

Japanese Students' Reading Skills and STEAM Education

Katsutoshi KAWASHIMA
Osaka Sangyo University

My Experience in Math Class

- At the beginning of a math class, I gave a problem:
- "Prove that the sum of an odd number and an even number is odd."
- Only about 20% of students answered correctly.
- This shows that many students have difficulty understanding basic logical statements.

The Problem – Reading Skills Are Declining

- Many students struggle with basic sentence understanding
- Example: (next page)
- Based on the Reading Skill Test (RST) by Prof. Noriko Arai
- Logical reading is weak — not just vocabulary or grammar

Example

“Alex is a name used for both males and females. It is a nickname for the female name Alexandra, but also a nickname for the male name Alexander.”

In this context, choose the most appropriate word to fill in the blank in the following sentence:

The nickname for Alexandra is ().

1. Alex 2. Alexander 3. Male 4. Female

Less than 40% of junior high school students answered this question correctly!!

Why It Matters for STEAM

- STEAM = Science, Technology, Engineering, Arts, Mathematics
- STEAM needs:
 - Reading instructions
 - Understanding information
 - Explaining ideas
- Poor reading = Poor performance in STEAM

Conclusion and Questions

- Reading skills are essential across subjects
- STEAM can help, but only if students can read and think clearly
- We need to connect reading and STEAM in education



Question for the audience:

- How are reading skills among children in your country?
- What kinds of efforts are made to improve reading literacy?