1. Objectives and outputs of IO8 as outlined in the ConnEcTED proposal (p. 214)

IO 8, as IO 7, forms part of the intellectual outputs that are to enhance a coherent internationalization of the Teacher Education Curriculum or, respectively, transnational impulses of coherence orientation. In this context, a wide concept of ‘internationalisation’ is applied – focusing not only on tradition dimensions and approaches such as mobilities, but including measures of what is referred to as "Internationalization at home" or “internationalization of the Curriculum” in teacher education:

“Internationalisation of the curriculum is the incorporation of an international and intercultural dimension into the content of the curriculum as well as the teaching and learning arrangements and support services of a program of study” (Leask, 2015, p. 209).

Against this background, the goal of IO 8 is the development of a digital conceptual tool kit with tools and approaches for a coherent internationalization and/or transnational coherence orientation in European teacher ed. systems, combined with interactive, co-creative Communities of Practice that pilot and further develop it. In order to facilitate the communication, cooperation and co-creation of those CoP across borders, digital media come into play – as a vehicle and a topic.

What does digital transformation mean in and for teacher education, what chances and challenges does it create for teachers and teacher educators - how might even "core teaching practices" (cf. IO 5) be subject to change? In accordance with the project’s priorities, the respective tool and concept kit will focus on how digital media might be integratively used to enhance a coherent knowledge integration/competence development in the professionalisation of teacher education students.

Against the background of the European Commission's Framework of the Digital Competences of Educators (DigCompEdu, 2017), and based on previous work from the participating organisations, the expected impact of the toolkit is intended to support teacher educators (and, following up on this, also teacher students and teachers) to:

- reflect on the dimensions of digital transformation in teaching (with reference to digital material and modules as well as to their own practices and competences),

- get ideas of how digital media and methods can enrich their own teaching according to specific objectives and expected outcomes (such as strengthening coherent/integrative and international approaches)

- feel enabled to use, combine, and individually (co-)create digital materials and approaches for coherent learning and teaching arrangements

- explore, as one key example, formats of virtual exchange and tele-collaborations in virtual communities of practice

Virtual exchange formats were chosen as one of the key topics of IO 8 and its related tool kit, for example. since also the new Companion to the European Reference Frame of Languages (2017/2017) explicitly includes linguistic skills for "online interaction" and exchange for the first time (e.g. linguistic knowledge on the difference between written and oral codes, as well as communicative strategies and expressions in the foreign language). Accordingly, one aim of IO 8 will be the design of concepts and tools of task-based, profession-oriented tele-collaborations through which students and lecturers (or also associated teachers) from different partner institutions form transnational study groups or communities of practice.

Thus, the innovative aspect of IO 8 is that besides designing coherence- and profession-oriented course materials together, we also combine these with internationalized learning environments and collaborative/co-creative methods.

2. Key terms for a common understanding

2.1 Internationalization

For internationalization, we will use the categories as proposed by the Center for research on learning & teaching of the University of Michigan. They suggest a range of options and effort, from tweaking existing courses to developing new international collaborations:
Embed international elements in existing courses:

- Incorporate international material into existing courses wherever relevant using examples, case studies, and guest lectures.
- Create components or modules based on international theme(s), as part of the course.
- Collaborate with faculty (at U.S. and international institutions) to develop and share international course content.
- Integrate an "international field trip", i.e., short-term international travel, into a course.

Expand course and curricular offerings.

- Develop discipline-specific, internationally focused courses.
- Develop interdisciplinary courses with international focus.
- Develop minors focused on issues spanning international contexts, or issues intersecting in a particular international context.
- Develop new concentrations.

Source:
University of Michigan, Center for research on learning & teaching. https://crlt.umich.edu/internationalization/learning-outcomes

2.2 Digital Toolkit

A digital toolkit (2015) is a set of tools, resources, and strategies utilized to improve digital learning, teaching, and communication. These kits consist of various elements such as software applications, online resources, multimedia content, educational materials, and other digital assets, all of which are intended to aid educators and learners in attaining their learning objectives in a digital context.

2.3 Co-creative approach/ participatory design

We will adopt a co-creative approach (Hargreaves et al., 2012) to develop this toolkit within IO8, whereby teachers will pool their knowledge and expertise to collaboratively design and create educational resources, curriculum, and instructional materials. Bovill (2020) described this approach as participatory design, meaning it involves a collective effort among a group of stakeholders, which may include external participants, teachers, and students, to jointly design and develop various initiatives, including the curriculum.

2.4 References:


University of Michigan, Center for research on learning & teaching (2013). Options for Internationalizing the Curriculum. https://crlt.umich.edu/internationalization-options

3. The grid (please fill in the GridIO827032023.xls)

The digital toolkit realizes the internationalization of the curriculum through a co-creative approach or participatory design. A grid is used to list possible actions, based on the categories for the internationalizing of the Curriculum by the University of Michigan’s among other things. For each action, participating teams explain how they have achieved it.
### IO 8 Concept Grid: Concrete measures, aspects, examples of digitally enhance the (coherent) internationalisation of (coherent) TE programs

<table>
<thead>
<tr>
<th>Dimensions, tools, measures</th>
<th>Examples; Institution(s) involved?</th>
<th>Internationalization of the TE Curriculum (IoC) - Specify</th>
<th>Relevance for(of) digital transformation - Specify</th>
<th>Aspects of co-creation. Specify</th>
<th>Independent from ConnEctEd (framing document)?</th>
<th>Comments / Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>OER’s (information on OERs, list of national repositories, examples)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usefull tools for international communication and collaboration</td>
<td>One example by each partner</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing teaching learning concepts - digital showcase</td>
<td>IO3</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-create transnational materials (e.g. on transversal competencies, IO 7)</td>
<td>IO7 video 2 and podcast 3</td>
<td>X</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create teaching units together or borrow each other’s teaching units</td>
<td>X</td>
<td>?</td>
<td>x</td>
<td>?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorporate input from partners in your own course (international perspectives)</td>
<td>Zagreb, Freiburg</td>
<td>X</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Guest lectures: Invite other partners physically or virtually</th>
<th>Vasilis/Nice/Marseille 05/09/22 (invitation other partner), Guest lecture ?</th>
<th>x</th>
<th>?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create deeper and improved mobility of TE students (e.g. virtual mobility)</td>
<td>Helsinki (first IO 7 videos)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Inter-institutional events for teacher education students or in-service teachers</td>
<td>Freiburg/Nice/Oslo</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Virtual exchange between courses in two countries (shared lessons)</td>
<td>Complete: examples Freiburg and Nice (Christine/Katja), Vasilis - Marseille, Zagreb - Freiburg (?)</td>
<td>X</td>
<td>x</td>
</tr>
<tr>
<td>Others?</td>
<td>One example by each partner?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Additional comments?
5. Template for IO 8 contributions

IO8 content sheet for the web page

*Development of a digital toolkit to internationalize the curriculum*

Name of the institution(s) or teams:
...

Format:
...

Title:
...

Keywords:
...

Topic:
...

Goals:
...
...
...

Domains/aspects of internationalization (fill in the category from the grid)
...

Target group:
...

Educational level and study year:
...

Context information users would need to understand the digital tool (e.g. about the TE system, curricular integration): ...

Language of the example:

...

License (see Schuwers presentation from our Oslo meeting):

...

Please provide answers to the following questions (if applicable, cfr grid):

In how far does your approach strengthen the **internationalization (of the curriculum)** in Teacher Education?

Possible dimensions: Incorporation of international material into existing (using examples, case studies, and guest lectures); creation of components or modules based on international theme(s), as part of the course; collaboration with colleagues from abroad to develop and share international course content.

...

Which **dimensions of digital transformation** in teaching for teacher educators did you incorporate (utilize)?

Possible dimensions: **digital competencies** (use digital tools and resources effectively in your teaching practice), **digital pedagogy** (integration of digital tools and resources into teaching and learning strategies, including the development of new approaches and techniques), **digital curriculum** (use of digital material and modules to design, develop and deliver curricula that are aligned with digital transformation in teaching), **digital assessment** (the use of digital tools and techniques to assess and evaluate student learning, including the development of new assessment methods and approaches), and **digital infrastructure** (the provision of digital infrastructure and resources to support teaching and learning).

...

How have you utilized **digital tools/methods/resources** in your teaching practice to strengthen coherent/integrative and/or international approaches, and what specific strategies or techniques have you found to be effective in achieving this objective?

For example the use of digital tools and resources, such as virtual exchanges with students from other countries, could enhance the international and cross-cultural dimensions of a learning experience.

...

**How have you employed co-creative approaches and/or participatory design** in your use of digital tools to enhance student learning and engagement, and what have been some of the successful outcomes that you have observed as a result?

...