змогу виростити

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з учнів особистість, вірну традиціям свободи та демократії народу, яка вбирає духовні, гуманістичні та культурні цінності народу, яка любить свій рідний край та його мешканців, захищає честь країни, мислить самостійно та творчо. Підготовка початкових педагогічних кадрів насамперед залежить від рівня та якості окреслених взаємин «учитель – учень». Для правильного налагодження стосунків «учитель – учень» вчитель, по-перше, повинен набути високих моральних якостей, зразково поводитися, виправдати себе як фахівець, працівник і людина.

Важливість застосування та практична значущість: матеріал може бути використаний на лекціях та семінарах у закладах вищої освіти.

Ключові слова: педагогіка, педагогічна практика, методика, навчання біології, підготовка студентів.

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