



## TEACHING MATHEMATICAL STATISTICS ELEMENTS AT SCHOOL

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Article history:	Abstract:
<b>Received</b> 8 <sup>th</sup> October 2022 <b>Accepted:</b> 8 <sup>th</sup> November 2022 <b>Published:</b> 17 <sup>th</sup> December 2022	The article outlines the topics of "Mathematical statistics" in school mathematics, teaching and analyzing students in a variety of interactive ways.
<b>Keywords:</b> lesson, statistics, table, graphics, technology, assignment, chart, theme, interactive methods	

Beginning in the 2017 academic year, the study of topics of "Mathematical Statistics" in accordance with the curriculum of secondary schools will be studied from grade 5. The curriculum is allocated 4 hours to the topics of charts and charts for 6th graders, where students will learn the following basic stages [16]:

present data in the form of tables, diagrams;

read the information provided in the form of a table, chart;

distinguish between the data presented in tables, charts;

create charts based on data, create tables;

distinguish, interpret, and modify the information presented in tables and charts that reflect the properties and characteristics of real processes and events.

In the 6th grade, 4 hours were allocated to the topics "Jadvallar and charts" in the 6th grade of general secondary schools of M.A.Mirzakhmedov, A.A.Rahimqoriyev, Sh.N.Ismailov, M.A. Toxtahodjayeva. In Russian literature, in Lesson 5, Vilenkin N.Ya [25] in the "Mathematics" textbook set aside only 2 hours to study round charts. In the mathematics textbook for grade 5, Dorofeeva [135] was allocated 3 hours to study the material in the textbook. In studying this textbook, students are given not only how to learn to read tables but also how to draw up charts and charts. In Lesson 6, by lesson Vilenkin N.Ya. [25] The themes "Column Charts" and "Graphics" will be studied. The textbook, edited by Dorofeev G.V., examines the subject of a circular and column chart [16].

A *table* is the easiest way to organize data. Tables are used in school diary pages, classroom charts, and classroom journals. Tables make it easy to find the necessary information. We will do the following in teaching these topics.

*Methodology for studying the theme " Tables. "*

*"Jadvallar" darsi mavzusini o'qitish maqsadlari:*

formation of skills and skills of working with the schedule: extracting information from tables, analyzing the information obtained;

create tables, empty tables (rows and columns). formation of filling skills;

matonat, sabr-toqatni tarbiyalash.

At the beginning of the lesson, the teacher offers students a small game: class 2 is invited to be divided into 2 teams, and each team receives the text of the assignment specified on the card. The team that was the first to complete the task will win. The game is that the task for the first team is presented in text form, and the task for the second team is presented in the form of a schedule.

### **Assignment 2.1.1 to Team 1**

Erkinjon talked to classmates and discovered how much time each classmate spends a day in front of a computer. Erkinjon's four classmates were reportedly not allowed to use computers by their parents. Five classmates spend no more than an hour a day on a computer, and six classmates spend two hours; Three free-class students spend three hours a day on a computer and the other 2 on a computer four hours or more a day. Based on the information obtained, prepare answers to the following questions:

1. Erkinjon sinfida nail o'quvchi bor?

<sup>1</sup> Kibzun A.I., Goryainova E.R., Naumov A.V., Sirotn A.N. Probability theory and mathematical statistics. Basic course with examples and tasks / Training. allowance. Moscow. FIZMATLIT, 2002. p. 324.

2. How many of Erkinjon's classmates sit on a computer for two hours a day?
3. How many of Erkinjon's classmates spend less than 2 hours on the computer?
4. How many of Erkinjon's classmates spend more than 2 hours on a computer?

**2.1.1.-Assignment to Team 2**

Forming a task for the second team: Erkinjon conducted a survey among his class's students to find out how much time they spend a day on a computer. He presented the results obtained in the form of table 2.1.1.-:

*Results of the class survey*

2.1.1.-jadval

Number of hours that classmates spend on a computer	0	1	2	3	More than 3
Sinfdoshlar soni	4	5	6	3	2

Use the information in the table and answer questions:

1. Erkinjon sinfida nail o'quvchi bor?
2. How many of Erkinjon's classmates sit on a computer for two hours a day?
3. How many of Erkinjon's classmates spend 2 hours or less on a computer?
4. How many of Erkinjon's classmates spend 2 hours or more on a computer?

During the game, readers should notice that using tables allows them to find solutions faster than using a text condition. Thus, data systemization significantly increases efficiency and speed in problem solving.

Readers can then be asked to remember which tables they had met earlier (tables for adding and multiplying numbers, verb arrival tables, queue tables, daily pages).

It is necessary to analyze the simplest schedules with readers, to show that tables are very common in everyday life (calendars, dining rooms menu, store work time table, etc.). It therefore emphasizes that students will be able to categorize and incorporate the material into tables, just as they will be able to use tables as well. It is explained that there are rows and columns in the tables, and that rows and columns can have their own names. Invite readers to provide their own schedule examples.

The following tasks can be considered to improve students' ability to extract and analyze the information presented in the table.

**2.1.2.-Task. Weather** observation results for five months in 2021-2022 are presented in Table 2.1.2.

*Weather tracking results for five months*

2.1.2.-jadval

Ob-havo	Votes					Jami
	November	December	January	February	mart	
Mostly Cloud	8	6	12	9	8	
Partially clouded	12	17	8	14	12	
Quyoshli	10	8	11	5	11	

The last column should be filled.

2.1.2. According to the information included in the table, the following questions should be answered:

1. Identify the months when the exact number of days is the same?
2. Identify the month that includes the most cloudy days?
3. Determine the exact number of days in five months?
4. Determine the number of open days for the whole winter?
5. Which days were open or cloudy in November?

As a result, students will have the skills to work with rows and columns, learn to summarize their table data. In *Grade 6*, students will consider tasks aimed directly at working with tables, with the ability to provide the necessary information in the form of a table.

As a homework assignment, students can be asked to compile a questionnaire that may include a variety of questions: your favorite movies, games, desserts, the size of your family, how much time students in your class spend doing their homework, the birthday of classmates or friends every month of the year, etc. Form the questionnaire in the form of a schedule and, after a conversation with friends, family members or classmates, enter the results of the survey in the structured table.

The following tasks will help to develop the skills to provide the necessary information in the form of a table

**2.1.1 Task.** The table provides information about the notable work of talented students in the district:

T.r.	Ish has	September	October	November	December	Jami
1	She'r	22	30	15	28	95
2	Story	14	17	20	19	70
3	Newspaper article	25	32	21	18	96
4	Scientific project	9	7	12	16	44
5	Technical model	15	11	23	14	63
	<b>Jami</b>	<b>85</b>	<b>97</b>	<b>91</b>	<b>95</b>	<b>368</b>

Answer questions:

- 1) How many scientific projects were created in November?
- 2) How many stories were written in 4 months?
- 3) How many things were done in total in September?
- 4) What were the most common cases done in December? What about 4 months?
- 5) What month is the most commonly done? What's the least?
- 6) What numbers will be the sum of the painted number?

**2.1.2 Task.** Study the schedule of an inter-class football match

T.r.	Sinf	1	2	3	4	5	Ochko	To'plar	O'Reilly
1	6-"A"		2:3	1:2	0:0	2:1	4	5:6	4
2	6-"B"	3:2		5:0	0:1	4:2	9	12:5	1
3	6-"D"	2:1	0:5		1:1	2:0	7	5:7	2
4	6-"E"	0:0	1:0	1:1		2:2	6	4:3	3
5	6-"F"	1:2	2:4	0:2	2:2		1	5:10	5

*Methodology for studying the subject "Diagrams"*

When there is a lot of information, they need to be sorted. A table is the easiest way to organize data. Tables make it easy to find the necessary information without studying all available data. However, tables do not give a visual image of the values ratio. For this, various diagrams are used: barcode charts, circular charts, dotted charts, and so on. The diagrams are used to compare visual, memorable images and data.<sup>2</sup>

*"Diagrams" lesson theme objectives:*

- introduction to the concept of a chart, showing different types of charts;
- learning how to read and build diagrams.

In practice, it is necessary to deal with tables more often, in everyday life the diagrams are less common. For fifth graders, the chart is an absolutely new concept that needs to be explained by specific examples. You can consider the following issue.

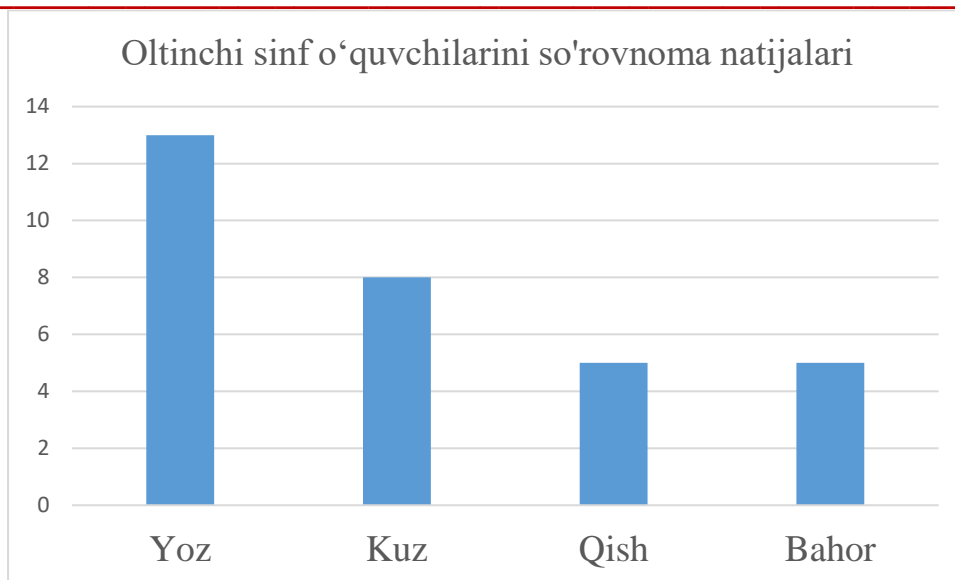
**Scenario 2.1.3.** Among sixth-graders, a survey was conducted on the theme "Favorite Time of the Year." The results of the survey are listed in Table 2.1.3. Based on this table, you can make a chart (Figure 2.1.1).

Results of a survey of sixth graders.

*2.1.3-jadval*

Seasons of the year	Number of readers
Degenerate	13
Kuz	8
Winter	5
Spring	5

<sup>2</sup> Kibzun A.I., Goryainova E.R., Naumov A.V., Sirotn A.N. Probability theory and mathematical statistics. Basic course with examples and tasks / Training. allowance. Moscow. FIZMATLIT, 2002. p. 324.



2.1.1-rasm.

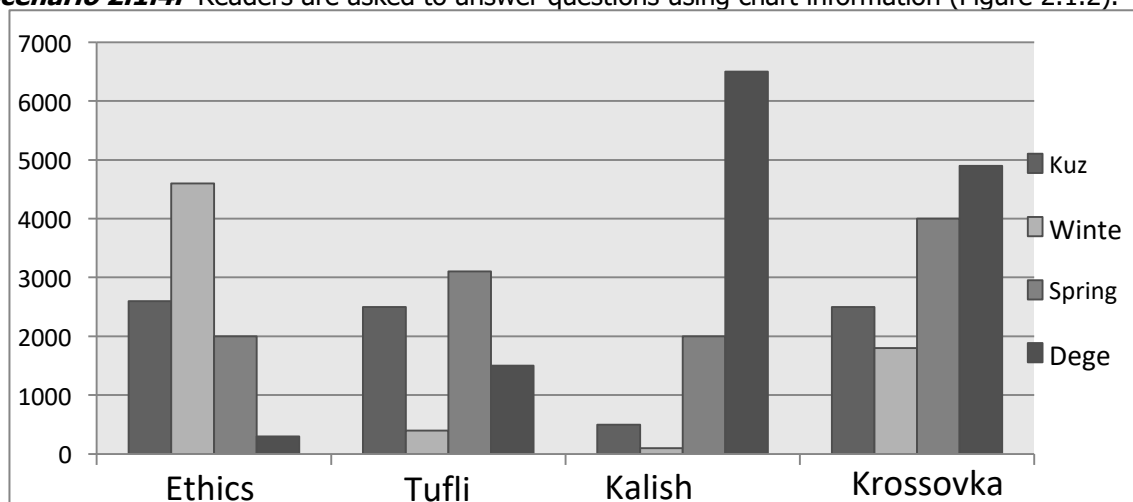
Readers can be offered a comparison of a chart and a chart.

1. Do you think it's more convenient to use a table or chart to compare data?
2. In what form is the presentation of information most understandable to you - in the form of a table or in the form of a chart?
3. Have you gotten acquainted with the charts before. Where are the diagrams used?
4. There are different types of diagrams. The name of the diagram depends on which geometric figure to describe the information. The diagram can be linear, circular, column, conical, cylindrical, and so on. Figure 2.1.1 shows the column chart.

Let's cite other examples of diagrams.

With the task below, you can consolidate the ability to read the diagrams.

**Scenario 2.1.4.** Readers are asked to answer questions using chart information (Figure 2.1.2).



2.1.2-rasm. Variety fasllarda tovarlarni sale diagrammasi.

Questions for the chart:

1. What is the best-selling type of products in the summer (spring, autumn, winter)?
2. What is the best season for selling shoes (boots, sneakers, sneakers)?
3. At what time of the year was the bubble best-selling (boots, squid, sneakers)?
4. What types of shoes are best sold in summer (spring, autumn, winter)?
5. What kind of product is in demand at all time of the year?
6. What is sold well in the fall - boots or boots?
7. How many times do sneakers sell better than staying in the spring?

At the end of the lesson, students will be asked questions.

1. Diagrammalarga misollar keltiring.
2. Are tables or diagrams a more visual and convenient form for reading information?

The following tasks will help to develop skills to provide the necessary information in the form of a chart.

REFERENCES:

1. Kibzun A.I., Goryainova E.R., Naumov A.V., Sirotin A.N. Probability theory and mathematical statistics. Basic course with examples and tasks / Training. allowance. Moscow. FIZMATLIT, 2002. p. 324.
2. Shomurotov, S. S. O. (2021). The Need for Formation of Knowledge on the Effective Use of Water Resources in Young People in the Process of Globalization. (in the Example of the Aral Sea). *International Journal of Human Computing Studies*, 3(2), 89-91.
3. SHOMUROTOV, S. S. O. (2021, April). FIRST STEPS FOR MODERNIZATION OF WATER FARMING IN THE REPUBLIC: ACHIEVEMENTS AND CHALLENGES. In *Euro-Asia Conferences* (Vol. 4, No. 1, pp. 152-155).
4. Shomurotov, S. S. O. (2021, February). Some Environmental Problems Related To Land And Water Resources In Uzbekistan. In *International Scientific and Current Research Conferences* (pp. 39-41).
5. SHOMUROTOV, S. S. O. Construction and Changes in Canals and Pumping Stations in Uzbekistan. *JournalNX*, 7(1), 262-266.
6. Shomurotov, Sh. (2021). Historical significance of reforms carried out in the water system of Uzbekistan. *Society and Innovation*, 2(3/S), 458-465.
7. Шомуротов, Ш. (2021). Ўзбекистон сув хўжалиги тизимида амалга оширилган ислохотларнинг тарихий аҳамияти. *Общество и инновации*, 2(3/S), 458-465.
8. Sarvarbek, Z. (2022). THE STRUCTURE OF THE CONCEPT OF HAPPINESS IN METALINGUISTIC COVERAGE ON THE EXAMPLE OF THE PERCEPTION OF SCHOOLCHILDREN. *BARQARORLIK VA YETAKCHI TADQIQOTLAR ONLAYN ILMIY JURNALI*, 444-446.
9. Obidovich, N. F., Qodiraliyevich, A. N., & Valijon o'g'li, M. T. (2021). E-LEARNING ENVIRONMENT TO PREPARE FUTURE TEACHERS OF COMPUTER SCIENCE IN PEDAGOGICAL ISSUES. *E-LEARNING*, 8(4).
10. Nazhmiddinov, F. O., & Abdullaev, N. K. (2020). History of the SIMPLEX METHOD. *Internauka*, (13-1), 6-8.
11. Isamitdinov, S. S., & Nazhmiddinov, F. O. (2017). PEDAGOGICAL ACTIVITY IN INSTITUTIONS OF SPECIAL EDUCATION. *Scientist of the XXI century*, 82.
12. Kobilova, E., Sobirova, O., & Najmiddinov, F. (2021). The importance of music education in the formation of musical culture and spirituality. *Academicia: An International Multidisciplinary Research Journal*, 11(1), 698-703.
13. Isamitdinov, S. S., & Nazhmiddinov, F. A. (2016). Didactic ýyinlar taxli. *Young Scientist*, (3-1), 7-8.
14. Abdurasulov, A. A. (2020). ORGANIZATIONAL AND PEDAGOGICAL FEATURES OF CORPORATE GOVERNANCE IN HIGHER EDUCATIONAL INSTITUTIONS OF ADVANCED FOREIGN COUNTRIES. *Scientific Bulletin of Namangan State University*, 2(9), 298-303.
15. Abdukarimovich, A. A. (2022). CORPORATE PEDAGOGICAL FOUNDATIONS OF EFFECTIVENESS OF HIGHER EDUCATION MANAGEMENT: Abdurasulov Abdullajon Abdukarimovich. *YOUTH, SCIENCE, EDUCATION: TOPICAL ISSUES, ACHIEVEMENTS AND INNOVATIONS*, 1(2), 80-85.
16. Abdukarimovich, A. A. (2022). Content of the corporate governance system, foreign experience and efficiency of its implementation. *Asian Journal of Research in Social Sciences and Humanities*, 12(5), 240-244.
17. Abdukarimovich, A. A. (2021). Problems of Power and Administrative Governance in Higher Education of Uzbekistan and the Need for Modernization of the Governance System. *Middle European Scientific Bulletin*, 11.
18. Abdukarimovich, A. A. (2022). THE EFFECTIVENESS OF THE IMPLEMENTATION OF THE CORPORATE GOVERNANCE SYSTEM IN HIGHER EDUCATIONAL INSTITUTIONS. *INNOVATIVE DEVELOPMENT IN THE GLOBAL SCIENCE*, 1(3), 120-125.
19. Abdukarimovich, A. A. (2020). METHODS OF MANAGING EMPLOYEES IN HIGHER EDUCATIONAL INSTITUTIONS ON THE BASIS OF CORPORATIVE CULTURE. *European Journal of Research and Reflection in Educational Sciences Vol*, 8(11).
20. Shomurotov, S. S. O. (2022). O 'Zbekistond a Suvdan Foydalanuvchilar Uyushmalarining T a shkilLama Va Faasyonda Yuzaga Kelayotgan Muammola Ri. *Miasto Przyszłości*, 29, 216-220.
21. Shomurotov, S. S. O. (2022). Measures Taken to Develop the Irrigation System in the Country. *Miasto Przyszłości*, 29, 207-209.
22. Boytemirova, Z. (2020). Youth and Spiritual Security. *International Journal on Integrated Education*, 3(12), 181-183.