







| GENERAL INFORMATION | |
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| Module | ***Module 6: Learning and assessment design for lower secondary classes based on the THINKER framework*** |
| Unit | *6.3: Online tools for teaching and assessment* |
| 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 and describe digital tools for teaching informatics:** Explore tools such as audience response systems, H5P, and coding games. |
| 2 | **Explain how digital tools enhance student engagement and learning:** Discuss the impact of interactive tools on learning outcomes. |
| 3 | **Compare different online tools for assessing informatics competencies:** Analyze tools such as Moodle quizzes, Kahoot, and chatbots. |
| 4 | **Share best practices for using digital tools:** Contribute examples from their own experience to the THINKER community |

| 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 * Handout with a comparison chart of digital tools - [link](https://www.google.com/url?q=https://drive.google.com/drive/u/0/folders/1EiL7QjM5Dtiag0tQMshT55jFizW7Vt17&sa=D&source=docs&ust=1746802211946907&usg=AOvVaw0pUQxjsIvorlGjnc_zwJZy) * THINKER Framework guidelines ([THINKER Project](https://thinker.ucd.ie/resources/framework-and-toolkit/)) * Online platforms: Moodle, and Kahoot |
| Additional resources | Links to tutorials for using H5P and Moodle for assessment creation   * Gilje, Ø. (2024). Digital pedagogy in educational chronotopes – didactical choices for teaching, learning, and assessment. Pedagogies: An International Journal, 19(3), 439–455. <https://doi.org/10.1080/1554480X.2024.2379789>. * Abid Haleem, Mohd Javaid, Mohd Asim Qadri, Rajiv Suman, Understanding the role of digital technologies in education: A review, Sustainable Operations and Computers, Volume 3, 2022, Pages 275-285, ISSN 2666-4127, <https://doi.org/10.1016/j.susoc.2022.05.004>. * H5P Quiz (Question Set) Tutorial Video: <https://www.youtube.com/watch?v=-t8vC25bGI4&pp=ygUkcHJhY3RpY2FsIHVzZXMgb2YgaDVwIHF1aXogcXVlc3Rpb25z> * Moodle 4.1 - Embed interactive quiz questions (Video): <https://www.youtube.com/watch?v=TeZbOTszyCQ&pp=ygUncHJhY3RpY2FsIHVzZXMgb2YgTW9vZGxlIHF1aXogcXVlc3Rpb25z> |

| UNIT CONTENT | |
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| Introduction | In today's rapidly evolving educational landscape, digital tools play a crucial role in informatics education, enhancing both teaching and learning experiences. To explore this further, we will:   * Discuss the significance of digital tools in informatics education and how they contribute to more effective learning. * Connect this topic to participants' prior experiences by reflecting on their use of online teaching tools and the impact on their instructional practices. * Highlight how these digital tools align with the THINKER Framework, fostering inclusive and authentic learning experiences for all students.   This discussion will provide valuable insights into the evolving role of technology in education while ensuring inclusivity and engagement in learning environments. |
| Activities | **1. Exploring** o**nline** t**ools for** t**eaching** i**nformatics (15 minutes)**  * **Slides:** Use Slides 5-10 from the provided presentation. * **Step-by-Step:**   1. **Why use digital tools (3 minutes):** Explain how digital tools can be useful (Slides 5-8)   2. **Interactive Demo (3 minutes):** Showcase three tools: H5P (interactive content creation), Kahoot (live quizzes), and Coding Games (e.g., CodeCombat) - (Slides 9-10)   3. **Discussion (5 minutes):** Discuss how each tool supports engagement, creativity, and assessment. * **Educational Outcomes:**   1. Identify the key features and functions of H5P, Kahoot, and coding games.   2. Evaluate how different digital tools enhance engagement, creativity, and assessment in informatics education.   3. Reflect on personal preferences for integrating digital tools into their own teaching practices. |
| **2**. **Designing a** q**uiz with an** o**nline** t**ool (20 minutes)**  * **Slides:** Refer to Slide 13-24 for the quiz creation template. * **Step-by-Step:**   1. **Tool Selection (5 minutes):** Provide a brief overview of H5P (Slide 18) and Moodle quiz tools (Slide 21).   2. **Hands-On Practice (10 minutes):** Participants design a 5-question quiz on an informatics topic (e.g., “Introduction to Algorithms”) using H5P.   3. **Peer Review (5 minutes):** Participants test each other's quizzes and provide feedback. * **Educational Outcomes:**   1. Demonstrate an understanding of online quiz creation tools (H5P and Moodle) by selecting an appropriate tool.   2. Apply quiz design principles by creating a 5-question quiz on an informatics topic.   3. Develop critical evaluation skills through peer review and feedback on quiz design. |
| **3**. **Sharing** b**est** p**ractices and** e**xperiences (10 minutes)**  * **Step-by-Step:**   1. **Discussion (5 minutes):** Participants share examples of digital tools they have used successfully in their classrooms.   2. **THINKER Forum Post (5 minutes):** Participants post their experiences on the course’s THINKER discussion board. * **Educational Outcomes:**   1. Synthesize personal experiences with digital tools in informatics education through group discussion.   2. Contribute to a collaborative learning community by sharing insights on the THINKER discussion board.   3. Reflect on best practices for using digital tools to enhance student learning outcomes. |
| Assessment | * Collect participants' quizzes for review. * Discussion thread to evaluate the understanding of key concepts from the session. |

| KEY TAKEAWAYS | |
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| Reflection and Conclusion | **Summary:** Highlight the advantages of using online tools for teaching and assessment.  **Reflection Questions:**   1. Which tool do you feel most confident using in your classroom? 2. How do online tools support different learning styles? 3. What challenges might you face when implementing these tools? |
| Homework/ Additional Tasks | **Contribute to the THINKER discussion board:** Share an example of a digital tool you have used in your classroom and explain its impact on student learning.  **Further Practice:** Explore the THINKER website and create an additional interactive activity for your students.  THINKER Project's official website: [https://thinker.ucd.ie/](https://tinker-project.eu/)  THINKER Project’s Moodle (for discussions): <https://thinkerlms.ucd.ie/> |