



Case Study

Taiwan
Intel® Teach Program

"The Intel® Teach Program really stimulates student thinking. It's not just about passively reporting back what's been read or giving the right answer. These comprehensive learning tools help students achieve depth and breath in their thinking. They're much less likely to just go by their own subjective thoughts and feelings."

Prof. Greg C. Lee, Department of Computer Science and Information Engineering, National Taiwan Normal University

"The Intel® Teach Program helps my students think more clearly and logically. In terms of teaching them how to reflect and solve problems, it's much better than traditional methods."

Lead Teacher Chen Siou-huei, Jen-ai Elementary school, Luchou

Building Up Reading and Thinking Skills Thinking Deeply Through Reading

Have you ever wondered what it would be like to live through a plane crash? To journey through the snow-capped Andes? Now, through the Intel® Teach Program, Taiwanese students are passionately reading, discussing and researching the real-life story in ***Miracle in the Andes : 72 Days on the Mountain and My Long Trek Home***. This is not your traditional book report! Instead, students exercise their creativity through thinking tools to come up with their own answers. The Intel® Teach Program is helping them to shatter traditional models of reading and learning. This is what it's like to think outside the box.

Challenges

- In the past, learning has been about giving the teacher the "right" answer, without an emphasis on thinking for oneself.
- Inundated with audiovisuals, students tend to just passively take in information without exercising their own imagination or thinking.

Methods

- The Intel® Teach Program helps students to think about the content and structure of a book they've just read.
- The Seeing Reason Tool helps students visualize the rationale behind actions and characters.
- After plotting out causal relations in the book, students strategize solutions to problems posed in the reading.
- With the Visual Ranking Tool, students plot out a sequence of actions and explain the rationale for how they've ordered things.
- The Showing Evidence Tool allows students to hone their argumentative skills by arguing the pros and cons of a position.
- Finally, students bring together cause and effect, sequencing, argumentation and the identification of core values and concepts towards a complete analysis of what they've read.

Results

- Teachers use information technology to foster high-level thinking, while students integrate thinking tools into their learning and express their thoughts visually. They also learn critical thinking and collaboration skills.
- By linking information technology with education, the Intel® Teach Program helps teachers teach more effectively, and empowers students to read with greater comprehension. Ultimately, they learn to think independently and creatively.

Intel® Teach Program: A Case Study

Reading and language skills are critical tools for learning. It's not enough for a student to just read for basic comprehension. They need to know how to take in information, reflect on it, and become lifelong learners. But are longer class hours, picture books, and worksheets the best solutions?

The reading and writing competition revolving around ***Miracle in the Andes*** came out of collaboration between Intel, Taipei County and National Taiwan Normal University. It was designed to empower students in logical thinking, visual explication, communication and reading. Developed by Hsieh Tung-sen of Chin-lung Elementary School, the competition involved fourth through ninth graders reading ***Miracle in the Andes***, then working together in teams of five to create a research report on the book's key concepts and values.

After just a month, the teams unveiled some amazing projects at the competition. As Hsieh said: "If you give students a chance and just let them try things out for themselves, they'll come up with the most incredible ideas. These kids can do a lot more than we can even imagine!"

One of the judges remarked: "Chung-lin Junior High School's students have utilized Intel® thinking tools to think through the ethical issues involved in this tale of survival. They've understood the core concepts and values of the book. I'm just amazed."

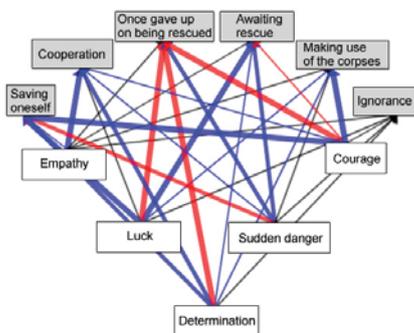
Students analyzed the main characters' reactions to life and death challenges and came to understand how the book works in terms of its chronological sequence. Their visual maps of **Miracle in the Andes** illustrated how those thinking tools helped them think through the book's structure and logic.

Inspired thinking is truly powerful. Students came to understand and identify with the events and characters in the book, which prevented them from being swayed by exaggerated media coverage of, say, the survivors' eating the flesh of the dead. Instead, they focused on dimensions of courage and survival highlighted in the book. Working together, students also came up with alternative survival strategies for the victims of this disaster. Just listening to their discussions made it clear that they were intellectually stimulated and elevated. This was not just a reading competition, but planting seeds of a whole new way of teaching and learning. At the Intel® Teach Program, we truly believe that reading can become an exploration of in-depth thinking!



"We weren't just learning through reading, but through talking with each other and sharing our opinions. By training our thinking and argumentation, we came to a more complete understanding of the event portrayed in the book. It made us really want to learn!"

- Participating student from Ta Kuan Junior High School



Question: Analyze the cause and effect relationships underlying the behaviors and chances of survival for those involved in the airplane crash.



Mind Map of Miracle in the Andes

Intel® Teach Program

This global initiative emphasizes logic, problem-solving and strategic thinking through information technology, project-based learning, and student-centered development. Teachers can develop innovative lessons by utilizing modular teaching strategies, interdisciplinary topics, global online libraries, critical thinking tools, and assessment resources. For more information, please see: www.intel.com/education/tw

"With the help of technology, teachers will be leaders in the transformation of education around the world."

- Craig R. Barrett - Chairman, Intel Corporation