RESULTS OF CLASS EXPERIENCES

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I SEE

It's your time to imagine the futures

The starting point

The structure of the ISEE modules,
characteristic and specific,
has been outlined and shared within the project.

It is based on the objectives and the philosophy of the project itself.

The research work began in September 2016,
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Working group

The construction of the start-up module has seen us
- teachers of an Italian scientific high school -
collaborate within a working group consisting of:

Italian, Icelandic and Finnish professors and researchers
Finnish and Icelandic teachers

“Different souls” at work

At the design stage:

different professionalism, styles and skills have been used

(disciplinary, didactic, in terms of research and teaching, related to future studies …)

Under experimentation:

each of the three nations involved in the project managed tasks within a specific module slot

An enriching experience

as a personal training

for comparison with different realities and teaching / learning styles

that has highlighted the specificities of each individual

“A sensitive world and a world of paper …”

Galileo in the Dialogue …."*Our discourses have to be around a sensitive world, and not around a world of paper*"

but we know how much Galileo has traveled in a world of paper, an ideal world built with theoretical arguments, to arrive at the regularities to which the sensitive world seems to adapt

our styles of teaching / learning compared

greater attention and care for practical activity and / or the phenomenological and experimental dimension

vs

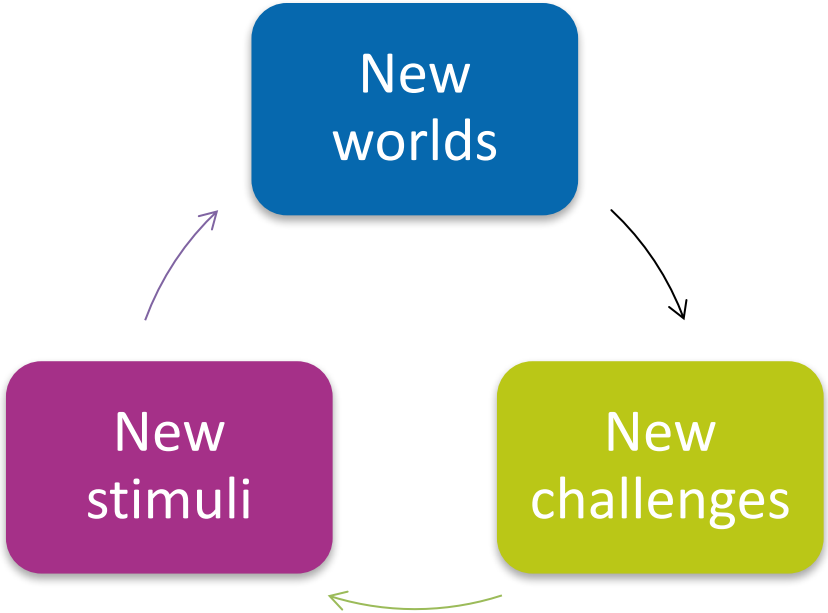
greater attention and care for the conceptual dimension and meta-reflection

The second phase: the MODULE on Artificial Intelligence (A.I.)

June - July 2017:
The Italian group decides to put
at the center of the new experimentation
the theme of Artificial Intelligence

The construction of the module required the following months of work ...

What it means for us - as teachers - to live a project like ISEE



Have a behaviour
in continuous research

New worlds...

new perspectives .. new goals .. new themes

new ways of looking at:
discipline - scientific knowledge - scientific education

New challenges…

- The personal training on innovative and extra-curricular subjects
- The choice and adoption of multidisciplinary perspectives from which to look at scientific contents
- The identification of new and significant keys for reading contents
- The experimentation of new and innovative ways of 'working'

New challenges.....

In the research phase:

live the initial phase of
exploration of ideas (and doubts)

overcome - by critical and constructive comparison and implementation of different skills - the difficulties of identifying, delineating and unraveling the threads of the route

In the experimentation phase:

live meetings with experts

observe students at work in different ways, be able to guide them in the use / re-reading of knowledge, listen to their reactions, opinions, their desires ..

The “breath inside” the school

Sharing → of work

Analysis / evaluation → of results / impact

New collaborations

Recognize the value of "extra" activity

activities that 'mark' ... because they

motivate, raise interests, give relevance
activate new looks and mature new awareness
orient, promoting the critical sense
leave space for debate and creativity

Some questions for the future … that we would like to share with you

- How to emphasize the work of the students?
- How to share / communicate the results?
- How to take part and enhance meetings with experts?
- How to reproduce the module enriching it with contributions of several voices within the school?

The reactions of the students....

observing them
and listening to them
during the activities ....

A participatory atmosphere

- The whole course and the single group activities have been "taken seriously“
- A climate of participation and of listening to each other was created; the students seemed "amused" to play with their own ideas
- The students showed that they were dealing with a complex and far-reaching issue and did not shy away from the challenge

The choise of the topic – A.I.

- Current and of great interest for young people
- Multidisciplinary: involves many dimensions (technical-scientific, social, economic, ethical, personal identity ...)
- Relevant from a social and personal point of view

The structure of the module

First part of the module: frontal and/or interactive lessons

Language and tools of complex systems in particular:

- from *one and necessary* to *many possible*
- *linear* and *circular* causal models
- *possible* scenarios

The structure of the module

Second part of the module: group works

Structured activities to help build future skills

In summary.....

Choice of the topic and structure of the activities to create a climate of "cognitive tension" and "genuine participation“ ...

- reasoning on different dimensions aware of the difficulty / impossibility to keep them together
- to realize the complexity of the problem and the importance of each one's contribution
- grasp that there are no true or false answers, there is room for each one with their own opinions and desires

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The voice of the students …

We would have needed another three-hour meeting in which we could confront each other, all together (Giulio)

A final meeting to settle everything would have been useful (Claudia)

I really liked it because it's the future […] I liked this part of the discussion (Francesco)

From the group works....

Centrality of complexity

not the search for certainties but the acquisition of adequate "*thought tools*" with the consequent need for change of attitude

The voice of the students…

I was very interested in this topic […] I had a totally different vision of what the A.I. can be […] we are inside a world and we do not realize it […] the technology is so obvious that we do not realize that, in the past 10 years, things have totally changed (Giovanni)

It emerged that student

fear that A. I. (technology as they call it) can not replace man with regard to thinking (and here they opened topics such as responsibility, awareness, control);

advocate the use of technology that can replace / relieve the man only in the most difficult tasks in order to have more free time to devote to his/her own interests.

The voice of the students…

Leave the most basic things to Artificial Intelligence in order to simplify the life of men but always leaving room for man. (Francesco)

Artificial Intelligence as a tool but it can not replace man. An instrument to facilitate life. (Laura)

At the end of the module they did not become experts in complexity and Artificial Intelligence but there was a **change in attitude** and a greater **awareness**

I came here with an idea of totally negative artificial intelligence and I came up with a more conscious idea (Luca)

Awareness that it is necessary to build adequate thinking tools to deal with uncertainty

Need for a redefinition of scholastic knowledge

Group named …

Young visionary intellectuals who believe in the future

The action that they thought today to solve the problems of the city desired in 2040 is linked to the redefinition of knowledge, aware that this is the challenge

The voice of the students …

At the base of everything there is education, we have focused everything on education. [….] Today you study for jobs that are already dead; you get in the field of work unprepared, knowing nothing about it

Education is the only thing that can save us in the future

In an even more complex society it is necessary to raise the level of the critical sense, the ability to process and analyze, [...] raise the level of the ability to analyze the scenarios.

Today the analysis is more complex, the wider world, [...] we need to train people in such a way that they can deal with this complexity

What frightens young people in facing the future?

Is it just an uncertain future or even a feeling of inadequacy in dealing with it?

The voice of the students…

The course started with the idea that we - young people - are pessimistic about the future; [but we played to be] young visionaries who have hope in the future (Giulio)

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