







| GENERAL INFORMATION | |
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| Module | ***Module 6: Learning and assessment design for lower secondary classes based on the THINKER framework*** |
| Unit | *6.2: Designing assessment activities aligned with the THINKER Framework* |
| Target Group | Upper primary/ lower secondary education teachers/trainers |
| Duration | 60 minutes (personal studying time included) |
| Prerequisites | Concepts related to authentic and inclusive learning |
| ECTS | 0,04 |

| LEARNING OUTCOMES | |
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| 1 | **Identify formative and summative assessment strategies:** Understand the role of formative and summative assessments in informatics education. |
| 2 | **Design a formative assessment tool for informatics competencies:** Develop an assessment tool with at least two practical tasks and one reflective question aligned with the THINKER Framework. |
| 3 | **Implement practical tools for measuring informatics competencies:** Use coding challenges or problem-solving activities to assess informatics skills such as algorithmic thinking. |
| 4 | **Provide immediate and constructive feedback:** Develop strategies for offering real-time feedback to enhance learning outcomes. |

| 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 slides * Handouts with templates for formative assessment design - [link](https://www.google.com/url?q=https://drive.google.com/drive/u/0/folders/1p18usos5_pp63sDUJprvAk8JuC7INYS9&sa=D&source=docs&ust=1746802098565442&usg=AOvVaw2l3pkoYGjTH-HLeobm2oOJ) * THINKER Framework guidelines ([THINKER Project](https://thinker.ucd.ie/)) * Online tools (e.g., Google Forms, Kahoot, or Scratch) |
| Additional resources | * Articles on formative assessment strategies provided to the teachers - [link](https://drive.google.com/drive/u/0/folders/1p18usos5_pp63sDUJprvAk8JuC7INYS9) |

| UNIT CONTENT | |
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| Introduction | Assessments play a crucial role in informatics education, shaping both the teaching process and student learning outcomes. In this lesson, to understand their impact, we will:   * Provide an overview of formative and summative assessments and their importance in informatics education. * Connect the topic to prior knowledge by discussing how assessments drive learning outcomes. * Highlight the role of the THINKER Framework in designing inclusive and practical assessments. |
| Activities | 1. Introduction (10 minutes)  * **Slides:** Use Slides 5-7 from the provided presentation. |
| 2. Analyzing formative assessment examples (15 minutes)  * **Slides:** Use Slides 8-10 from the provided presentation. * **Step-by-Step:**   1. **Group Discussion (5 minutes):** Present two examples of formative assessments   2. **Collaborative Analysis (7 minutes):** In breakout groups, identify which THINKER principles are applied in the examples.   3. **Share Outcomes (3 minutes):** Each group highlights one strength and one improvement for each assessment. |
| 3. **Designing a** f**ormative** a**ssessment (25 minutes)**  * **Slides:** Refer to Slides 11-14 for the assessment design template. * **Step-by-Step:**   + **Template Overview (5 minutes):** Explain the components of a THINKER-aligned formative assessment.   + **Group Work (15 minutes):** Each group designs a formative assessment tool that includes:     - **Two Practical Tasks:** e.g.,       * **Task 1:** Giving Directions: Guide a Friend Like a Robot.       * **Task 2:** Treasure Hunt: Follow Step-by-Step Instructions to Find a Hidden Object.     - **One Reflective Question:** “What was the most challenging part of this activity, and how did you approach solving it?”   + **Gallery Walk (5 minutes):** Groups post their assessments on a shared digital board for peer review. |
| 4. **Implementing and** g**iving** f**eedback (10 minutes)**  * **Slides:** Use Slides 15-21 for feedback strategies. * **Step-by-Step:**   1. **Presentation of the feedback strategies (3’)**: Present the feedback strategies.   2. **Practical (2 minutes):** In pairs, one teacher administers their assessment, and the other completes it.   3. **Feedback Practice (5 minutes):** Provide immediate, constructive feedback using the THINKER feedback model (Specific, Timely, Actionable, Respectful – STAR). |
| Assessment | * Collect the designed formative assessments and provide feedback. * Contribute to the peer assessment process within the discussion thread of the module. |

| KEY TAKEAWAYS | |
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| Reflection and Conclusion | * **Summary:** Recap key concepts (formative vs. summative assessments) and their alignment with THINKER principles. * **Reflection Questions:**  1. What is the value of formative assessments in informatics education? 2. How can feedback enhance learning outcomes? 3. Which THINKER principle was most challenging to apply in your design? |
| Homework/ Additional Tasks | * **Refine the Designed Assessment Tool:** Based on peer feedback, revise the formative assessment and submit it to the course repository. * **Further Reading:** Explore case studies on the THINKER Project website for additional inspiration. |