



## **THE ROLE OF SCIENTIFIC CIRCLES IN IMPROVING THE QUASI-PROFESSIONAL ACTIVITIES OF FUTURE BIOLOGY TEACHERS**

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<p><b>Received:</b> 8<sup>th</sup> August 2022  <b>Accepted:</b> 8<sup>th</sup> September 2022  <b>Published:</b> 14<sup>th</sup> October 2022</p>	<p>The article describes the activities of the "Quasi-professional activity" circle and its role in the formation of professional characteristics of students. The role of quasi-professional activities in the step-by-step professional training of future biology teachers is shown. Consideration of these tasks is explained by the author's belief that the quasi-professional model of education can be fully implemented not only in classrooms, but also in other practice-oriented educational areas of higher education</p>

**Keywords:** Quasi-professional activities, modeling, become a "Sensei Statue Owner!" project, design technologies, problem-based learning technology.

Reforms in the field of education implemented in the Republic today, teaching theory of pedagogy and its connection with practice occupy an important place in the formation of professional characteristics of future specialists. Improving the quasi-professional activity of the future teacher is of great importance. Quasi-professional activity is one of the forms of contextual education, which involves modeling a certain segment of professional activity, creating real pedagogical situations. The activities of the "Quasi-professional activity" circle and its role in the formation of professional characteristics of students are described below. By forming a quasi-professional activity in the circle, students learn to solve various professional problems and establish a system of pedagogical interactions, independently solve various problem situations. In addition, this type of activity can be considered as a kind of transitional period between educational activity and educational and professional activity. This increases the level of preparation of

students for teaching practice and solves the problem of fear of expressing one's opinion in public, showing professional knowledge. Before joining the circle, each participant is assessed on the basis of a questionnaire called "Professional qualities of a biology teacher". On the basis of this evaluation, they will know their teaching skills and qualities. In addition, these results are obtained again after the end of the circle training and determine the level of formation of the qualities characteristic of the future biology teacher in the participants [see Table 1].

The circle conducts its activities in accordance with the Law of the Republic of Uzbekistan "On Education" and the "National Program of Personnel Training" and the "Regulation on the Search, Identification and Targeted Training of Talented Students" of the Ministry of Higher and Secondary Special Education and the legal and regulatory documents developed by Bukhara State University.

**Table 1**  
**The training plan of the "Quasi-professional activity" circle.**

№	Name of training	Expected result of the training
1	The purpose, importance and tasks of the "Quasi-professional activity" circle.	They get acquainted with the educational, training, scientific - methodical foundations of the circle
2	Forms of quasi-professional activity and their classification	The members of the circle will have information about the forms of quasi-professional activity and their classification.
3	Organizing quasi-professional activities of future biology teachers and conducting individual interviews with students	Organization of quasi-professional activities of conducting individual interviews with students
4	Conducting training on formation of communication culture in future biology teachers	Forming a culture of communication among members of the circle (future biology teachers).



5	Quasi-professional activity is a necessary stage of transition from educational activity to the world of professional culture	Quasi-professional activity—realizes that it is a necessary stage of transition from educational activity to the world of professional culture.
6	Helping students solve various professional pedagogical situations and establish a system of pedagogical relations, directing them to independently solve various problematic situations.	To teach students how to solve various professional problems and establish a system of pedagogical interactions, how to independently solve various problem situations
7	Preparing students for quasi-professional activities based on design technologies.	Competence of design and practical implementation of lesson developments based on design technology methods
8	Preparation of students for quasi-professional activities based on problem-based educational technologies.	Competence of design and practical implementation of lesson plans based on problem-based educational technology methods
9	Preparation of students for quasi-professional activities based on didactic game technologies.	Competence of design and practical implementation of lesson plans based on the methods of didactic game technology

In the "Preparation of students for quasi-professional activity on the basis of design technologies" class, students are required to organize classes based on design technology, to develop skills related to the essence of this method and its application. Become a "Sensei Statue Owner!" below there is talk about the project named.

Group: 1st-2nd year students

Topic: Preparing students for quasi-professional activities based on design technologies.  
Purpose of training:

1. Educational purpose: to explain the essence and importance of the project "Owner of the Sensei figurine", to form quasi-professional competences and skills in students based on this technology.

2. Educational purpose: to educate future biology teachers based on the formation of quasi-professional activities through the project "Owner of the Sensei Statue".

3. Developmental goal: Formation and development of students' scientific, creative, pedagogical, psychological, collective, managerial activities.

**Training equipment:**

"Sensei figurine" demonstration tool In the "Preparation of students for quasi-professional activity on the basis of design technologies" class, students are required to organize classes based on design technology, to develop skills related to the essence of

this method and its application. Below is a discussion about the project named Become a 'Sensei Figurine' Owner!"

Become a 'Sensei Figurine' Owner!" The event project will be announced by the teacher on Monday of the week. Depending on the completion of the tasks indicated next to the 10 colored coins, during the week each student will have his own account number, i.e. several coins. On Saturday, the presentation of the "Sensei Statue" will be held. In this presentation, the student who collected the most coins will be the owner of the statuette, and the 1st, 2nd, and 3rd place winners will be determined. Candidates for awards will be selected for 6 more stars.

About the assignments:

1. For the smart ones. Completing difficult tasks prepared for gifted students, coins are thrown into accounts. It is up to the students to complete these tasks.

2. For parents. Coins will be added to the accounts of parents based on their participation in classes, parent meetings, and on the unified electronic education platform for teachers, students, parents, administrators of educational institutions, and representatives of educational management bodies.

3. For active participation in classes and textbooks. In addition to students' active participation in classes, coins will be added to their accounts to ensure that their tools are always ready.



4. For creative work. In this case, coins will be credited to the student's account to prepare independent educational tasks such as crosswords, tests, videos, thematic abstracts, various mock-ups and mock-ups.

5. For the "Sensei figurine" lesson. On one day of the week, reinforcement topics are selected from any subject. Coins collected in this lesson will be credited to the student's account.

6. For duty. Coins are tossed based on the supervision of the students on duty.

7. For behavior. Coins that the most polite children will have. These coins can also be used to determine the level of achievement of the educational goals of each subject.

8. For being able to express an independent opinion. In this case, coins are added for the efforts made to form a culture of communication during the tasks of problem-based educational technologies and didactic game technologies used in classes.

9. Fine. Penalty coins for students who are tardy, missed class hours, disorderly conduct in class. In this case, 2 of the previously collected coins are removed. When the defect is corrected, it will be returned again.

10. Bankruptcy. Coins for unexcused absences, unexcused absences. All coins collected by the student will be removed.

This project activates students' participation in collective work, serves as a good tool for connecting parents with the school. It eases the supervision of teachers, helps them to achieve high efficiency in the educational process, and thus helps to create the teacher's class management activity.

Another advantage of the "Sensei figurine" is that it is possible to organize classes, contests, events even by dividing students into groups. When dividing into groups, the cognitive potential of students is taken into account. However, the reason for this grouping is not mentioned in order not to dampen the enthusiasm of the students to study. Students can be grouped into:

Group 1 The most active students;

Group 2 includes students who master education well;

Group 3 includes students who are free to acquire education;

Group 4 includes students who are not responsible for education;

Group 5 is grouped in the form of students with low learning ability.

By making assignments suitable for classes, contests, and events for each of these groups, by

creating an opportunity for the participation of students in groups 3-4-5, the concept of "So I can compete" and "I can be a winner" will appear in them. Self-confidence is awakened, desire for school, assessment of one's work, analysis, self-control are formed.

When making coins, special attention should be paid to their color. Coins of 10 different colors are selected in 10 conditions, and a sample of the selected color coin is placed next to each condition. In this way, the student will know what coin he will get if he fulfills the condition, and the teacher will also know which condition the student fulfilled.

Shiny gold coins are the pick of the discerning. The shine of these coins attracts the child's attention and he will definitely try to do this trick.

Shiny silver coins are the choice for parents.

Red, yellow, green - similar simple colors are selected according to other conditions.

However, it is better to choose a brown color for a fine, and a black color for bankruptcy.

Coins of each color (from 30, 40 and 50) are good to have in the bank vault. There are 10 pockets at the bottom of the treasure display, and each pocket contains 10 coins of different colors.

As an honorary prize winner, the student who holds the Sensei statuette will have a picture of the shiny statuette affixed to his pocket and a picture of the same statuette will be affixed to his diary. Later, a contest with several sensei statue veterans can also be held. Most importantly, talented students in the class are identified and additional practical training is conducted with them. These students are announced as Junior Olympiad candidates, and Olympiads are held in the classroom at the end of each term. Parents are invited to the event, that is, to the presentation, and medallions are given to Olympiad participants for 1st, 2nd, 3rd place, and the statue of sensei is ceremoniously put on the highest place holder.

As mentioned above, this project can also be used in the classroom. For this purpose, any topic from any subject is chosen once a week and announced to the students as "Sensei statue lesson".

Become a 'Sensei Figurine' Owner!" After it is explained to the members of the circle based on the project, we will apply it among them as well. Because it requires a great pedagogical ability from the future teacher to properly organize the project. This, in turn, requires the development of quasi-professional activities. Students are given the following tasks:

- for the formation of students' scientific activity: studying 5-6-7-8-9-10-11 grade biology textbooks and choosing topics for practical, research,



informative, creative and role-playing projects, methods of their organization, the ability to interest their students it is necessary to learn the rules of proper incentives for formation. Members of the circle who can complete the task will get "For the Smart" coin in their account.

- In order to get a "For parents" coin, students are asked to choose topics for parents' meetings, what educational activities should be conducted at home for the parents of students who are lazy learners, who are irresponsible for education, who have a weak ability to learn, what is the phenomenon of dyslexia in children. , it is necessary to prepare a series of necessary advices, questionnaires for conducting interviews and test sessions, about organizing libraries and choosing suitable books for them, about what to do if the child does not want to come to school.

- In lessons, contests and events, students will receive coins for active participation in classes and textbooks based on the development of methods of working with students who are passive learners, irresponsible for education, and have a weak ability to learn. Being able to work with textbooks means that students develop additional tasks for gifted students, knowing that school textbooks are for advanced students.

- In order for students to have coins for creative work, they should learn design, problem-based learning, didactic game technologies, use them, learn to prepare articles for republican and international magazines, abstracts for republican and international conferences on the topic they are interested in. Later, the teacher chooses a topic to complicate the task and helps to further form the creative activity of students.

- Students can earn "For Duty" and "For Conduct" coins by participating in community affairs or organizing them, demonstrating their management skills.

- Students should form a culture of communication in order to be able to express their independent opinion. For this purpose, in the process of preparing and rehearsing a speech for communication, students should independently find answers to the following questions:

1. How do I want to make the audience think?
2. What kind of mood do I want to create a positive atmosphere in the audience?
3. What kind of intonation and rhythm does the content and context of the speech require?

Before any educational activity, students should record their speech several times (audiodisk, dictaphone) and try to correct their mistakes and rehearse their speech. They are required to enrich their speech with colorful artistic and literary words. They should develop such abilities as enriching and completing their impressions, attracting the attention of students with the perfection, purity, and effectiveness of the teacher's speech, finding a way to their hearts, and eliminating all conflicts encountered in professional pedagogical activity without any difficulty.

- "Penalty" coins are given to students who come late to classes, do not complete assignments, and "bankruptcy" coins are given to very serious deficiencies.

Based on the above tasks, students will learn about their shortcomings based on the coins they have accumulated in their accounts during the week, and the teacher will give them additional information and tasks to correct these mistakes.

According to the proposed model, the students who participated in the circle and the control groups were analyzed for their theoretical knowledge gained as a result of studying the special course. The responses were rated on a four-point scale, namely excellent-5, good-4, satisfactory-3 and unsatisfactory-2. The obtained results are presented in Table 2.

**Table 2**  
**Evaluation of the theoretical knowledge of the students of the biology education department of the Faculty of Agronomy and Biotechnology on quasi-professional activities**

No	Questions and assignments	Control group						Experimental group					
		The total number of students is 52				The number of questions and answers is in 4 and 5 %	The total number of students is 53				The number of questions and answers is in 4 and 5 %		
		Grade					Grade						
		4	5	6	7		8	10	11	12		13	14
1	2	4	5	6	7	8	10	11	12	13	14		



1	What are the goals and objectives of directing students to biological professions?	3	12	21	16	28,8	7	21	16	9	52,8
2	What do you mean by the uniqueness of the biology teaching profession?	2	13	24	13	28,8	8	23	15	7	58,5
3	How do you determine the content of career guidance in the study of biology?	3	12	25	12	28,8	9	22	17	5	58,5
4	What are the most effective forms of work of a biology teacher?	2	12	20	18	26,9	11	21	19	2	60,4
5	Determine the most effective system of methods for directing students to biological careers	4	14	19	15	34,6	10	24	15	4	64,2
6	What tools can help guide students toward biological careers?	2	15	19	16	32,7	9	19	15	10	52,8
7	What methods do you use to diagnose student personality?	2	13	26	11	28,8	8	21	17	7	54,7
8	Do you know your local area's needs for biological occupations?	3	13	23	13	26,9	7	22	18	6	54,7
9	Can you make occupational charts of biological occupations?	2	12	24	14	26,9	7	21	19	6	52,8
10	What are the specific features of the organization of students' practical activity of choosing a biological profession?	1	11	21	19	23,1	6	22	16	9	52,8

The data presented in the table show that the theoretical knowledge of the students who participated in the circle according to the model we developed is at a higher level compared to the students of the control groups. In the model, the theoretical problems of the pedagogical-methodical foundations of organizing and conducting work on directing students to biological professions are fully disclosed. So, "What are the goals and objectives of directing students to biological professions?" 28.8% of the students in the control groups gave a good and excellent answer to the question, while in the experimental groups studied according to our proposed model, this indicator is

much higher, that is, 52.8% of the students gave a good and excellent answer. The biggest differences in the quality of students' evaluations of the experimental groups can be seen in their answers to the following questions: "What do you see as the specific features of the work of a biology teacher in guiding students to the profession?" (control - 28.8%, experimental - 58.5%), " How do you determine the content of career orientation work in the study of biology?"(control - 28.8%, experimental - 58.5%), " the most effective forms of work of a biology teacher how?" (control - 26.9%, experimental - 60.4%) and "What are the specific features of organizing practical activities of



students on choosing biological professions?" (control - 23.1%, experiment - 52.8%).

The analysis of the content of the answers of the students who studied under the Course program showed that they are more reasonable and complete.

On the basis of the circle, the future teachers contributed to the formation of theoretical knowledge on the problem of professional direction of professional training, as well as some skills of professional and

pedagogical professional direction, as well as the foundations of professionally important personal qualities. This greatly facilitates the practical activities of the future teacher during pedagogical practice. Analysis of the data obtained on the results of study in the circle confirms the appropriateness of our assumption.

Generalized information is presented in the following table:

**Table 3**

**Evaluation scale of the formation of professionally important personal qualities describing the professional training of future biology teachers who participated in the "Quasi-professional activity" workshop**

		Average scores for the formation of professionally important personal qualities					
		Before Attending the Circle		After Attending the Circle		Absolute growth	
		Evaluation	Self-assessment	Evaluation	Self-assessment	Evaluation	Self-assessment
1.	Citizenship	3,2	3,3	3,9	4	0,7	0,7
2.	Love for children	3,1	3,4	4,1	4,2	1	0,8
3.	Optimism	3,3	3,6	4,2	4,3	0,9	0,7
4.	Organization	3,1	3,4	3,9	4,1	0,8	0,7
5.	Unreasonable demands on children and oneself	3	2,8	4,3	4,5	1,3	1,7
6.	Altruism	3,2	3,5	4,3	4,4	1,1	0,9
7.	Fairness	3,1	3,4	4,4	4,5	1,3	1,1
8.	Qatar	2,9	3,3	4,3	4,5	1,4	1,2
9.	Kindness	2,8	3,2	4,3	4,4	1,5	1,2
10.	Persistence	2,7	3,1	4,5	4,6	1,8	1,5
11.	Self control	3,1	3,4	4,4	4,6	1,3	1,2
12.	Durability	3	3,2	4,5	4,6	1,5	1,4
13.	Bravery	3,1	3,2	4,6	4,8	1,5	1,6
14.	Tolerance	3,2	3,4	4,3	4,5	1,1	1,1
15.	Pedagogical observation	3,1	3,4	4,5	4,6	1,4	1,2
16.	Sympathy	3	3,2	4,6	4,6	1,6	1,4
17.	Intellect	2,9	3,1	4,2	4,3	1,3	1,2
18.	Modernity	3,1	3,3	4,3	4,4	1,2	1,1
19.	Dominance	3,1	3,2	4,4	4,3	1,3	1,2
20.	Creativity	3,1	3,4	4,2	4,4	1,1	1,0



The analysis of the results of step-by-step control surveys of students, shown in the table, shows that the circle on career guidance helps to connect the knowledge of pedagogical theory with practice.

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