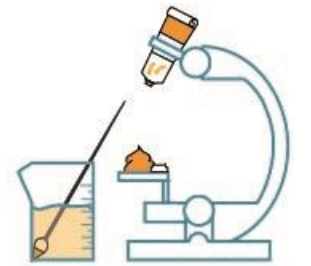


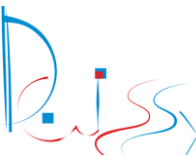
Competence Needs and Professional Development of STE(A)M Educators



STE(A)M Educator Competence Framework

Natalia Spyropoulou

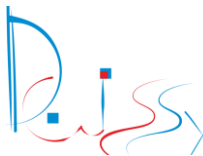
DAISSy research group @ Computer Technology Institute & Press
“Diophantus”



Co-funded by the
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Why do we need a competence framework?

- Need for education system reform to support STE(A)M education
 - Limited consideration of the challenges educators face
 - Guidance for educators in terms of how to **effectively teach STE(A)M-related courses is lacking.**
- Better preparation of educators
- Educators **need to update** their **competence profiles**



Competency-based perspective and development methodology

Competence frameworks and profiles

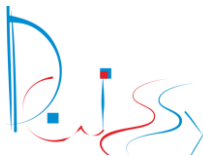
- Assist in effective learning and development

Educators' competence frameworks and profiles

- Goal setting for professional growth and efficiency,
- Guide for educator training and professional development activities.

Methodology for design STE(A)M educators competence framework

- Desk and field research to align with professional development requirements in different countries and levels of education.
- Evolution phases by the community



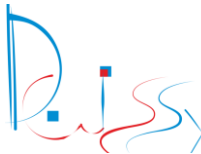
STE(A)M educator competence framework

A complete set of competences

- 5 perspectives
 - 16 competence areas
 - 44 competences

Two specific-aims

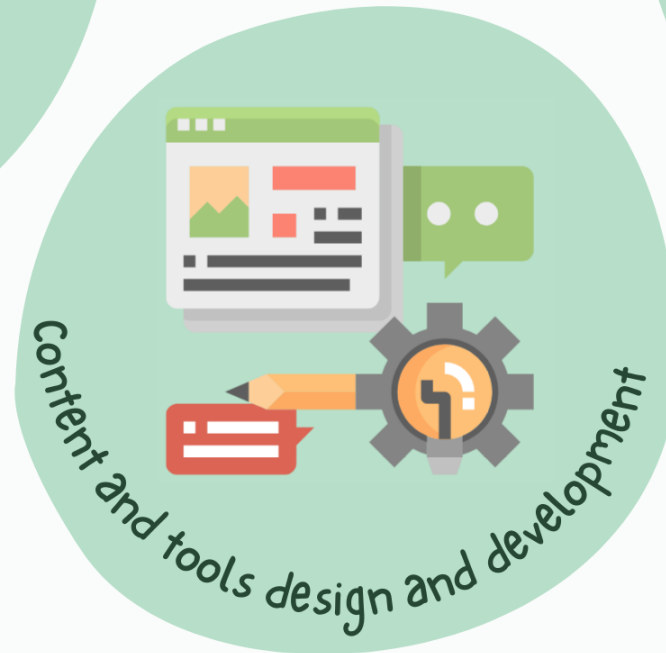
- Be usable by educators for self-evaluation purposes as **a self-assessment tool**
- Allow **support of professional development of STE(A)M educators**



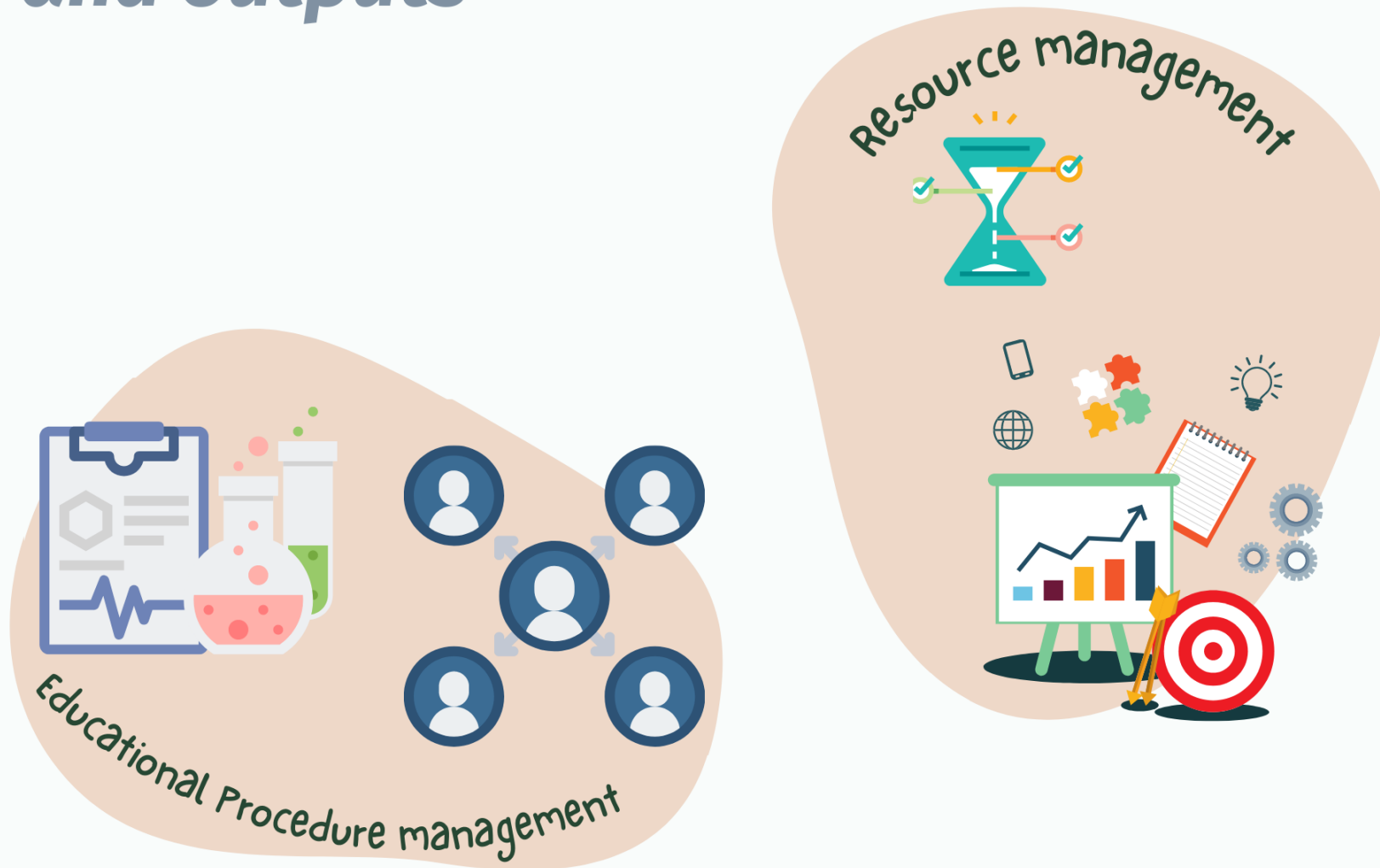
1. Educator as teacher-trainer-tutor / implementing the educational procedure



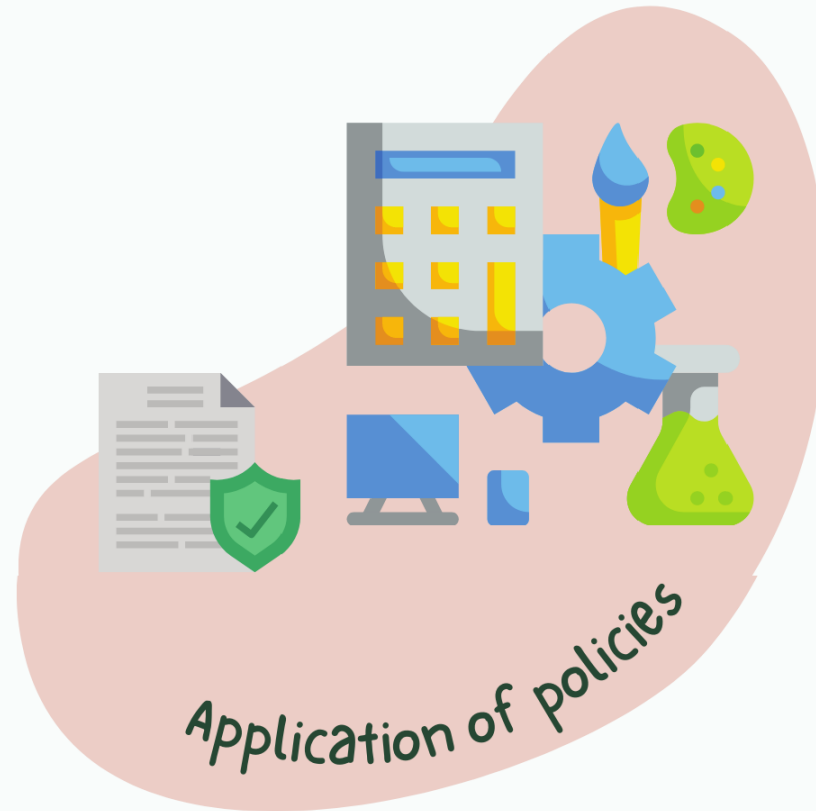
2. Educator as *learning designer and creator* / *designing and producing outputs*



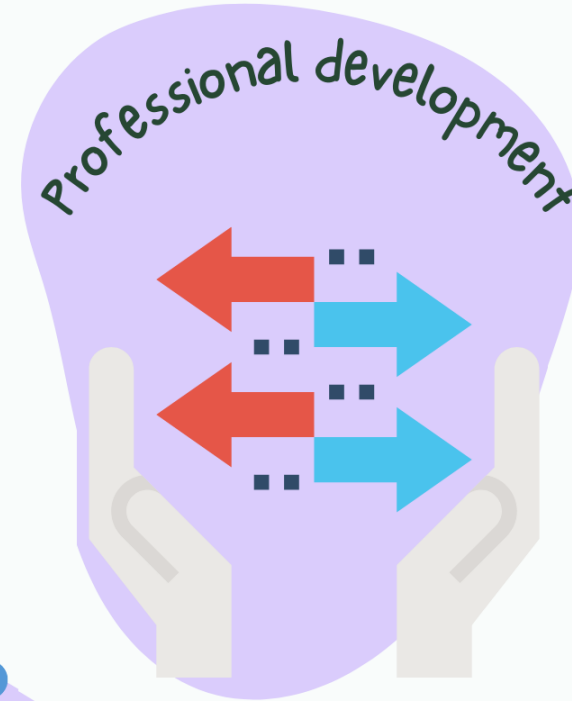
3. Educator as orchestrator and manager / coordinating procedures and outputs



4. Educator as *community member / interacting with the environment*



5. Educator as *professional / developing and applying competences*



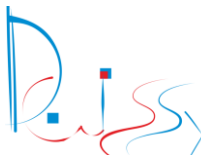


Evaluation of the Framework

By educators, researchers, school managers/directors and policy makers at all levels of education from different organizations and geographic regions.

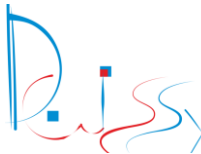
Two-phase evaluation

- Survey-based
 - More than **300** participants from **21** countries
- Interviews-focus groups



The use of STE(A)M educator competence framework

- **Professional development program** for STE(A)M educators, including a blended course and a Massive Open Online Course (MOOC).
- **STE(A)M educator profile(s)**, following the rules of ESCO framework.
- **STE(A)M readiness Self-assessment Tool** for educational organizations and educators (based on SELFIE tool)



Thank you!

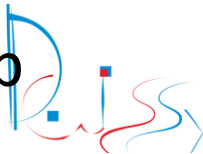
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