

STEM IN EDUCATION AND LIFE

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STEM in schools

Curricula are «over stuffed» with factual content –
More & more topics while few are removed

Pedagogy – assessment models

Text based – factual recall → Exploratory learning modes (ISBE)

What is the relevance of content to the pupils' lives and future careers?
Pupils fail to see how STEM relates to society's current challenges
(climate change, energy, ...)

**High STEM performance in a country does not lead necessary to a higher level
of interest**

3 major questions

Attractiveness of STEM

- How can STEM teaching and learning be reformed?
- How to enhance engagement and uptake of STEM studies

STEM Educators and Innovation

- How can educators be supported in implementing innovative approaches to STEM education?

Cooperation

- How can educators and industry fight the main stereotypes around STEM education and careers?
- How can all stakeholders cooperate more effectively to tackle the STEM challenge in a more holistic way ?

Signs of change

Innovative pedagogies

Assessment approaches

Professional development of teachers and other school actors

National STEM policies and initiatives

Signs of anxiety

Perception of lack of motivation for studying STEM (gender issue)

Anticipation of a strong deficit of STEM teachers

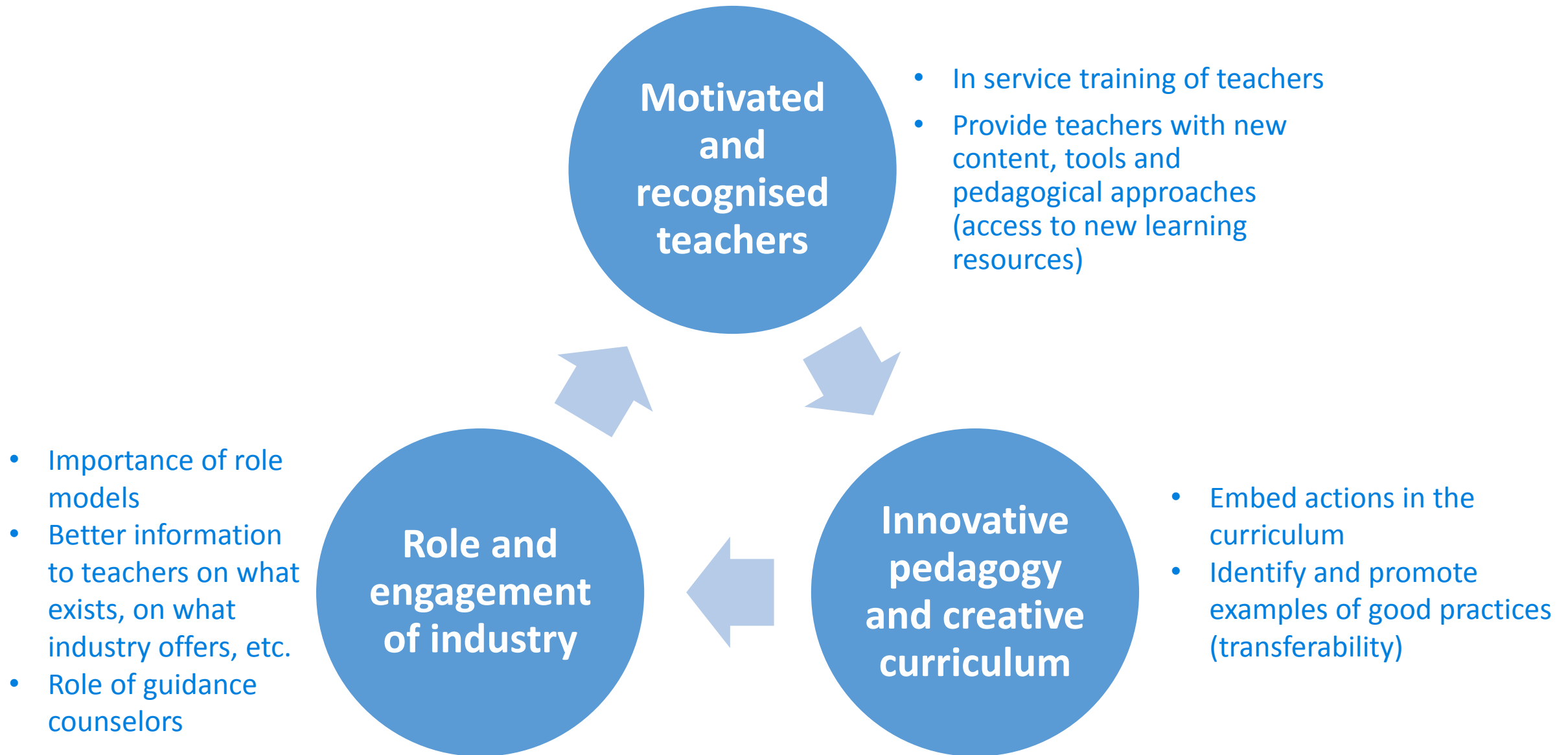
Lack of well trained professionals (primary school teachers guidance counsellors)

Sustainability mechanisms of projects

Mainstreaming processes of successful innovation (ITE)

How to make STEM studies and careers more attractive

3 key inter related factors



How to leverage existing initiatives of European Schoolnet



The community for science educators in Europe

www.scientix.eu



Brings teachers and industry together to excite pupils about STEM www.ingenious-science.eu



STEM Alliance Initiative

School/industry partnership

Awareness activities
STEM discovery week in schools

Knowledge activities
(evidence, study, research)



European Coding Initiative



Fostering logical thinking



Fostering problem solving



Fostering coding skills



Attracting students to computer science



Fostering employability in ICT sector

EUROPEAN SCHOOLNET ACADEMY
ONLINE COURSES PLATFORM DELIVERING
INNOVATIVE LEARNING SOLUTIONS AND ONLINE
PROFESSIONAL DEVELOPMENT FOR TEACHERS



Develop your teaching practice

What next ?

Cooperation with Ministries

- Platform of exchanges on policies and practices
- Professional development of teachers (Scientix, EUN Academy,)
- Cooperation within Scientix and other initiatives (STEM alliance, EU coding initiative,).
- Supporting schools and teachers

Cooperation with Industry

- Contextualisation of STEM teaching
- Attractiveness of STEM careers
- Mobility schemes
- STEM alliance and EU Coding initiative

Observatory of STEM trends in Education

- Developing a research based activity enabling accessible state of the art analyses, grounded in reliable evidence on any strategic STEM education issue

Thanks

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- Industrial partners
- Senior Advisers of EUN and all colleagues of EUN