ABSTRACT

The primary focus is on the development of mathematical education. The emphasis is on the design of effective approaches to mathematics education that promote active learning and engage students in meaningful mathematical activities. The goal is to foster a deep understanding of mathematical concepts and to develop problem-solving skills. This paper presents an innovative approach to teaching mathematics, emphasizing the use of real-world applications and encouraging students to think critically and creatively. Through a combination of interactive activities and collaborative learning, students are motivated to explore mathematical ideas and develop a strong foundation in the subject.

BUILDING ON CHILDREN'S MATHEMATICAL IDEAS: A TEACHING EXPERIENCE IN GRADE THREE

CHRISTOPHER SELTER
The teaching environment was conducted with twice-seven child and

2. COMPONENTS OF THE COURSE

When components of the course were

independently of the teacher, before I give examples, I want to sketch the

we never organize opportunities for the children to express and discuss their feelings. Communication drops in so-called whole-class discussions. Communication with children is a major part of the teaching environment. We have to give as much incentive to children as possible.

Instead I want to show how it was arranged to ensure that the ideas

in detail (see example of the teacher and the children, 1996, 34).

the horizontal component. A single child or the teacher

or less efficient way of working things out (policies of

moral way (Figure 1). The methods must differ with respect to
The entire number line

2.1. General overview

1. The number line

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The number line is a tool used to represent numbers in a linear sequence.
The correct ranking of the empty number line is shown below. Children are asked to rank the numbers 1 to 1000 in order to determine the correct sequence. The numbers are placed according to the following rules:

1. The first digit of the number is placed at the beginning of the number line.
2. The second digit is placed after the first digit.
3. The third digit is placed after the second digit.
4. The fourth digit is placed after the third digit.

The sequence is determined by the correct order of the digits in the number.

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**Figure 3:** The correct ranking of the empty number line.
Person: How many people were in this room?

- A man: Four people. There were two men and two women.

B: Yes. But if I asked you to name the people, you might not recognize them. How do you think the people in this room were identified?

A: I think they were identified by their names.

B: That's correct. People are identified by their names. It's important to remember that. Now, let's move on to the next question. How do you think this room was used?

A: I think it was used as a meeting room.

B: That's correct. This room was used as a meeting room for the discussion of the project. It's important to remember that.

A: I see. Thank you for explaining.

B: You're welcome. Now, let's move on to the next section of the test.
The role of math tools was prominent in the 1950s. However, these tools were not as productive as modern tools, and they require a lot of time and effort. Therefore, the focus shifted to the process of learning and understanding the material. Modern tools allow for more efficient learning, and they are easier to use.

The methods discussed in group settings were also popular. However, they were not as effective as modern tools, and they require a lot of time and effort. Therefore, the focus shifted to the process of learning and understanding the material. Modern tools allow for more efficient learning, and they are easier to use.

The main difference in group settings was the amount of time required. Modern tools require more time and effort, but they are more effective in the long run.

In other words, in the past, the learning process was more focused on understanding the material, whereas modern tools allow for more efficient learning.

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3. The Teaching Experiment

We did a number of conferences where the teacher and other children made their comments.

And the experiment explained:

The child was asked to explain their idea of the picture. The child had written and explained the idea of the picture.

In the beginning of the conference, the child explained some conclusions drawn from the picture. The child had written and explained the idea of the picture.

Where the child's idea of the conference is in the child's mind. The child had written and explained the idea of the picture. A child who is unable to explain the conference is told by the teacher what S.S. (1961) experimental evidence is the importance of children's ability to produce good conference. The conference is held in the form of conference. The child's idea of the picture. The child had written and explained the idea of the picture.

2.6. The main conclusions

The child's idea of the conference is in the child's mind. The child had written and explained the idea of the picture. A child who is unable to explain the conference is told by the teacher what S.S. (1961) experimental evidence is the importance of children's ability to produce good conference. The conference is held in the form of conference. The child's idea of the picture. The child had written and explained the idea of the picture.
A second example: Once always work in a sort of adding down to a second example. Figure 12.4 and several more.

In addition, the people described other situations that they thought
and (0) however the children were not needed in these situations.
AIDON (Figure 12) who were close to each other (of AID 1.5's
STEPS (Figure 2) in Figure 13). AIDON, who had been selected in each
situation, described the different situations. Several problems were presented
during the kind of case the people focused on the children.
an auxiliary task, even if both numbers were not close to a convenient number. When asked, he said that this method was his favorite and that he had no difficulties in using it. We cannot absolutely be sure whether this really was true. Nevertheless, this example once again illustrates the following: what seems to be skillful way for adults does not have to be clever for (single) children and vice versa.

Finally, Sven's 'invention' was to change the sequence of both numbers. He had found out that the ones could be combined to a (convenient) ten so that he could add up to 400 which was his first preliminary result. Subsequently, he added the tens and, in the end, the hundreds of the number that initially was the first one (398 + 2 + 70 + 400).

3.4. 'That's the way we did it' - Reflecting on the course

Reflections about what has been done and learned should always be an integral component of the mathematical teaching/learning process. At the end of the course reflection was given an extra amount of time. The children worked on a big maths diary for the second graders which was also shown to their parents (Figure 17). It contained selected sheets on which the children described their own methods as well as documents from the other parts of the course. In addition, the children included several self-invented problems and wrote an introduction. Kristina, for example, described things relevant to her as follows:

'Dear second graders! We have been working with the empty number line for quite a while. If you want to do it skillfully and the two numbers are close to each other, you can use the reverse task. And if the numbers are not close to each other, it is clever to start with hundreds, then tens and finally ones! We also did maths conferences. And we laughed a lot!'
REFERENCES

[Redacted due to length]
REFERENCES


The broader context: the design science approach

4.

The other points of the contribution are also referred to.