International Polar Education: Potential, Opportunities, Languages And Resources

Sandra Zicus, University of Tasmania
Institute of Marine & Antarctic Studies & Faculty of Education
Why is **international education** important?

- To understand global connections and impacts of local actions
- To develop intercultural communication skills needed to solve global problems
Sharing our Planet (Brazil, Chile, Greenland and Malaysia)

Three examples

Ice e-mystery (Australia and Alaska)

‘The Long Night Survey’ education project (Greenland and France)
Ice e-Mystery

- 12 Australian primary classes paired with Alaskan classes
- Included indigenous students in remote schools
- Project combined science, literature and art
- Paired classes wrote and illustrated polar mystery stories
- Grant funding from DEST (Australia) and NSF (USA)
Teacher workshops were held in both Alaska and Australia.

Postgraduate students from the University of Tasmania worked as science advisors to the teachers and students.
Ice e-Mystery

www.iem.tmag.tas.gov.au
“The students are far more motivated to be involved in written work and in finding out about other people, where they live and how they life.”

“I have noticed that they are much more ready to collect information from the news, current affair programmes, the newspaper, etc. when there is a mention of Alaska or Antarctica.”

“The kids felt empowered and their research was driven by the need to know – not by a plan that I put in place.”
Scientific project:
“The Long Night Survey 2012-2013”
The education project *(Pascaline Bourgain)*
Objectives

In France
1- Educate about climate change and polar regions
2- Promote scientific studies and research

In Greenland
1- Explain why we are here
2- Promote interactions between scientists and local population

3- Discover a new country, a new culture
Workshops in France
Climate, Marine Biology, Arctic Fauna, Logistics, ...
Workshops in Greenland
Oceanography, Glaciology, GPS training, interviews of Elders
Cultural exchanges: video calls and ‘snail’ mail
‘Sharing our Planet’ school project

Greenlandic, Greenland
Danish

Portuguese

Spanish

Brazil

Malay

Malaysia

Chile

64° N

53° S
Project goals

*To help students develop:*

**Environmental understanding & action**
- Understand their local environment
- Identify local & global issues
- Work towards solutions

**Social responsibility**
- Global awareness
- Personal roles & responsibilities in a global society

**Personal skills**
- Interpersonal, intercultural and linguistic skills
- Computer technology skills
How it worked

Students made videos about their local school and environment and shared them with the other schools.
Focus questions were translated into local languages

1. Getting to know each other: Weather, climate, natural resources, and human life where you live

2. Investigating a local problem: Pollution

3. Making global connections: Climate change

4. Sharing your knowledge: Environmental action
Focus questions guided students through environmental investigations in the field and in class in their native languages...
... and the students shared the information in English through Edmodo, emails and video conferences.
Some results

Both the students and the teachers learned more about their own natural environment.

Greenland students raised money through bake sales, snow shovelling, and posing for pictures in native dress.

Extreme weather information shared by the Chilean students was used by the Greenland school.
Greenland students meet their colleagues in Malaysia!

Student-made documentary shown on Greenland public television:
https://www.youtube.com/watch?v=hyAThX2EE48&sns=em
Challenges

• Time
  – School year schedules
  – Time zones

• Resources
  – Coordination
  – Training
  – Technology
  – Money

• Languages
Bridging the language gap

Engagement:

• Make it personal.
• Focus on similarities.
• Start studies in native language(s).

Support:

• Develop a strong local network.
• Use peer support.
Bridging the language gap

Reaching mutual understanding:

• Be aware of cultural and linguistic differences.
• If you don’t understand, ask for clarification.
• Don’t be afraid to mix languages.
• Use music, art and other visuals.
• Use on-line translation tools (carefully)
Language challenges in international projects

• Teachers’ fears of trying to communicate in another language.

• Lack of materials in native languages, especially when you need the same materials in more than one language.

• Most new research is published in English.

• More translation is needed!
Translation of science

Published research

Scientific English

Public English

Scientific native languages

Public native languages

Resources needed: time & money
Issues of translation

- Translator expertise in languages & subject (science and education)
- Lack of equivalent words in a given language (conceptual equivalence)
- Researchers’ lack of knowledge of scientific terminology in their own native languages.
Dividing the tasks and combining knowledge means less work (and time) for everybody!
Some keys to success...

Passionate volunteers!

Don’t be afraid to try.

Involve parents and local community.

Channel student enthusiasm.

Pascaline Bourgain (France)
Elena Sparrow (USA)
Melissa Hansen (Greenland)
Lars Poort (Greenland)
Miriam Hebling Almeida (Brazil)
Priscilla Velasquez (Chile)
Lorena Gonzalez Aguila (Chile)
Yayasan Anak Warisan Alam (Malaysia)
Copenhagen Zoo (Denmark)
... and many others.
Research by the British Council in 2014 found that more than 1 billion people around the world are actively learning English as a second or foreign language.

They predict that this number will almost double by 2020.

Is there an opportunity for polar education here?
Thank you for listening.
Any questions?