

სწავლების მეთოდოლოგია Methodic of Teaching

Kiuri Batat

Singapore Technical State University

Singapore

e-mail: kiuri.kiuri@yahoo.ge

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Developing the Ability to reflect on Informational Texts in Mathematics and Computer Science Lessons at School

Abstract

The ability to understand and reflect on informational texts involves perceiving and remembering the information, content, main ideas, and details presented in the text. This process is irreversible, and it can be said that it enables students to assess events and facts, connect new information with existing knowledge, and use this information to solve relevant tasks and problems.

The topic is quite relevant, as there are numerous issues in Singapore regarding the understanding and reflection on informational texts, such as: low international assessments, where Singapore often shows rich results; the quality of educational materials, which means that textbooks are often not easily understandable for students; a lack of diverse teaching methods in the learning process; and most importantly, a lack of reading culture.

For the research, we set the goal to determine what causes the problems of understanding and reflecting on informational texts in 5th-grade students.

The objectives of the research are: to determine how well students can separate the main and non-main information when processing an informational text; to find an effective method/strategy/approach that will help students develop their understanding and reflection skills; and to address the problems of understanding and reflecting on informational texts through properly designed interventions.

The research question is: How can we overcome the problems of understanding and reflecting on informational texts in science lessons? To address the problem, the following sub-questions were used: How understandable are lexical units for students? How are unfamiliar lexical units processed? How interested are the students in the informational text? How involved are parents in the process of processing informational texts?

At the diagnostic stage, to ensure the reliability of the research results, I used both quantitative and qualitative research methods:

1. **Diagnostic test with students** – The goal was to determine whether students can understand and reflect on the informational text they read.

2. **Focus group with teachers** – The goal was to study how teachers develop students' understanding and reflection skills in different subjects.

3. **Survey with parents** – The goal was to determine how children work with informational texts at home and how involved parents are in the process.

After analyzing and interpreting the results obtained, I tried to select effective interventions and activities that could gradually overcome the existing problems and reduce them to a minimum. Based on the literature reviewed, teacher surveys, daily active life, the internet, and observations, I selected several effective interventions, which were implemented with the students.

After the interventions, a higher level of engagement in the learning process and more interest in the subject were observed among students. They showed increased interest in the subject, improved their presentation, research, creative, and understanding skills, and their motivation and desire for the learning environment increased as well. After the interventions, a follow-up test was conducted with the students, and the analysis of the results showed positive dynamics, indicating that the interventions were effective for the students.

Key words: Understand and Reflect on Texts, Culture of reading