

## Computers in the Classroom

Terri Thompson (Organisation for Economic Co-operation and Development/ECD) & Charles Ungerleider (University of British Columbia) conducted a *State of the Art* review to determine the degree to which contemporary views of the importance of computers in the classroom are supported by good research.



## What Are the Claims?

Efficacy:

- more positive attitudes toward computers
- greater achievement
- increased motivation
- enhanced self-esteem, cooperation, strategies for learning

Effective for:

- reading, writing, math, and science instruction

## What Does the Research Say?

Student attitudes:

- toward computers and related technologies improve with increased exposure to them

Group work improves if teachers address:

- factors relating to the age of the students
- characteristics of task
- amount of independence in computer use

Mathematics instruction improves:

- for higher level concepts
- for students above Grade 7

***But the results of studies are often contradictory and based on insufficient scientific rigor.***

## Suggestions for Further Research

Improve research methods by including:

- control groups
- random assignment of students to programs and evaluations
- unbiased evaluations conducted without pre-existing knowledge of experimental *treatments*

Studies that ask:

- Do boys and girls perceived the value of computers in the classroom in the same way?
- What is the impact of ICTs on student motivation, and how should we measure it?
- Do computers in the classroom enhance students' self-perceptions?
- Do computers in the classroom improve students' learning strategies?

## Implications for the Development of Policy

Most studies were conducted outside Canada, and they lack a pan-Canadian perspective.

Need for investment in well-designed and executed studies to inform policy choices.

Research investments will lead to cost-effective use of computers in the classroom.

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