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**Research Article** 

# DEVELOPING TEACHER'S SKILLS IN USING SCIENTIFIC METHODOLOGICAL ARTICLES IN SCIENCE TEACHING

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#### ABSTRACT

The article provides information about today's problem, that is, the teacher's ability to use scientific articles and apply them to his subject. At the same time, the technological map of the technology of working with the article during training in the training system is presented in a new content. At the same time, information is given about the advantages and disadvantages of the "Problem-based education" technology.

#### **K**EYWORDS

Article, technology, problem-based, foreign methods, 21st century skills, lesson plan.

#### Introduction

In the Decree of the President of the Republic of Uzbekistan No. PF-6108 "On measures for the development of the fields of education and science in the period of new development of Uzbekistan", national education that withstand today's fierce competition on a global scale The aim is to establish the lim system, improve textbooks and training manuals based on the requirements of the times, create a new generation of them, and optimize training programs and standards [2].

Creating the necessary conditions for regularly improving the professional skills and efficiency of pedagogic employees, improving the system of professional development based on the principle

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of "lifelong learning" is defined as one of the main directions of further development of the fields of education and science...

As each technology has its own approach, there are opinions and debates about the merits of Problem Based Learning. Problem-based learning focuses on students' own processes of learning and exploration for successful learning. This method allows students to absorb current information, discuss it, develop creative thinking and express their opinions. Let's talk about the advantages of problem-based learning. In cooperative learning in problem-based learning, students learn to work in groups and cooperate with each other. This feature allows students to develop social cooperation, work with neighbors and community. Improving the ability of the student is also of great importance in this technology. This method helps to improve students' talents and abilities. Students will have the opportunity to master and express their thoughts in the areas of their interest. Problembased learning helps students apply their theoretical knowledge to practice and make connections to practice in their learning. This method allows students to put their work and learning into practice. Another advantage of this technology is that it is based on the development of students' ability to discuss, think and analyze. Students learn to express their opinions in the discussion and process of argument development.

Along with its advantages, problem-based learning has several disadvantages. Significant resources and training are required to make

problem-based learning relevant to practice and student engagement in blended learning. In order to put this method into practice, there must be laboratories, databases, practical tools and teaching tools. The organization preparation of these resources can be a problem.

There are also individual challenges for students of this education. In problem-based learning, students specialize in collaborative learning or working with others to master and think creatively, which can be challenging for individual students. In this way, every student should be ready to solve all their problems in learning and expressing their thoughts. In addition, another disadvantage of problem-based learning can be the problem with the process of assessing students and studying the results. This method can be difficult to match with traditional methods of assessing students' discussion, creative thinking, and mastery processes. Problem-based learning requires active student participation and collaborative learning. Sometimes, students may not be interested or receptive to participating in or learning from this method. This method should be fun and engaging for all students.

An important disadvantage of problem-based education may be the difficulty of establishing an educational environment in accordance with the creative thinking and learning processes of students. A peaceful and supportive environment should be created for students to express their opinions and work with neighbors. These shortcomings can cause problems in the implementation of problem-based learning and in learning outcomes. Therefore, it is necessary to

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apply directions and strategies to organize this method in practice and solve its problems.

In Article 46 of the Law of the Republic of Uzbekistan "On Education". Chapter "Obligations of Pedagogical Employees", it is defined "regularly improving qualifications..." [1]. Secondary school teachers currently earn an 18-credit certificate by studying 36 hours online or offline over the course of a year. For 36 hours, the teacher pedagogue's communicative skills development, information and communication technologies and media of self-development and literacy. issues continuous professional development, pedagogue responsibility and flexibility, issues of introducing inclusive education, knowledge of normative legal documents of education and issues of use in professional activities, news in science, current issues of teaching science, professional knowledge necessary to increase the effectiveness of the educational process based on the modules of methods and tools for assessing students' competencies, It consists in developing skills and competences on the basis of modern methods and their professional competence [3].

During this period, students learn foreign methods, new educational technologies, didactic games and organization of trainings. In order for teachers to work independently and think independently in classes, they are given various

assignments in classes, and given demonstration and distribution materials. In the organization of lessons, it certainly begins with instilling the skills of the 21st century. In modern education, it is considered a big problem for a teacher to work in the educational system without 21st century skills. So, what skills can we include in the skills of the 21st century. Before that, one of the modern educational technologies is "Problem-based education". There are 8 essential elements of problem-based learning and they are:

- curriculum content:
- 21st century skills (skills);
- should know;
- guiding questions;
- student opinion and choice;
- difficult (in-depth) questions;
- monitoring and analyzing each other;
- product presented by students (practical lesson, presentation, tool).

In our modern lesson organization, we pay attention to these 8 elements of problem-based education, especially the skills of the 21st century are an important asset. Pupils who have mastered the skills of the 21st century will grow up to be a modern generation, builders of our future. The 21st century skills (4K) are communication, collaboration, creativity and critical thinking. We recommend you a technological map with these elements and skills.

#### **LESSON PLAN**

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Class: Andragogy

Science: News in science, topical issues of teaching science

**Date:\_\_.**\_\_.2023

Topic: Current problems on the	Couple:
scientific-theoretical foundations	
of primary education (lecture)	REPRESENTATION OF THE PROPERTY

Required equipment: presentation, handouts, kits		Learning objective: The teacher uses scientific and methodical articles in the teaching of science		
Stages of the lesson	Key words	Study materials, work to be done	Explanation	
Stage 1 (15 minutes) Enter	Greeting, subject, start, group, 21st century skills	-divide into 5 groups before the start of the lesson; - greeting; - dating; - information about educational news, inventions and discoveries, articles and dissertations; - questions guiding the learning goal; - introducing the learning objective of the lesson to the audience: Setting the problem of "Teacher's use of scientificmethodological articles in science teaching". It is emphasized that it is necessary to work on the formation of 21st century skills.		
Stage 2 (10 minutes)	Training. The main goal: creativity	Question: 1) "In which transport did you come to class?"; 2) "Why did you choose this transport?"		

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Stage 3 (35	Article, literature,	Tasks are worked on in a
minutes)	magazine, scientific	team.
The main part.	article	
Finding a		1. Give information about
solution to the		the magazine and determine
problem.		the order of the article you
"Can the		have chosen?
teacher use	-10	(Communication)
scientific		2. How does your chosen
articles and use	13,0010	article differ from other
them in his	100000000000000000000000000000000000000	articles? (collaboration)
work?"		3. Link the article you have
	0000	chosen to exactly one topic
A 1	0000	that you will pass.
		(creativity)
		4. Is there a part of the
	When assigning tasks to	article that does not apply to
	groups, it is mentioned	you and why? Relate?
6 6 5	that they will be	(critical thinking)
	evaluated after their	
	answers	
00	(10 m	inutes)
		(grading)
- 9/		nse time is evaluated.
		ints: 1, 2, 3
		swer - 3 points
38		wer - 2 points
3	Partial answer - 1 pe	
Step 4	A moment of rest.	Focus training. Training is
(5 minutes).	Who is agile? game	done in pairs. It is done with
Training.	Paper, guiding words,	quick actions.
	actions	
Step 5	Group solution analysis	Feedback
(5 minutes)	Summary	The activity of the groups
Conclusion	(25) (25) (25)	and the answers to the
		problem are analyzed and
Homework		the lesson is summarized.
	(a) (a) (a)	The improvement of
		The importance of
		continuous professional

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	development of a teacher in	
	pedagogical activities	

In general, the teacher should have knowledge, skills, skills and competence in forming the ability to apply scientific articles to his subject.

## Conclusion

In conclusion, it is worth saying that the more communicative the school teachers are, the more teamwork skills are developed, the more creative, proactive, ready for innovations in the educational system, the more critical they are, the more meaningful their work is. and its students become educated people who think in a new way. For this, the teacher should always work on himself based on the recommendations given above, and continuously develop his professional skills as a teacher.

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