







| GENERAL INFORMATION | |
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| Module | ***Module 7: Action Research: teachers as co-creators of solutions*** |
| Unit | *7.1: Identifying classroom challenges and research questions* |
| Target Group | Upper primary/ lower secondary education teachers/trainers |
| Duration | 60 minutes (personal studying time non-included) |
| Prerequisites | / |
| ECTS | 0,04 |

| LEARNING OUTCOMES | |
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| 1 | **Identify the steps involved in conducting action research,** including problem identification, planning, and implementing changes in the classroom. |
| 2 | **Identify and document a classroom problem for Action Research** to enhance teaching practices and improve informatics education 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 | PPT slides; sticky notes or digital equivalent ([Miro](https://miro.com/), [FigJam](https://www.figma.com/figjam/)); Timer |
| Additional resources | * Mertler, C. A. (2019). *Action Research: Improving Schools and Empowering Educators* (6th ed.). SAGE. <https://books.google.it/books?id=_KahDwAAQBAJ&lpg=PP1&pg=PP1#v=onepage&q&f=false>. * Teachers Network Leadership Institute. *How to do action research in your classroom.* Retrieved from <https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/pubs/How%20to%20do%20Action%20Research.pdf>. * National Foundation for Educational Research (NFER). (n.d.). *How to run an action research project: A "do-it-yourself" guide.* Retrieved from <https://www.nfer.ac.uk/media/texbxexa/how_to_run_action_research_do_it_yourself.pdf>. * Efron, S. E., & Ravid, R. (2019). *Action research in education: A practical guide* (2nd ed.). Guilford Press. Retrieved from <https://www.daneshnamehicsa.ir/userfiles/files/1/9-%20Action%20Research%20in%20Education_%20A%20Practical%20Guide.pdf>. |

| UNIT CONTENT | |
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| Activities | 1. Introduction -What is Action Research? (15 min) **Slide 5: Activity 1 - What is your change story? (10 minutes)**   * **Recall:** teachers reflect on a past classroom problem they addressed and jot keywords on cards.   + *Example:* "Girls avoided debugging → paired them as ‘leaders’ → saw more attempts." * **Pair & compare:** teachers share stories in pairs using guiding questions:   + *How did you identify the problem?*   + *What change did you try?*   + *How did you measure success?* * **Define Action Research together:** facilitator clusters themes and co-defines AR with the group.   **Slide 6 - 10 (5minutes)**  **Slide 6: Definition**   * **Overview:** explain action research (AR) as a reflective, iterative process where teachers investigate classroom challenges, implement solutions, and assess impact. * **Key quote:** “Research done ***by*** teachers, for ***their*** classrooms.” * **Importance of AR:**   + Connects theory to practice   + Empowers teachers to address equity gaps (e.g., gender disparities in informatics)   **Slide 7: Historical overview**   * **Historical context:** Briefly mention contributions from Kurt Lewin, Paulo Freire, and Bridget Somekh.   **Slide 8: Video: What is Action Research?**   * **Youtube video:** What is Action Research? A visual explanation   **Slide 9: The 5-steps Action Research cycle**   * **Infographic:** introduce the learners to the 5-steps AR cycle.   **Slide 10: How does action research (AR) empower teachers to create gender-inclusive and authentic learning experiences in informatics education?**   * Briefly underline the importance for teachers to implement AR in the classroom.   + evidenced based, context specific solutions;   + student centered and inclusive;   + iterative improvement. |
| 2. Identify - Framing classroom challenges (40 min) **Slide 11: What is a classroom challenge and how to frame it? (5 min)**   * Introduce teachers to the concept of classroom challenge and steps for framing it.   **Slide 12: Activity 2 - Brainstorming challenges (10 minutes)**  *(PPT Slide: Identify - Framing Classroom Challenges)*   * **Individual brainstorm:** teachers list 2–3 challenges on sticky notes using prompts:   + *Where do you see gender gaps in informatics?*   + *Which topics leave students behind?*   + *What systemic barriers exist?* * **Group synthesis:** Cluster similar challenges on a poster.   **Slide 13: Activity 3 - Reflect on the identified challenges (15 minutes)** *(PPT Slide: Identify - Framing Classroom Challenges)*   * **Reflection exercise**: teachers reflect on the challenges they wrote down during the previous activity.   They try to answer the following questions, writing down their answers:   * IMPORTANCE: Why does this challenge matter? * ROOT: What is the root tension? * PAST EXPERIMENTS: What have I already tried? What worked/failed? * ADJUSTMENT: Can I solve it by adjusting my approach (i.e., through teaching strategies, not just policy changes)? * INTERSECTIONALITY: Does the given challenge unfairly impact certain student groups based on the intersection of their unique identity characteristics (i.e., the issue disproportionately affects marginalized groups)? * ASSUMPTIONS: What assumptions am I making?   Teachers keep their notes for later.  **Slide 14-16: Activity 4 - Craft a final question to guide your Action Research (10 minutes)**   * **Draft questions**: Teachers write a first-draft AR question (e.g., *"Why do girls avoid debugging?"*). * **Peer feedback:** Refine questions using criteria:   + *Specific, actionable, measurable.*   + *Example:* *"How can storytelling make algorithms more engaging for girls?"* |

| KEY TAKEAWAYS | |
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| Reflection and Conclusion | **Slide 17: Reflection and conclusion (5 minutes)**  **Wrap up**   * **Feedback:**  Invite learners to provide feedback on the lesson, and ask each of them to say one word about the lesson! * **Reviewing key points:** Briefly summarize the content of the Unit * **Next steps:** Unit 7.2: Design interventions for the identified challenge. |
| Homework/ Additional Tasks | / |