

# Applying active teaching methods to statistics content in math for 4th grade students at IGC Ben Tre primary and secondary school, Ben Tre city

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**Abstract:** The article presents the results of applying active teaching methods to statistics content in mathematics for grade 4 students at IGC Ben Tre Primary and Secondary School.

**Keywords:** Statistics, active learning, IGC Ben Tre School

## 1. Introduction

In the 2023-2024 school year, the Vietnamese Ministry of Education and In the 2023-2024 school year, the Ministry of Education and Training (2018) has changed the grade 4 books according to the 2018 general education program as presented in Circular 32/2018/TT-BGDĐT, applying the student-centered teaching perspective to promote the positivity, dynamism and creativity of students in Math lessons has limited positive results, creating significant changes in perception and action at IGC Ben Tre Primary - Secondary School in particular, and primary school students in general. However, besides the basic results and advantages, there are still many difficulties and challenges for pedagogues and teachers, even though they have been trained and fostered in the skills of applying active teaching methods. For the above reasons, the author chose the research topic: "Applying teaching methods to statistics content in Mathematics for grade 4 students at IGC Ben Tre Primary and Secondary School, Ben Tre City".

## 2. Content

### 2.1. Active teaching methods

#### 2.1.1. Concept of active teaching methods

According to Binh, N. L (2015), active teaching methods are a term used to refer to teaching methods that promote the positivity, initiative, and creativity of learners. Active teaching methods are not specific methods but concepts that encompass different teaching methods, forms, or techniques to promote and increase the interaction and initiative of learners, creating conditions for them to maximize their abilities and potential in learning to develop creative abilities and problem-solving abilities.

Active teaching brings learners excitement and joy in learning and is especially suitable for children's active psychology.

#### 2.1.2. Characteristics of active teaching methods

According to Binh, N. L. (2015), the typical signs of active teaching methods are: Teaching through organizing students' activities and focusing on practicing self-study methods; Enhancing individual learning activities, coordinating with cooperative learning; Teaching focusing on students' interests and hobbies, the needs of social benefits; Teaching values guided exploration; Combining teachers' assessment with students' self-assessment.

#### 2.1.3. Active teaching methods in the process of teaching Math

For the approach of taking the learner as the center of the teaching and learning process, active teaching methods are a synthesis of ways of coordinating and interacting between teachers and students to promote the activeness of students, that is, focusing on self-study, taking the collective to support individuals, taking machines and technology as tools and using resources to help students develop their thinking and creativity, develop their capacities, qualities and skills in life. Active teaching methods used in general schools are visual methods, suggestive-questioning methods, games, group cooperation teaching, project teaching methods, brainstorming methods, practice-practice methods, problem discovery and solving teaching methods, differentiated teaching methods, and teaching

### 2.2. Applying visual teaching methods to the content of math in grade 4

#### 2.2.1. Concept of visual teaching

Visual teaching method in teaching Mathematics

in Primary School is a teaching method in which the teacher is the one to organize and guide students to operate on visual aids, thereby supporting students to perceive the necessary knowledge and skills of Mathematics. The purpose of visualization is to create an active learning environment, ensuring the interactive participation of learners to help learners easily absorb new knowledge, increase interest in learning and deepen knowledge. In particular, this method plays a very important role in developing the senses and language skills of Primary School students in particular and children in general.

### 2.2.2. Applying visual methods

According to Chung, V. Q (2005), visual teaching methods can be carried out in 4 steps.

Step 1: Teachers prepare teaching aids (can use available equipment or make their own) to ensure pedagogical, scientific, and appropriateness to the objectives and content characteristics of the teaching lesson.

Step 2: Teachers introduce visual aids, state learning tasks and suggest and guide students on how to use visual aids.

Step 3: Students perform operations on visual aids to collect information, self-analyze, comment, discuss, supplement and present results (individual or group). If necessary, teachers can guide, suggest - and advise.

Step 4: Teachers comment, evaluate students' results, and consolidate the knowledge of the lesson (including self-assessment activities of individuals and groups of students).

**Example 1:** Apply visual methods to teaching exercises on collecting, classifying, counting and arranging data: exercise 2, page 38, Dung, T. N. (2002).

Step 1: The teacher prepares a bar chart as shown in figure.

Step 2 + Step 3:

- The teacher introduces figure.

The teacher asks students to observe and describe the picture chart (Students observe and describe).

- So do we know the number of tomatoes in each class? (Students: Don't know).

- What do we have to do to know how many tomatoes each class grows? (We need to count (tally)).

- The teacher invites students to count the tomatoes of class 4A (Students: 9 tomatoes).

- If students count in the usual way (1, 2, 3, ...), the teacher suggests the fastest way to count tomatoes: Your answer is correct. However, is there another faster way to count, has anyone discovered it? (count in pairs (2, 4, 6, ...)).

- The teacher asks students to count, and do questions a and b in their notebooks within 1 minute (Students: Do the exercise in their notebooks).

- The teacher asks students to present in front of the class - comment on each other (Students: present, comment on their group).

- The teacher comments.

- The teacher organizes for students to play the game "Try the super kids' talent" to perform the requirements of exercise 2c.

+ The teacher divides the class into 2 teams, each team is given 5 tomato cards containing the numbers of the data series.

+ The teacher organizes for students to discuss for 1 minute so that each team chooses 5 members to wear the cards and assign standing positions in order from smallest to largest (from left to right) (Students: Discuss).

+ After 1 minute, the teacher lets the 2 teams compete with each other by moving to the front of the class to present the requirements of exercise 2c. The team that arranges the fastest and most correct answers within 30 seconds wins. The remaining members have the task of observing, checking, adjusting and cheering when the two teams compete (Students: 2 competing teams move quickly to the front of the class).

- The teacher asks the students to comment (Students: comment).

- The teacher comments, praises the winning team and encourages the losing team.

- The teacher notes the requirements of questions c and d

Step 4: The teacher comments, evaluates the results of the students, and consolidates knowledge.

**Example 2:** Applying visual methods to teaching column chart exercises: Lesson 17: Column chart, page 39, Dung, T. N. (2002).

Step 1: The teacher creates a bar chart.

Step 2 + Step 3: The teacher projects the bar chart and asks a system of questions to help students recognize the information on the given chart: When learning about a bar chart, we first pay attention to the following information:

- What does this chart represent? (Students Number of trees planted in Grade Four)

- What does the horizontal row below show? (The teacher suggests pointing to the class letter in parentheses, Students: Identify the classes in Grade Four)

- Comment on the relationship between the height of the colored columns and the number written in the left column. (The teacher points to the word tree in parentheses, Students: Based on the height of the columns and the number written in the left column, we know the number of trees each class planted).

- In this chart, how is the number of trees written? (Students: The number of trees is written at the top of each column)

- How does each column represent the number of trees planted? (Students answer: Each column represents the number of trees planted by each class).

- Teacher - Conclusion.

Guide students to read the chart

- Teacher asks and answers, helping students read the chart.

+ How many columns are there in this chart? (Students: 5 columns)

+ Why are there 5 columns? Which classes are they? (Students: Because there are 5 classes 4. They are 4A, 4B, 4C, 4D, 4E).

+ What is written below each column? (Students: Write the class name)

+ What is written at the top of each column? (Students: The number of trees each class planted)

- Teacher organizes students to discuss in pairs, doing:

+ How many trees did each class plant?

+ Use the words most, least, more, and less to compare the number of trees planted by each class.

The teacher encourages students to present combined with pointing to the chart; The teacher points to the columns, visually suggests, and asks: Besides comparing by numbers, are there any other ways to compare? What are they? The teacher lets students present ways to compare when observing the bar chart in front of the class. The student group answer

Step 4: Teacher gives general comments - Conclusion.

### 2.3. Pedagogical experiment

Pedagogical experiments were conducted in parallel between the experimental class and the control class. The experimental class and the control

class were taught directly in class by the same teacher.

The pedagogical experimental method has proven its effectiveness and feasibility when the author applied active teaching methods to teach statistical content in Math 4. Applying these active teaching methods helps students not only master theoretical and practical knowledge but also helps them develop the ability to think positively, and recognize and solve simple problems in the form of statistical math. In addition, students will be able to apply a lot of the knowledge they have learned to real life. From there, it helps students have basic knowledge and capacity to serve as a “fulcrum” for statistical knowledge in larger classes.

### 3. Conclusion

Using active teaching methods, specifically visual methods, has initially promoted students' learning capacity and skills in applying knowledge to solve simple problems related to knowledge. The results obtained after the experimental study are evidence confirming the feasibility of applying active teaching methods, thereby confirming that the application of active teaching methods to teaching knowledge content in Mathematics for grade 4 students at IGC Ben Tre Primary and Secondary School has contributed to developing capacity and skills related to learning tasks, encouraging students to be proactive, explore and apply the knowledge they have learned to solve related practical problems.

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