



#### International Polar Education: Potential, Opportunities, Languages And Resources

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## Why is international education important?



- To understand global connections and impacts of local actions
- To develop intercultural communication skills needed to solve global problems



### **Three examples**



Ilar ZOC 'The Long Night Survey' education project (Greenland and France)

#### Sharing our Planet (Brazil, Chile, Greenland and Malaysia)

# Ice e-Mystery











International Antarctic Institute



- 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

# Ice e-Mystery



"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."





Student artwork from Polar Bears & Penguins

"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"









Slides provided by Pascaline Bourgain

#### The education project (Pascaline Bourgain)









#### 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





#### Stories of the mascots Titlouis & Toornaq



## 'Sharing our Planet' school project





## **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...



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... 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.



Extreme weather information shared by the Chilean students was used by the Greenland school.

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



## Two years later:



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







## 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!



# **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.



#### English language One activitv PEI members possible Convert to Spanish using on-line translator approach A Spanish-speaking teacher reviews it for general meaning and grammar, and revises where needed. Members of APECS, SCAR, Revised translation posted on IASC, etc. password protected web page **Dividing the tasks** Spanish-speaking scientist volunteers review for and combining scientific accuracy and revise where needed knowledge means less work (and time) After review, translated activity posted on PEI public access web page for everybody!



## Some keys to success...

Passionate volunteers!

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.



Don't be afraid to try.



# Involve parents and local community.



Channel student enthusiasm.

# A final thought . . .

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?

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