







| **GENERAL INFORMATION** | |
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| **Module** | Module 8: Workshop: co-design and evaluate learning scenarios for upper primary and lower secondary informatics teaching and assessment, based on the THINKER framework |
| **Unit** | Unit 8.1: Collaborative creation of effective learning scenarios |
| **Target Group** | Upper Primary and Lower Secondary Education Teachers/Trainers |
| **Duration** | 90 minutes |
| **Prerequisites** | Basic understanding of lesson planning |
| **ECTS** | 0,04 |

| **LEARNING OUTCOMES (slide 3)** | |
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| **1** | Apply structured collaborative techniques to design learning scenarios for Informatics. |
| **2** | Employ brainstorming and consensus-building strategies to generate inclusive lesson ideas. |
| **3** | Integrate Authentic Learning and Gender Inclusion principles into collaborative planning. |

| **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 | √ | Reflective discussion |  |

| **LEARNING MATERIAL** | |
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| **Required material** |  |
| **Additional resources** | <https://www.youtube.com/watch?v=euhtXUgBEts>, The Jigsaw Method  <https://www.youtube.com/watch?v=tMBu5XZs-LA> , Steps of RoundRobin |

| **UNIT CONTENT** | |
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| **Introduction**  **Slide 5** | This unit focuses on collaborative strategies for designing effective Informatics learning scenarios. Teachers will learn to design gender-inclusive, authentic informatics scenarios using evidence-based collaborative strategies, grounded in social constructivism and inclusive pedagogy. In detail, the unit takes up the JIGSAW method, the Round-Robin brainstorming technique. These practices (among other collaborative methods) not only help co-develop learning scenarios, but the feedback gained can be exploited by appropriate peer-review protocols in the evaluation process. The unit presents the theory behind the respective collaborative methods and examples of how these methods can be used. In parallel, the unit stresses challenges and barriers in using these collaborative strategies and providing solutions to overcome these difficulties. |
| **Activities** | **Activity 1: The need for collaboration (slide 6)**  Stressing the fact that the importance of collaboration in designing learning scenarios is supported by theories such as Social Constructivism (Vygotsky, 1978), which posits that learning is an inherently social activity.  **Steps:**  Discuss the figure depicted in slide 6 (4 min)  **Activity 2: Presenting the JIGSAW method (slides 7-10)**  **Purpose:** Co-design scenarios using Jigsaw.  **Process:**   * Watch the video (6 minutes) * Discuss the figure in slide 8 (5 min) * Discuss benefits (slide 9) (2 min) * Implement Activity 1 (slides 10) (35 min):   ***Collaboratively design a learning scenario by applying the Jigsaw method, focusing on data privacy, authenticity, and gender inclusion.***  **Activity 1 Steps:**   1. **Form Expert Groups**  * **Group A** – Authenticity Team: Examine a real-world data privacy breach (e.g. Facebook Data Leak). Discuss what makes it authentic and why it is relevant for students. * **Group B** – Inclusion Team: Evaluate whether diverse demographics are represented. Consider how marginalised groups (e.g. girls, minority groups) are portrayed.  1. **Become Experts**  * Each team explores their focus area in depth using guiding questions. * Example guiding questions:   + What makes the breach realistic and engaging?   + Are both genders or diverse groups included in the case?  1. **Form Jigsaw Groups**  * Rearrange into mixed groups containing at least one member from each expert group. * Each member shares their expertise with their peers.  1. **Co-Design Scenario**  * Collaboratively create a short learning scenario on data privacy that integrates both authenticity and gender inclusion.  1. **Reflect as a Group**  * Discuss: What worked well? What would you improve?   **Activity 3: RoundRobin Brainstorming (slides 11-15)**  **Process:**   * Watch the video (5 minutes) * Discuss the background and theoretical foundations in slide 12 (2 min) * Discuss benefits (slide 9) (3 min) * Discuss figurein slide 14 (3 minutes) * Implement Activity 2 (slides 15) (15 min):   ***Use the RoundRobin brainstorming method to critically evaluate how Informatics is currently taught in your country, focusing on equity, inclusion, and authenticity.***  **Activity 2 Steps:**  **Step 1**  Ask the teachers to form small groups of 3–4 people.Each group should assign the following roles:   1. Facilitator – helps guide the group and keeps the activity moving. 2. Timekeeper – makes sure each person speaks for no more than 30 seconds. 3. Recorder – writes down every idea shared, without changing the wording. 4. Optionally, choose an Equity Monitor – reminds the group to be respectful and avoid judging ideas.   **Step 2**  Each teacher answers this question:  “What are the key challenges or strengths in how Informatics is currently taught in your country?”  Everyone takes one turn to speak. No discussion or comments – just listening.  **Step 3**   * After everyone has shared, take about five minutes to look at all the ideas. * Together, identify 2–3 common points or themes that came up in your group. * Write these down clearly - use them to get a better understanding of the situation.   **Step 4**   * Each group chooses one teacher to present their main ideas. * Teacher will have one minute to share their key insights with the whole room.   **Activity 4: Discussing challenges in implementing Jigsaw and RoundRobin (slides 16-21)**  **Present the following:**   * Challenges in Jigsaw implementation (slide 17) (3 minutes) * Discussing solutions (Jigsaw) (slide 18) (1 minute) * Challenges in Implementation (RoundRobin) (slide 20) (3 minutes) * Discussing solutions (RoundRobin) (slide 21) (1 minute)   **Activity 5: Reflection and Conclusion (slides 22,23) – 3 minutes** |
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| **KEY TAKEAWAYS** | |
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| **Reflection and Conclusion** | Summarize the key points:  . The employment of collaborative strategies enhances Expertise Sharing, promotes Equity, and  improves Quality Control.  . The Jigsaw method is heavily dependent on the good merging of the groups’ ideas, whereas the RoundRobin Brainstorming relies on positive rotating feedback. |
| **Homework/ Additional Tasks** | Use the Jigsaw or the RoundRobin method to co-design a learning scenario on Algorithms in social media, ensuring authenticity and gender inclusion. |
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| **REFERENCES (slide 20)** |
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| Aronson, E., & Patnoe, S. (2011). The Jigsaw Classroom. Sage.  Bambino, D. (2002). Critical friends. Educational Leadership, 59(6), 25-27.  Johnson, D.W., & Johnson, R.T. (1999). Learning Together and Alone. Allyn & Bacon.  Koch, M., et al. (2020). Gender-inclusive design in CS education. ACM SIGCSE, 51(1), 12-18.  Margolis, J., & Fisher, A. (2002). Unlocking the Clubhouse. MIT Press. | |