



## **Scientix observatory: Good practices in internationalisation and localisation of learning objects in STEM education**

Victor J. Perez Rubio – Premysl Velek  
European Schoolnet

MPTL18 Conference, Madrid, Spain, 11 September 2013



European Commission  
Directorate-General for Research



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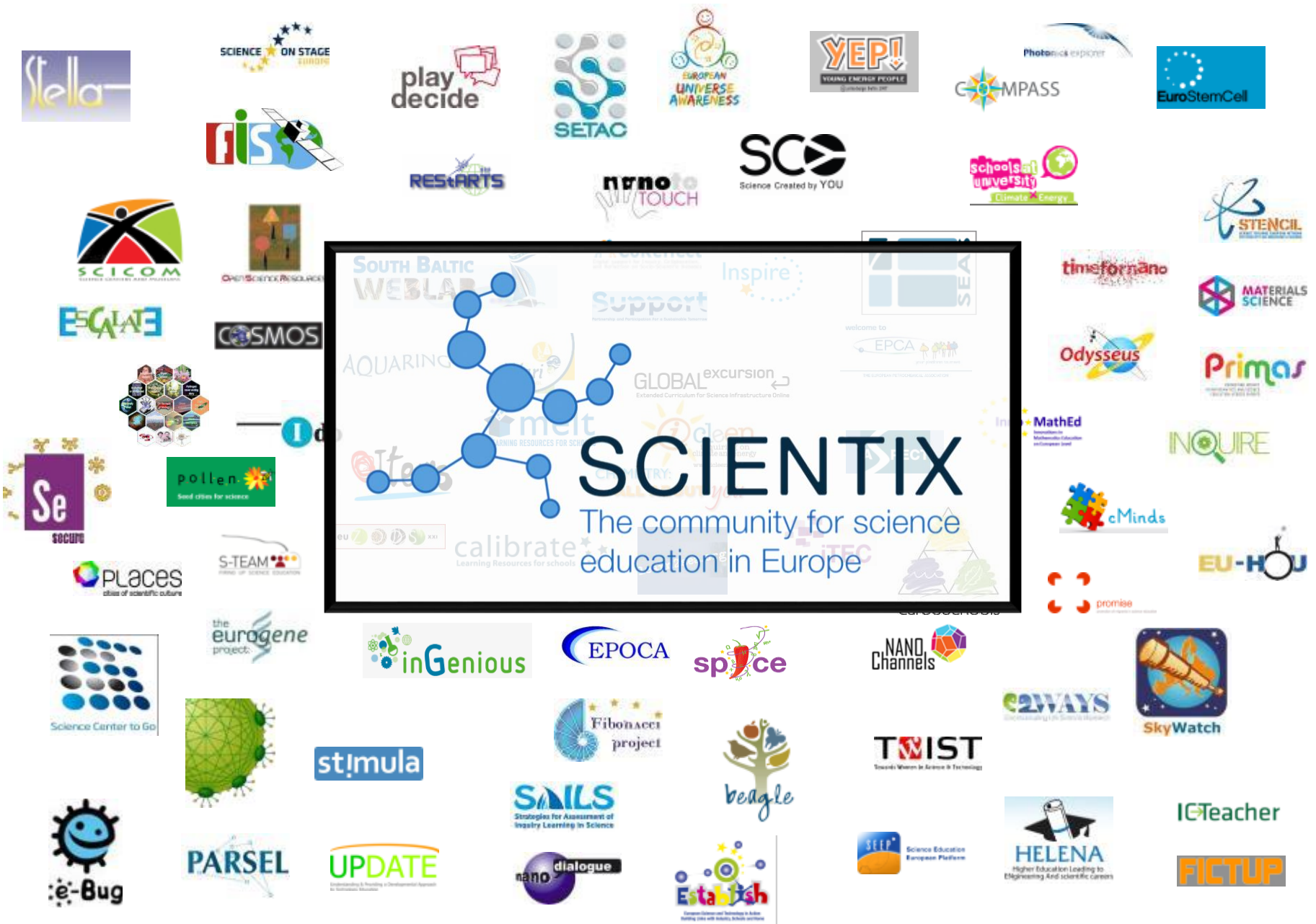
## Network of 30 Ministries of Education in Europe

Support schools in  
bringing about the best use  
of technology in learning

Promote the  
European dimension  
in schools and education

Mission:  
  
raise the quality of  
education in Europe

# EUROPEAN SCIENCE AND MATHS PROJECTS





Scientix facilitates dissemination and sharing of best practices in science and maths education in Europe:

- **Scientix portal [www.scientix.eu](http://www.scientix.eu)**
- **European Conference, 6-8 May 2011, Brussels**
- **Workshops for teachers and/or researchers in STEM education**





**SCIENTIX**  
The community for science  
education in Europe

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Researchers' Night will take place...

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ITEC (Innovative Technologies for an Engaging Classroom) aims to develop engaging scenarios for learning in the future classroom that can be...

[Read more ...](#)



### TEACHING MATERIAL Respiratory Hygiene – Super Sneezes – Junior



### REPORTS NANO DIALOGUE. Enhancing dialogue on nanotechnologies and nanosciences in society at the European level



### TRAINING Second Life in the classroom

## TAGS

Energy Computer science  
Physics Ecology Disease  
Mathematics Astronomy  
Biology Geography

Education for sustainable development

## TRANSLATION ON DEMAND

ÜBERSETZUNG  
ANFRAGEDIENST

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BASIC INFORMATION

RESEARCH INFORMATION

TEACHER INFORMATION



## INSPIRE – INNOVATIVE SCIENCE PEDAGOGY IN RESEARCH AND EDUCATION



The teaching materials produced for the purpose of this project were:

- Basic information pages for each of the 60 learning resources used during the project (12 Physics, 12 Chemistry, 12 Maths, 12 Biology and 12 IT/Informatics)

Each resource is in  
five languages of the  
English:

- Overview: this is a
- Suggestions: the
- Learning objectives
- Terms you need
- Additional information

### CONSERVATION OF ENERGY

**Descriptor:** Simulation, Computer, Physics, Energy

**Age:** 5-21 **Resource type:** wiki

**Description:** Overview and suggestions on how to integrate a simulation. [Read more...](#)

**Creative Commons license:** 

**Project:** Inspire

**View this in:**

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# Resource repository

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## FIND RESOURCES

Keywords:

Subject:

Language(s) of resource:

Age range:

 - 

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Did you find an interesting learning resource in Scientix teaching materials? If it is not in your preferred language, you can use the translation on demand service to get it translated. [Read more...](#)

## TEACHING MATERIALS

You searched for "[[keyword!teaching]]" the system found 235 result(s).

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**A STEM CELL DREAM: USING IPS CELLS TO TREAT DISEASE**

# On-demand translation of teaching materials

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## A STEM CELL DREAM: USING IPS CELLS TO TREAT DISEASE

**Descriptor:** Biology, Biotechnology, Cell, Disease

**Age:** >15    **Resource type:** simulation , assessment , open activity , presentation , tool

**Creative Commons license:**

**Project:** Eurostemcell

**Author:** EuroStemCell EuroStemCell

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### DESCRIPTION

A dialogue based event about the real issues in stem cell research. Can IPS cells – 'hot stuff' for researchers as it is one of the latest major breakthroughs in stem cell science – be used to treat disease like Parkinson's? Can we develop safe treatments now? What does science say?

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## The Licenses

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<http://creativecommons.org/licenses>



# User's Request



[www.scientix.eu](http://www.scientix.eu)

We send  
to  
translate

Once  
translated  
we edit it

Translated  
and edited  
resource

# Scientix repository

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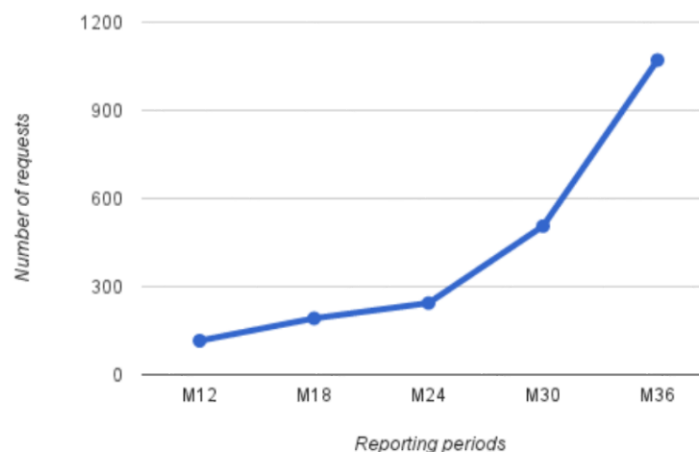
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Resource

# Resources translated

- Evolution of requests:



- From May 2010 to November 2012 the Scientix community member made:

**1,071 requests**

- From these, the number of accepted and translated resources reached the:

**440**



# Why translating by request?

- Many projects create resources in a limited number of languages.
- The most complex part is the creation of a new resource, but if not translated it is confined to the speakers of the original language.
- If the student is the target, it should be better to have it in their curricular language unless the teacher wants to do a cross-curricular activity.
- The translations are done once there is interest from the users for a more efficient use of the resources.
- Reach larger audience.
- Possibility of interaction between teachers and classes from different countries using the same material.

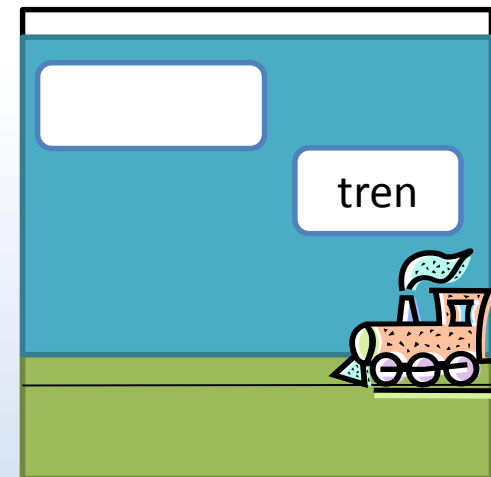
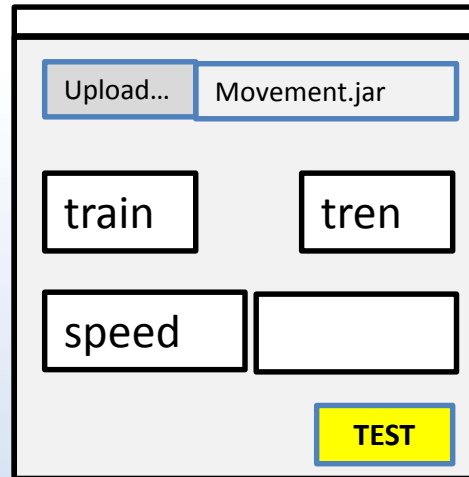
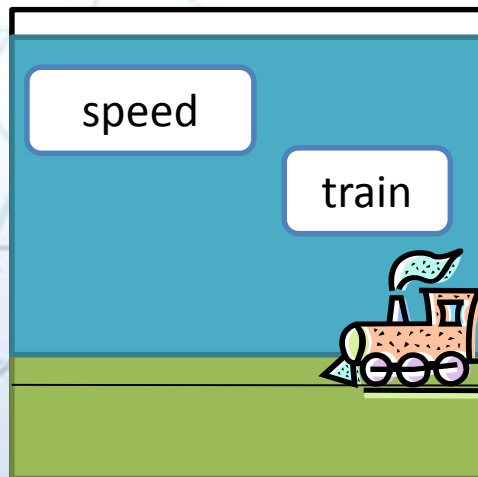
# Travel well resources

- Transnational topics.
- Usage of icons instead of words in a specific language.
- The format of the resource uses a widely spread software.
- No instructions needed.

# Good practices creating resources easy to translate

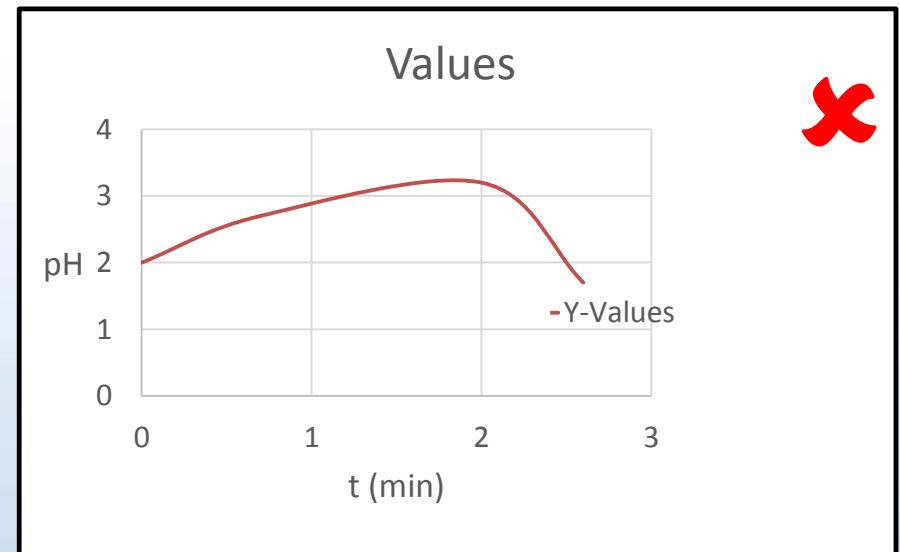
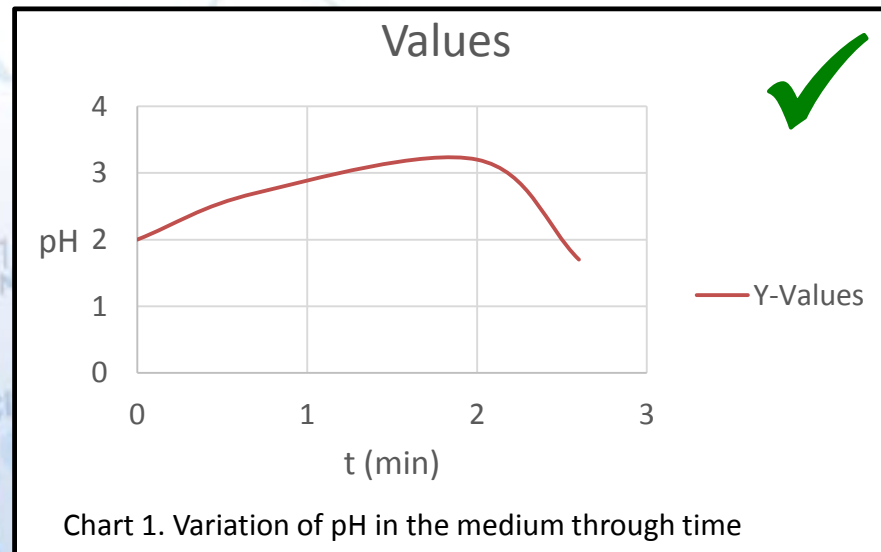
When using multimedia formats as Java or Flash, create a tool where you can upload the resource, edit its text and test it.

e.g.: <https://phet.colorado.edu/en/for-translators/translation-utility>



# Good practices creating resources easy to translate

When using charts, make sure the text included can be editable in the future. Charts added as images don't cause troubles to translators if there is no text. The chart can be shortly described below it.



# Good practices creating resources easy to translate

When creating a resource it is very important to add a clear reference to its copyright and what does it allow.

A copyright that doesn't allow changes, doesn't allow translations.

Using the Creative Commons Licences makes the process of translation easier as they have been created to facilitate the usage of materials.



# Good practices creating resources easy to translate

When the resource is text based (e.g.: lesson plan) it is a good practice to include two versions, one in pdf and another in a editable format (e.g.: odt/docx)

# More information

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