LEARNING STYLES AND STRATEGIES AMONG HIGH SCHOOL STUDENTS

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Abstract: This research investigates the learning styles and learning strategies of high school students at School No. 13 in Fergana, Uzbekistan. The goal is to understand how students prefer to learn and what techniques they use to study. The study used questionnaires to gather data from 120 students, focusing on four learning styles (Visual, Auditory, Reading/Writing, and Kinesthetic) and three types of strategies (Cognitive, Metacognitive, and Socio-affective). The results showed that most students prefer visual and auditory learning styles. A strong connection was found between learning styles and the learning strategies students use. These findings can help teachers create better, more personalized teaching methods.

1. Introduction

Every student learns in a unique way. Some learn best by seeing, others by listening, reading, or doing. These differences are called learning styles. In addition to how students prefer to learn, it is also important to know what learning strategies they use—such as planning their study time, asking questions, or using memory techniques. [1]Understanding learning styles and strategies can help teachers support students more effectively. In Uzbekistan, where the education system is becoming more student-centered, it is useful to

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[1] Neil D. Fleming and Charles C. Mills, "Not Another Inventory, Rather a Catalyst for Reflection," To Improve the Academy 11, no. 1 (1992): 137–155.

study these differences. This research was conducted at School No. 13 in Fergana, and it aims to answer these questions:

- What learning styles are most common among students?
- What learning strategies do they use?
- Is there a connection between learning styles and learning strategies?

2. Methods

2.1 Participants

This study involved 120 students from grades 9 to 11 at School No. 13 in Fergana, Uzbekistan. There were 68 girls and 52 boys, aged between 15 and 17 years. Students were randomly selected from different classes to ensure the results represent the whole school.

2.2 Research Approach [2] The study used a quantitative research approach, which means it collected and analyzed numerical data. A survey method was chosen because it allows researchers to collect information from many students in a short time. The main aim was to identify common learning styles and strategies and to find out if they are related.

2.3 Instruments[3]

Two questionnaires were used:

1. VARK Learning Styles Questionnaire [4] (Uzbek version) This tool identifies how students like to learn:
- Visual: prefer diagrams, charts, pictures
- Auditory: prefer listening to lessons or discussions
- Reading/Writing: prefer reading books and writing notes
- Kinesthetic: prefer hands-on activities and movement

Students selected answers that matched their preferred way of learning. [Zoltán Dörnyei, The

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[2] Rebecca L. Oxford, Language Learning Strategies: What Every Teacher Should Know (New York: Newbury House, 1990).

[3] Andrew D. Cohen, Strategies in Learning and Using a Second Language (Harlow, England: Longman, 1998)

[4] H. Douglas Brown, Principles of Language Learning and Teaching, 5th ed. (New York: Pearson Longman, 2007)

Psychology of the Language Learner: Individual Differences in Second Language Acquisition (Mahwah, NJ: Lawrence Erlbaum, 2005).]

2. Learning Strategies Questionnaire (based on SILL)

This questionnaire helped find out what strategies students use while studying. It had 30 questions with a 5-point scale:

- 1 = never use the strategy

- 5 = always use the strategy

Strategies were divided into:

- Cognitive (e.g., summarizing, repeating)

- Metacognitive (e.g., planning, self-checking)

- Socio-affective (e.g., group work, asking help)

Both questionnaires were translated into Uzbek and reviewed by teachers for clarity. [John W. Creswell, Research Design: Qualitative, Quantitative, and Mixed Methods Approaches, 4th ed. (Thousand Oaks, CA: SAGE Publications, 2014).]

2.4 Data Analysis

All student responses were entered into SPSS software. The following steps were taken:

- Descriptive statistics (like averages and percentages) were used to see which learning styles and strategies were most popular.
- Comparisons were made between different age groups and genders.
- A correlation analysis was done to check if there is a connection between a student's learning style and the strategies they use.[5]

A result was considered important if the p-value was less than 0.05. This means the result is likely meaningful and not due to chance.

3. Results

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[5] VARK Learn Limited, The VARK Questionnaire, accessed May 16, 2025, https://vark-learn.com

3.1 Learning Styles

The distribution of learning styles among the 120 students was:

- Visual learners – 38%

- Auditory learners – 33%

- Kinesthetic learners – 18%

- Reading/Writing learners – 11%

This shows that most students learn better with visual or auditory methods.

3.2 Learning Strategies

The most used strategies were:

- Cognitive strategies – used regularly by 77% of students

- Metacognitive strategies – used by 60%

- Socio-affective strategies – used by 48%

Cognitive strategies like note-taking and summarizing were the most common. Fewer students used metacognitive (planning and self-monitoring) or socio-affective (group work or asking for help) strategies.

3.3 Relationship Between Styles and Strategies

The analysis found the following connections:

- Visual learners strongly used cognitive strategies

- Auditory learners preferred socio-affective strategies

- Kinesthetic learners often used hands-on and group strategies

4. Discussion

This study shows that students at School No. 13 in Fergana have different ways of learning, and these differences affect how they study. Visual and auditory learners make up most of the student population. Their preferred learning style matched the types of strategies they used.

The fact that fewer students used metacognitive and socio-affective strategies suggests that many are not planning or evaluating their learning, and they may not often study with

others. Teachers can help by teaching students how to use these strategies and by creating classroom activities that support all learning styles.

These results are important for improving classroom teaching in Uzbekistan. When teachers understand how their students learn, they can use different teaching methods to match these styles, making lessons more effective and inclusive.

5. Conclusion

The study at School No. 13 in Fergana found that high school students have different learning styles, with visual and auditory styles being the most common. Most students use cognitive strategies, but many do not often use metacognitive or socio-affective strategies.

There is a clear connection between learning styles and the strategies students use. This means that students choose learning techniques based on how they prefer to learn.

Teachers can use this information to improve their teaching by including more visual materials, group work, and strategy training. This can help all students succeed, no matter their learning style.

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