







| GENERAL INFORMATION | |
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| Module | 1. THINKER Project overview and first introduction to authentic learning and gender inclusive practice |
| Unit | 1.1: Authentic learning for a gender inclusive education |
| Target Group | Upper primary/lower secondary education teachers/trainers |
| Duration | 60 minutes |
| Prerequisites | / |
| ECTS | 0,04 |

| LEARNING OUTCOMES | |
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| 1 | Understand the objectives and significance of the **THINKER project** in informatics education |
| 2 | Identify and list the main **informatic areas** as outlined by the Informatics4All coalition |
| 3 | Define what is **authentic learning**, and its main **principles** |
| 4 | Recognise the importance of authentic learning in promoting a gender-inclusive environment |
| 5 | Consider and apply **practical methods** to integrate authentic and gender-inclusive learning strategies in the classroom |

| 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 | * PowerPoint Presentation * THINKER Resources: * THINKER Framework and Toolkit available at: <https://thinker.ucd.ie/resources/framework-and-toolkit/> * THINKER Transnational Report on state-of-the-art and needs available at: <https://thinker.ucd.ie/resources/transnational-report-on-state-of-the-art-and-needs/> * Informatics4All Reference Framework available at: <https://www.informaticsforall.org/the-informatics-reference-framework-for-school-release-february-2022/> |
| Additional resources | Here you can find some additional resources for informatics education in Europe:   * European Commission. (2024). ICT specialists in employment. Eurostat. Retrieved December 17, 2024, from <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=ICT_specialists_in_employment> * European Commission, Directorate-General for Communications Networks, Content and Technology, (2019). 2nd survey of schools : ICT in education : objective 1 : benchmark progress in ICT in schools, final report, Publications Office. <https://data.europa.eu/doi/10.2759/23401> * European Commission, European Education and Culture Executive Agency, (2022). Informatics education at school in Europe, Publications Office of the European Union. <https://data.europa.eu/doi/10.2797/268406> |

| UNIT CONTENT | |
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| Introduction | *This unit will explore the following topics (Slide 6)*   * *introduction to the THINKER project, its objectives and the THINKER framework* * *importance of teaching informatics in an authentic and gender-inclusive approach* |
| Activities | **1. Welcome and** i**ce-breaker** (10 min) Slide 7  Purpose: This icebreaker will help teachers think about their teaching practices and sets the stage for self-reflection.   * Warm welcome * Start with the following: “Think about a lesson you have recently taught. Consider the main ways you have used to teach it (e.g., lecture notes, case-studies, project-based, etc.)” * Ask the participants to share their insights by recording their ideas on a collaborative tool, such as Padlet. * Explain the main topic of this unit and its expected outcomes. |
| **2. Understanding the** THINKER **project (10 min)** Purpose: This activity will help teachers to better understand the THINKER project and why there is a need to teach informatics in an inclusive and gender-inclusive approach.  **2.1. Introduction to the THINKER project**   * Explain what the THINKER project is about (slides 8, 9)   **2.2. The need for the THINKER approach** (slide 10, 11)   * Explain why there is a need to teach informatics in an authentic and gender-inclusive approach based on the EU data as well as the results of the desk & field research conducted in Cyprus, Greece, the Netherlands, Ireland, Italy, and Croatia.   **2.3. The THINKER framework** (slide 12)   * Shortly introduce the main components of the THINKER framework (slide 12): * Informatics areas and competencies (slide 13) * Authentic learning (slide 14) * Gender-inclusive practices (slide 15)   **2.4 Activity 1: Self-reflection prompt** (slide 16)   * Ask the teachers to think of a recent lesson they taught. * Have them answer the following questions by sharing their thoughts on a collaborative tool such as Padlet: * What was the objective of the lesson? * How did they teach the specific lesson? * Were all students engaged equally regardless of their gender? * Did they use real-world examples? * The trainer could then group similarities/differences and highlight key takeaways (e.g. Looking at the Padlet, I notice many of you focused on. . .)   Outcome: Teacher starts recognising gaps in their current teaching process. |
| **3. Exploring authentic learning (15 min)**  Slide 17  Purpose: This activity will help teachers to better understand what is authentic learning.  **3.1. Introduction to Authentic Learning** (slides 17, 18, 19)   * Present the definition and main characteristics of authentic learning.   **3.2. Activity 2: Self-reflection prompt** (slide 20)   * Divide the teachers in small groups. * Have them to discuss the following: * How have you applied authentic learning in your classroom? * Ask the groups to share their insights by recording their ideas on a collaborative tool, such as Padlet. |
| **4. Understanding how** a**uthentic** l**earning can lead to** g**ender-**i**nclusive** e**ducation** (15 min) Slide 21  Purpose: This activity will introduce teachers to the concept of gender-inclusion.  **4.1. Introduction to gender-inclusion**   * Present data on gender imbalance in informatics field (slides 22, 23) * Present how authentic learning is related to gender-inclusion (slides 24, 25, 26, 27)   **4.2. Activity 2: Brainstorming** (slide 28)   * Divide the teachers in small groups. * Have them to discuss the following: * What authentic learning strategies can you use to counter gender bias in learning environments? * Based on their discussions, ask them to write on Padlet or on any other collaborative tool (e.g. Shared online Microsoft Word document) some keywords about their authentic learning strategies. |
| **5. Reflection and** c**onclusions** (10 min) Slide 29  Participants reflect on how their teaching practices align with authentic and gender-inclusive practices.  Participants also discuss the following:   * What aspects of the lesson were most insightful?   The trainer summarises key takeaways and encourages teachers to integrate these reflections into their teaching practices. |
| Assessment | To assess the mastery of this lesson, at the end of the lesson teachers discuss with their colleague teachers the following:   1. Why is teaching using authentic and gender-inclusive practices important and how it can help students? 2. Discuss how your colleagues use authentic and gender-inclusive practices in their teaching. Are there any practices specific for the courses they teach? Are there any practices that you all share? |

| KEY TAKEAWAYS | |
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| Reflection and Conclusion | In this lesson, we explored the **THINKER project**, its objectives, and its role in **informatics education**, along with the **importance of authentic learning** in promoting a **gender-inclusive environment**. We examined the main **informatic areas** based on the Informatics4All coalition and discussed strategies for making learning experiences more inclusive and engaging.  Key points included gaining a **first understanding of authentic learning**, its principles, and how it can be used to **promote gender-inclusive education**.  Reflect on how these approaches can enhance your teaching practices. Consider questions like: **Are my current methods inclusive and engaging? Do they align with my educational goals? How can I integrate authentic learning strategies more effectively?**  Finally, to consolidate your learning, think of an **authentic learning method** in a **real** or **simulated classroom setting** and analyse the results. Share any remaining questions or challenges for further discussion. |
| Homework/ Additional Tasks | 1. Learners should come prepared for Unit 1.2 by identifying and preparing a specific topic they plan to teach to their classroom using authentic learning approaches. 2. Learners should watch the videos available at <https://www.youtube.com/@JanH119/videos> in order to familiarise themselves with authentic learning practices. |