







| GENERAL INFORMATION | |
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| Module | ***Module 4: Learning progression: from early primary, to upper primary to lower secondary informatics education*** |
| Unit | 4.1: Informatics areas & competencies, an EU perspective |
| Target Group | Upper primary/lower secondary education teachers/trainers |
| Duration | 150 minutes (personal studying time included) |
| Prerequisites | / |
| ECTS | 0,10 |

| LEARNING OUTCOMES | |
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| 1 | **Describe the main goals and priorities of the Digital Competences Framework** and the Digital Education Action Plan 2021-2027 as outlined by the EU. |
| 2 | **Summarise the key findings from the EU report** on addressing the gender gap in STEM education, and use the findings to inform the design of gender-inclusive Informatics lessons. |

| TEACHING METHODS (select all that apply) | | | | |
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| √ | Learning by doing |  | Peer learning |
|  | Project-based learning |  | Hands-on learning |
| √ | Active learning strategies | √ | Collaborative learning |
| √ | Blended learning |  |  |

| LEARNING MATERIAL | |
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| Required material | To deliver this course are required:   * Laptop, beamer and internet connection |
| Additional resources | For the course and for the individual study the key resource is:   * **The Digital Competences Framework and Digital Education Action Plan 2021-2027** (Link: [HERE](https://education.ec.europa.eu/focus-topics/digital-education/action-plan))   Here you can find some more video materials on tools for the training and to share with learners:   * **The European skills agenda** :   + The European Skills Agenda is a five-year plan to help individuals and businesses develop more and better skills and to put them to use effectively. The full text is freely downloadable online. (Link: [HERE](https://employment-social-affairs.ec.europa.eu/policies-and-activities/skills-and-qualifications/european-skills-agenda_en)) * **Digital Competence Framework - I version**:   + The previous version of the Digi Competence framework with eight proficiency levels and examples of use (2017). The full document is available on line. (Link [HERE](https://joint-research-centre.ec.europa.eu/scientific-activities-z/education-and-training/digital-transformation-education/digital-competence-framework-citizens-digcomp/digcomp-framework_en)) * **The level of Digi competencies**:   + A practical and clear infographic showing and explaining the 8 levels of competences. (Link [HERE](https://joint-research-centre.ec.europa.eu/system/files/2017-05/digcomp-framework-poster-af-ok.pdf)) * **Digital Competence Framework**  **2.2**   + The new document (2022) reporting the framework and related examples. (Link [HERE](https://publications.jrc.ec.europa.eu/repository/handle/JRC128415)) * **DigiComp Video**   + A short resume of what they are and why they are important for society. (Link: [HER](https://www.youtube.com/watch?v=2GU67vTVNpQ)E) * **DigiComp 2.2 for educators:**   + A short video by EU channel about Educator digital competences to introduce the Digi comp for educators and teachers. (Link [HERE](https://www.youtube.com/watch?v=cIDOrZuJzVU)) |

| UNIT CONTENT | |
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| Introduction | *This unit will introduce the European Digital Competence Framework. The document is a framework for the digital competences and is a common guideline for all the EU countries.* |
| Activities | Due to the topic this part will be structured as an active lecturer with a final part with a cooperative activity. Below will be illustrated the main contents for slides design. |
| 1. Welcome & introduction (5 min)Purpose: this first set of slides is helpful to give some initial information to the learners.A warm welcome to the learnersStart by introducing the module (using the slides 3 and 5).Explain the main topic of the module and how it is linked to the THINKER project.Clearly state the expected outcomes of this module and how they align with the THINKER project and with the THINKER educational framework (slide 3). |
| 2. Introduction to the EU Digi Comp Framework (6-8 min) **2.1. Introduce the concept (slide 7):**   * + **Introduce the topic through** [**this**](https://youtu.be/cIDOrZuJzVU?feature=shared) **vide**o.   + **Engage learners i**n an initial discussion about the level of DigiComp in EU countries.   + Stimulate them to start from themselves and what they are required to be able to do in the digital school era.   **2.2. Reinforce the concept and give a context (slides 8 and 9):**   * + Using the data reported in the slides 8 & 9, you can show to the learners the relevance of digital skills for the future of the EU. It is a quick and clear way to take in mind why DigiCompentences are relevant now more than in the past (you can show both slides or you can just choose one of them).   **Outcome:** Teachers will have a deeper understanding of the role of Digicomp for the future of the EU. |
| 3. Understanding the EU digital action plan (6 - 8 min) **3.1. Introduce the context (slide 10):**  Make a short introduction to the genesis of the Action plan.This can be helpful to better frame and highlight the political context driving the European Education Area (EEA) and the New Skills Agenda, with a strong focus on digital competence development (slide 7).  **3.2. Link the context to the Strategic vision of the Action plan (slide 11):**   * + Explain the ratio and how the Action plan is structured (slides 10 - 14) , speaker notes can help you).  Outcome: Teachers will have detailed understanding of how the EU Action Plan for Digital competences is structured. |
| 4. Understanding the key concept of digital competence (15 min) **4.1. Introduce the context (slides 15 -17 ):**   * + Briefly explain the five main areas of digital competence: Information and Data Literacy, Communication and Collaboration, Digital Content Creation, Safety, and Problem-Solving. Provide examples for each area (slides 15-17).   **4.2. Tasks - Group activity (slide 19):**   * + Divide participants into small groups (3-4 people per group). Assign each group a specific competency area (e.g., Communication and collaboration, safety, etc.). Alternatively, you could assign one specific competency from each of the five areas to each group.   + In their groups, participants will discuss and identify one real-world scenario or example where their assigned competencies are relevant. For example, if the group has "Digital Content Creation," they could discuss how these skills are used when creating a blog or a video for social media.   + Each group will prepare a short presentation (3 minutes) summarizing their scenario and explaining how the competencies help solve problems or improve performance in that scenario. The group will also suggest how they would assess proficiency in that competency.   **Outcome:** participants will develop a deeper understanding of the 21 competencies and how they apply in real-life contexts. This will also help them reflect on their own digital competence and identify areas for further development. Furthermore, by discussing real-world scenarios and examples, participants will learn how these competencies can be applied in various contexts (e.g., work, education, daily life). |
| 5. Understanding the key concept; the proficiency levels of Digital Competence Framework (15 min) **5.1. Introduce the context (slide 20):**   * Briefly explain that the Digital Competence Framework helps to assess and structure digital competencies. Highlight the four proficiency categories (Foundation, Intermediate, Advanced, Highly Specialized) and the corresponding levels (1-8).   **5.2. Tasks - Group activity:**   * **Ask learners to take a moment to assess their own digital competence based on the description of each level. They should think about:  -** What level do they feel most aligned with in terms of their digital skills (Level 1 to 8)? - Which specific tasks or activities do they feel confident doing independently, and where do they need support? * Have them jot down their reflections on a piece of paper or in a note-taking app * **Break learners into small groups (3-4 people). In their groups, ask learners to share:** What level they consider themselves to be at and why. One digital activity or task they feel comfortable doing and one they find challenging. **Encourage them to discuss how they can develop their skills further to reach the next proficiency level.**   **Outcome:** participants will develop a deeper understanding of the 21 competencies and how they apply in real-life contexts. This will also help them reflect on their own digital competence and identify areas for further development. Furthermore, by discussing real-world scenarios. |
| 6. Understanding the key concept; the Digital Competence Framework 2.2 an overview of the structure and how we can use it for daily activities (20 min) **6.1. Introduce the context (slides 20):**   * + Briefly explain that the Digital Competence Framework 2.2 includes some new elements helpful to effectively link the competences with knowledge, skills and concrete examples of learning scenarios both for formal and formal educational contexts.   **6.2. Tasks - Group activity (slide 21 - 25):**   * + **Begin by briefly explaining the goal of the activity:** to reflect on how the Digital Competence Framework competences connect with their teaching practices and to design practical classroom activities that foster digital competences. **Highlight that this is a reflection and hands-on activity where learners will explore real-life applications of the Digital Competence Framework 2.2.**   + **Divide the learners into small groups and ask them to reflect on one of the competences from the framework and think about how it connects to their own teaching.**   + After the reflection, each group should design an activity that aligns with the chosen competence. The activity should be something they could use in their own classroom to stimulate the development of that digital competence in their students. The activity can be a simple task, project, or challenge. Each group should take notes on the activity idea, focusing on the objectives, steps involved, and how the activity aligns with the specific competence from the Digital Competence Framework 2.2.   + Conclude the activity by discussing some key takeaways.Ask learners how the Digital Competence Framework can guide their teaching practices and how they can integrate digital competences in their future lessons. Encourage learners to think about which competences they’d like to develop further in their own teaching and how they can continue to improve their students' digital skills.   **Outcome:** participants will gain a better understanding of the Digital Competence Framework and how it applies to their teaching. |
| Assessment | For the assessment phase you design a gamified version of a quiz with two questions at least for each step of the training. |

| KEY TAKEAWAYS | |
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| Reflection and Conclusion | In this lesson, we explored the structure of the European Digital Competence Framework.  Reflect on how the Digital Competence Framework can be linked to teaching and learning practices and how it fully aligns with the real life and school context.  Finally, to consolidate your learning, apply at least one of the proposed learning scenarios to your classes and try to create by yourself another learning scenario for another competence.  **Reflection activity (slide 26)** Ask to reflect together with the learners about the responses given to the gamified quiz as a way to summarize the lesson’s key points and address any remaining learners’ questions.  **Instructions**   * Group learners in small groups (not more than 3 or 4 per group). Provide learners with the Digital Competence Framework document ([HERE](https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-digcomp2.1pdf_(online).pdf)). * Ask learners to reflect on one of listed competencies and, following the structure of the DCF to design at least one example of an activity can be done in class to stimulate students that competence. * Share the ideas between groups and highlight the take home messages. |
| Homework/ Additional Tasks | Share the Digital Competence Framework and ask the learners to use the document as a guide for the next module of the Unit.  **Reflecting on the National Curriculum and the EU Digital Competence Framework (slide 27)**  Objective: With this assignment, teachers will be stimulated to critically reflect on their experience with the country's national curriculum, evaluating its strengths and challenges. They will also compare it to the European Digital Competence Framework, exploring how well your national curriculum aligns with the digital skills and competences promoted at the EU level.  **Instructions**   * Personal Reflection (300–400 words):   Describe your experiences with your national curriculum in your role (as a teacher, student, or education professional).   * Address questions such as:   + Is it easy or difficult to implement?   + Is it up to date with current educational needs and technologies?   + Is it well-structured and effective, or does it need revision?   + Would you consider it a model for other countries or in need of reform? * Comparative Analysis (400–500 words):   + Introduce the EU Digital Competence Framework briefly.   + Compare your national curriculum with Digital Competence Framework in terms of digital literacy goals, integration of digital tools, and support for developing key digital competences (e.g., information literacy, communication, content creation, safety, and problem-solving).   + Discuss points of convergence or gaps, and suggest possible improvements or integrations.   Expected Outcomes:  By completing this assignment, teachers will:   * Develop a deeper understanding of your national curriculum’s structure and goals. * Gain insight into how EU-level frameworks influence or contrast with national education systems. * Reflect on the integration of digital competence in modern education and consider areas for improvement.   Format: Typed, max. 1000 words |