

REFERENCE TO FICTION LITERATURE IN TEACHING ASTRONOMY

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ABSTRACT

In recent years, the experience of using the "Case-study" technology, which occupies an important place among the problem-based educational technologies in the teaching of general and specialized subjects, is being formed in higher education institutions.

Keywords: Case-study, modern education, educational style, communicative, professional quality.

INTRODUCTION

Today, in the modern educational system of teaching, various technologies are used to help each pupil (student) to gain thorough knowledge and to strengthen the acquired knowledge. As a result of these processes, students are not given ready-made knowledge, but they are taught to think independently about the assigned task and guide them to independent assimilation of knowledge. For this reason, special attention is paid to the use of problem-based learning and effective application of problem-based learning technologies in the educational system today. In particular, in recent years, the experience of using the "Case-study" technology, which occupies an important place among the problem-based educational technologies in the teaching of general and specialized subjects, is being formed in higher education institutions. In this sense, it is possible to effectively, purposefully and appropriately use the technology of "Case-study" in organizing and teaching practical lessons of "General Astronomy" for students of higher educational institutions.

Case-study (in English case-set, specific situation, study-study) is a specific real or artificially created one, which is described in the case and aimed at expressing the problem of learners and searching for options for its appropriate solution. is *an educational method* based on problem situational analysis of the situation.

The main goals and objectives of the technology are as follows:

- students the right thinking and approach to the given situation or situation.
- Ensuring unity of theory and practice.
- Analysis of different opinions and views on a given problem.

Steps for students to solve the case:

World experience shows that if students' case-solving technology consists of two stages, it is possible to achieve greater efficiency in achieving educational goals:

The first stage is individual (outside the audience) work on solving the case.

The second stage is to work together with the case as a team (in the audience).

Application of the "Case study" technology in the educational process gives the following results: this method has wide educational possibilities and is divided into the following two groups:

1. Educational results - results related to mastering knowledge, skills;
2. Educational results are, in turn, the results of achieving personal effectiveness of education, discovering new personal and communicative, professional qualities of students in the process of interaction.

Case-study" technology is effective in organizing practical lessons of "General Astronomy" for students of higher educational institutions and teaching practical exercises on the problems of finding the ash mine and the ash mine height of lamps, can be used purposefully and appropriately. The following example proves this point:

CASE STATEMENT: Pirimkul Kadirov's work "Starry Nights" says: "Tonight, after Babur became restless inside, Tahir called the merchants and took him out with his bed to the open-top marble platform in the courtyard.

Agra's late autumn was as cool and soft as Andijan's springtime. The stars were shining in the dark sky. To Babur, who was very excited, it seemed as if the stars were spinning again in a vortex and crashing into each other. Babur closed his eyes:

- In my body... as if the blood is coagulating... - he said to Tahir.

Tahir began massaging her shoulders, hands, and then her legs slowly. Babur seemed relieved and opened his eyes again and looked at the sky.

The stars now stopped in place and began to shine quietly. There is the Golden Pile. The stars of the Seven Sisters to the west of it are receding into the horizon. Hulkar stars are rising from the east.

- "Hulkar used to be like this in our Guva," said Tahir.

Babur also remembered the sky of Andijan, where he spent his childhood. Here, the stars of Yetti Aghaini would go around the Golden Pole and sink to the west. There, too, as Yetti Aghayi put his head on the horizon, Hulkar's stars rose to the heights of the sky. When Babur was a teenager, Hulkar used to liken his stars to pieces of diamond. A diamond blade flying happily with its tail took his imagination back to his pure childhood years. It seemed to him that the sky is the same everywhere in the world, and that the stars he saw in Andijan at the beginning of his life were also shining in Agra at the end of his life. When Babur lay looking at the sky, he turned into a young, healthy young man again, and it was as if he was lying on the platform of the Andijan river.

QUESTIONS:

- 1. Do you think that the plot about the appearance of stars and constellations in the sky of Agra and Andijan in Pirimkul Kadyrov's work "Starry Nights" is explained astronomically correctly? Justify your answer.
- 2. How do you interpret the plot of this story?
- 3. Actually in Agra seen star Andijan see you in the sky is it possible
- 4. This to questions how answer to give necessity about recommendation work get out
- 6. You this the problem how solution did would you be

RECOMMENDED RESOURCES FOR STUDENTS:

- 1. M. Mamadazimov , , General "Astronomy " textbook .
- 2 . M. Mamadazimov , Sferik _ and practical from astronomy issues "
- 3. "Starry Nights" by Pirimkul Kadyrov .

GUIDELINES FOR STUDENTS:

- 1. The essence of the case enough realize take _
- 2. In the work the situation to explain service doer factors define _
- 5. Own your opinion statement do it

CASE SOLUTION PROCESS:

- 1. Students with the essence of the case get to know through small in the group discussion does _
- 2. Student small group members with in collaboration the problem solution to do the ground who prepares factors determines _
- 3. The problem solution to do possibility giving of the factors the most the important ones separate is taken .
- 4. Small group members common thought based on the most important factors statement is enough
- 5. Small of groups thoughts analysis is enough and common conclusion is made .

TEACHER'S SOLUTION:

- 1. We will find out whether the constellations in the sky of Andijan can rise and set during the whole night. We determine the condition of the constellations not setting. Geographical latitude of Andijon $\varphi=40^{\circ} 45' 36''$ to equal to

The condition of stars not setting: $d \geq 90$ from $0 - \varphi$

$$d \geq 90^{\circ} - 40^{\circ} 45' 36''$$

$$d \geq 49^{\circ} 14' 24''$$

The conclusion from this is that the stars in the Andijan sky deviation ($49^{\circ} 14' 24''$; 90°) do not set at all.

the declination of stars in the Ursa Major constellation is ($49^{\circ} 14' 57''$; $61^{\circ} 46' 09''$), the Ursa Major constellation does not set for this geographic latitude.

the declination of stars in the constellation Hulkar is ($29^{\circ} 37'$; $30^{\circ} 54'$), the constellation Hulkar rises and sets for this geographic latitude.

- 2. We will make the above account books for Agra. Geographical latitude of Agra is $\varphi=28^{\circ} 22' 12''$.

The condition for the star not to set: $d \geq 90$ from $0 - \varphi$

$$d \geq 90^{\circ} - 28^{\circ} 22' 12''$$

$$d \geq 61^{\circ} 37' 48''$$

Hence, the star deviation for Agra ($61^{\circ} 37' 48''$; 90°) does not set. Since the declination of stars in Ursa Major is ($49^{\circ} 14' 57''$; $61^{\circ} 46' 09''$), the constellation Ursa Major rises and sets for this geographic latitude.

the declination of stars in the constellation Huklar is ($29^{\circ} 37'$; $30^{\circ} 54'$), the constellation Huklar rises and sets for this geographic latitude.

So, in the plot of this work, interpret the Big Dipper constellation for Andijan (Babur also remembered the sky of Andijan, where he spent his childhood. Here, the stars of Yetti Aghayi used to go around the Golden Pile there and sink to the west) . is considered an astronomical error. As a result of calculations, the Ursa Major constellation does not set at this geographical latitude.

Therefore, analyzing astronomical phenomena in the process of reading works of art is an important step towards the humanization of astronomical education.

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