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Rethinking Digital Assessment in the Age of GenAI

AI-specific competencies, as part of the supplement of the DigCompEdu framework.

George Bekiaridis, Active Citizens Partnership

AI Pioneers Project

Contents

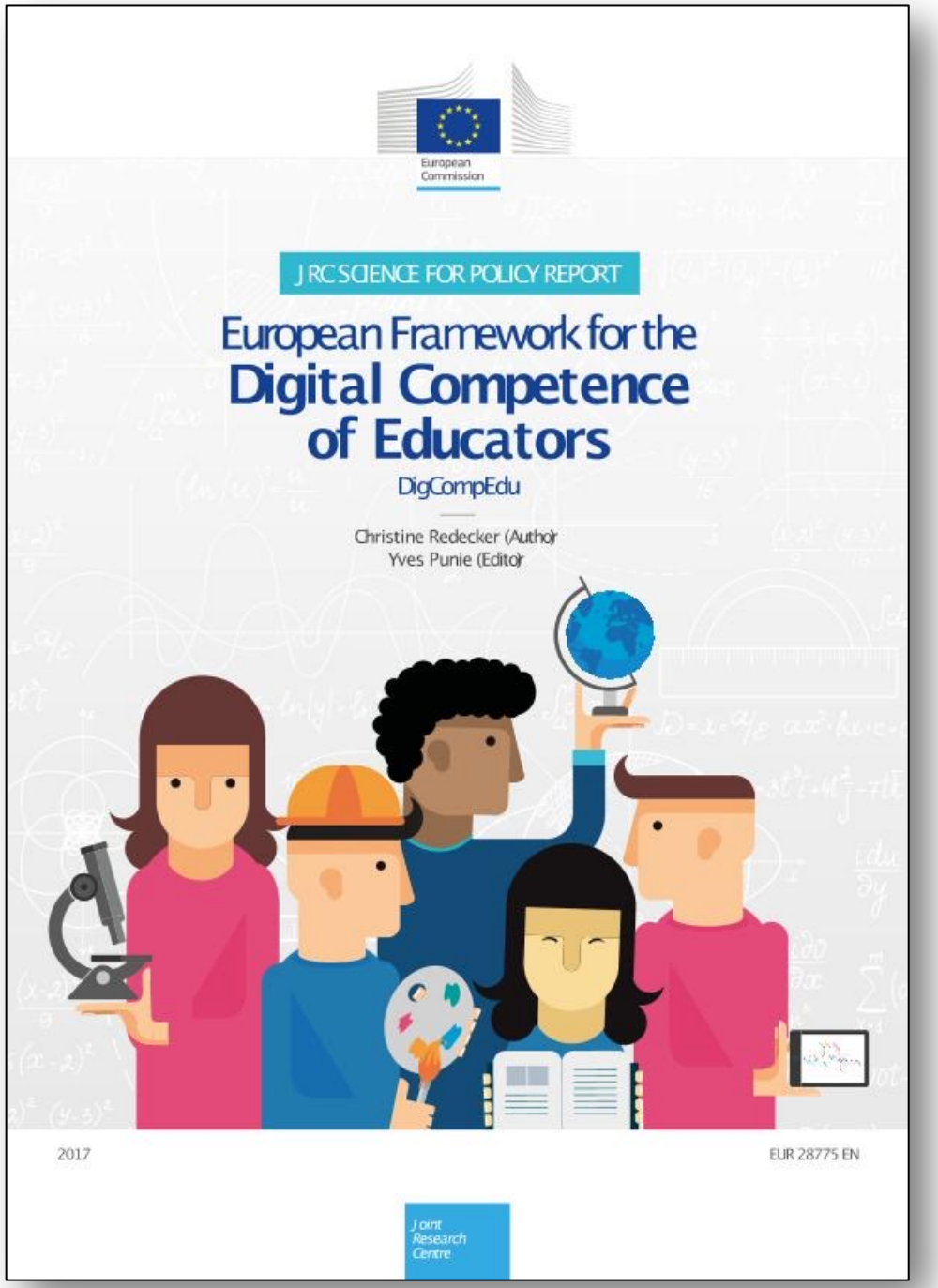
Nacho Kamenov & Humans in the Loop / Better Images of AI / A trainer instructing a data annotator on how to label images / CC-BY 4.0

AI PIONEERS

Artificial Intelligence in education & training

The AI Pioneers project, under the ERASMUS+ Forward Looking Projects, is a multifaceted initiative aiming to integrate Artificial Intelligence (AI) into education, particularly in Adult Education and Vocational Education and Training (VET).

- Reference Network of AI Pioneers
- Supplement to the DigCompEDU Framework
- Development of Resources
- Ethical Guidelines for AI Use



A comprehensive structure designed to assist educators in developing and enhancing their digital competencies.

22 elementary competences, six distinct areas:

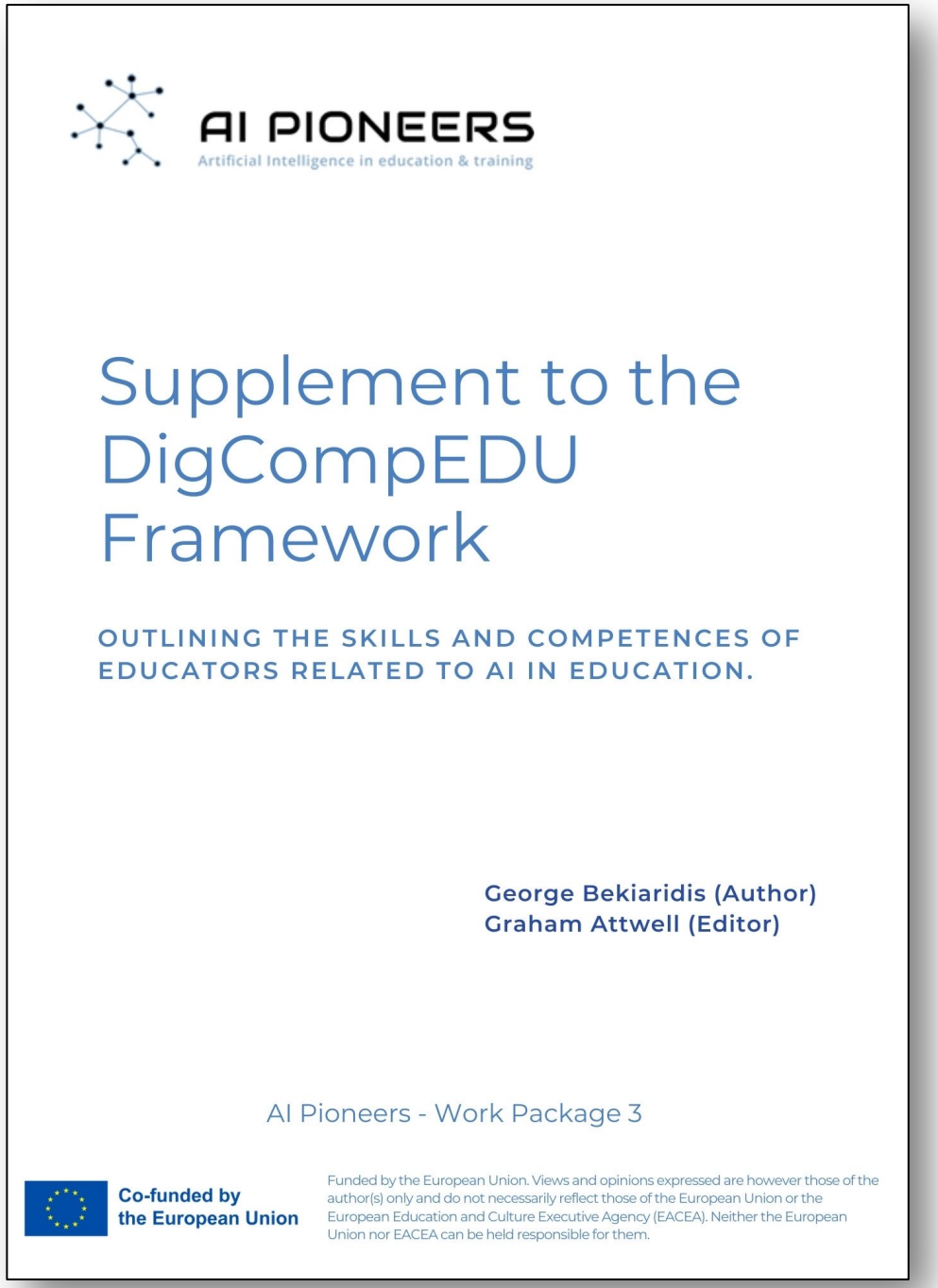
- Professional Engagement
- Digital Resources
- Teaching and Learning
- Assessment
- Empowering Learners
- Facilitating Learners' Digital Competence

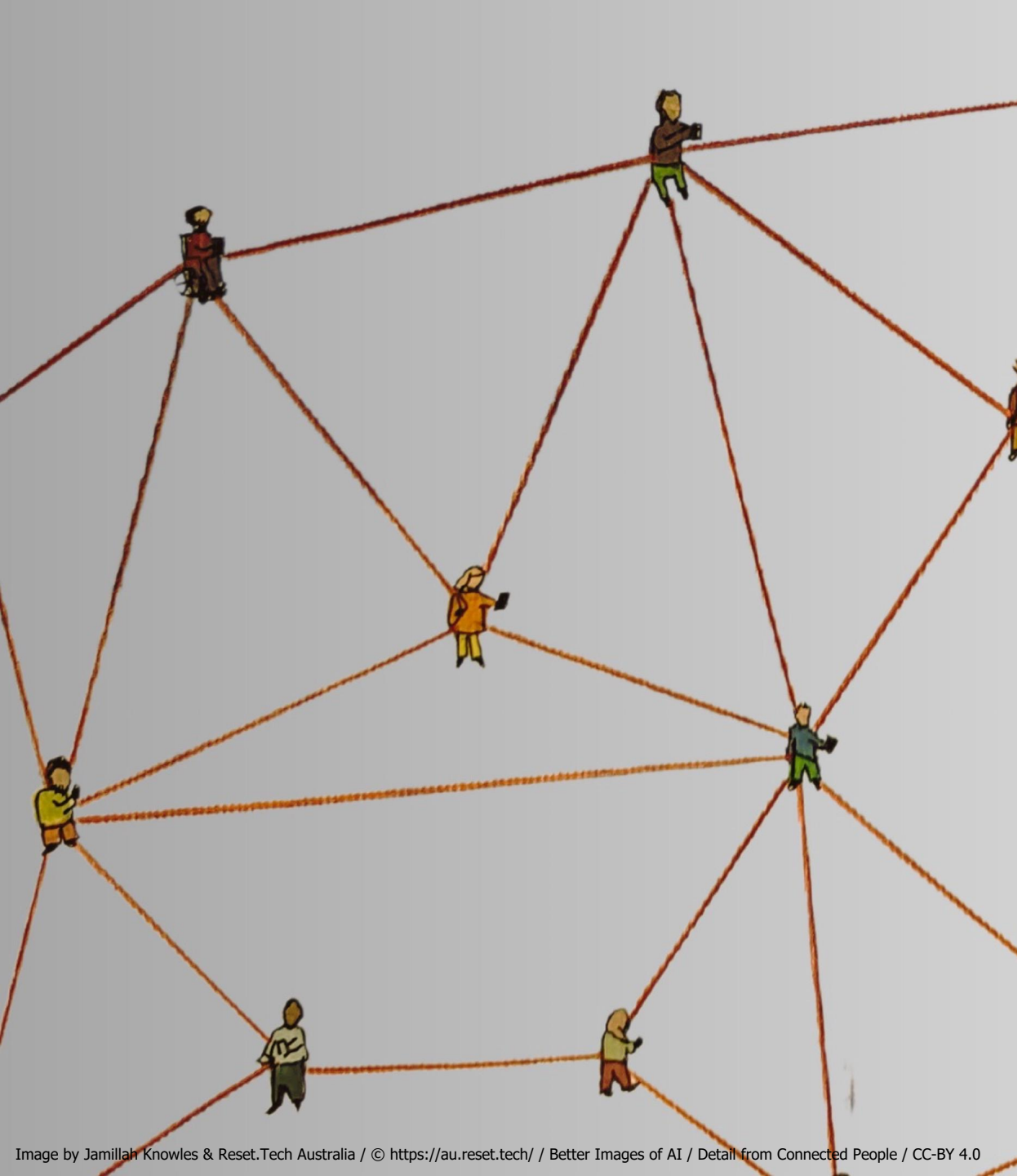
The supplement aims to build upon the DigCompEdu framework by integrating critical competencies relating to artificial intelligence (AI) in education.

For each area, it delves into :

- how AI can be applied in that context,
- suggested activities for educators to develop relevant skills,
- proposed progression levels for competency building,
- potential challenges that may arise

https://aipioneers.org/

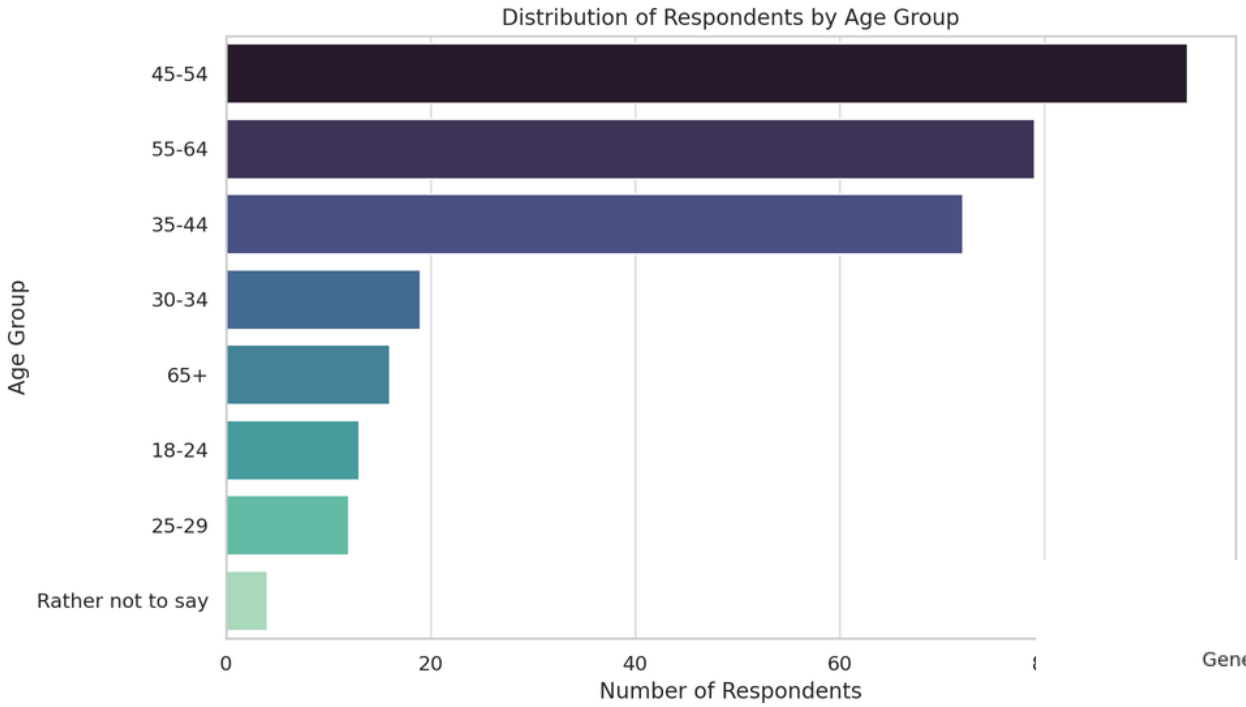


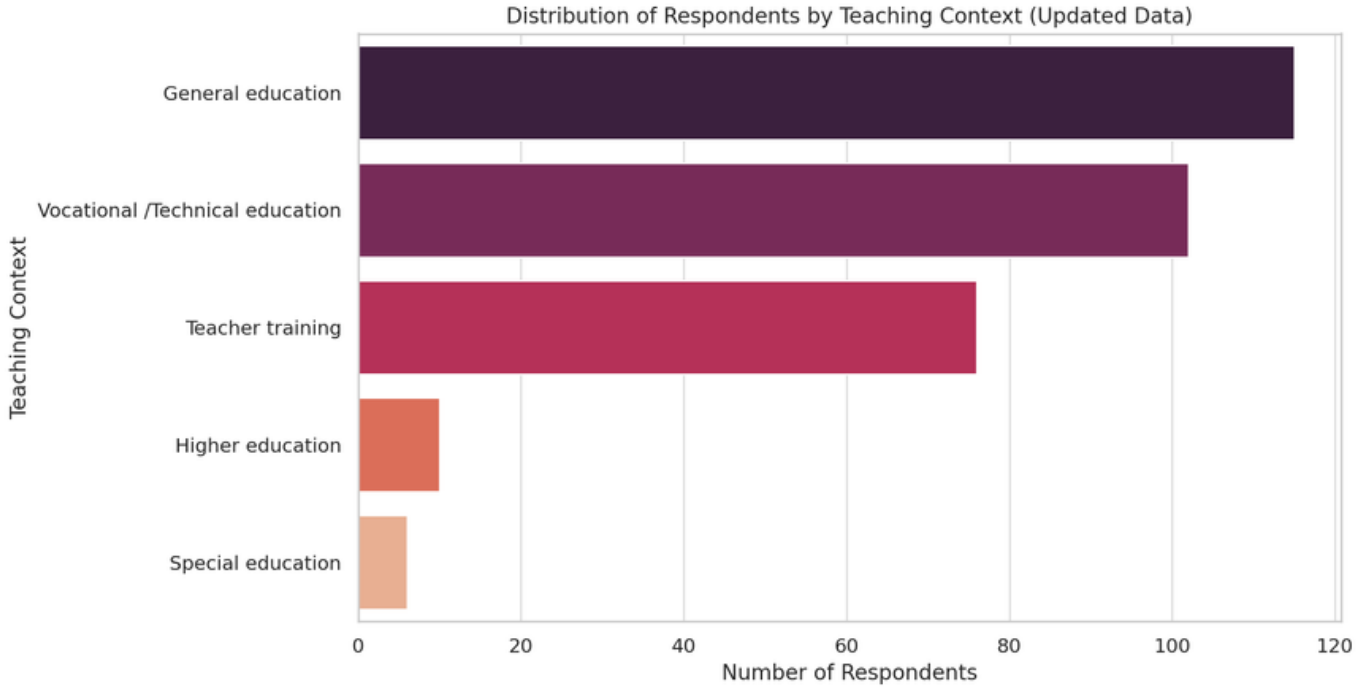


Survey of teachers and trainers and interviews and discussions with key stakeholders

- June – October 2023
- 310 teachers and trainers (265 were from EU countries, and 45 from countries outside the EU.)
- Interviews with 14 stakeholders having diverse backgrounds

Survey of teachers





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Main challenges in developing and using AI technologies in education

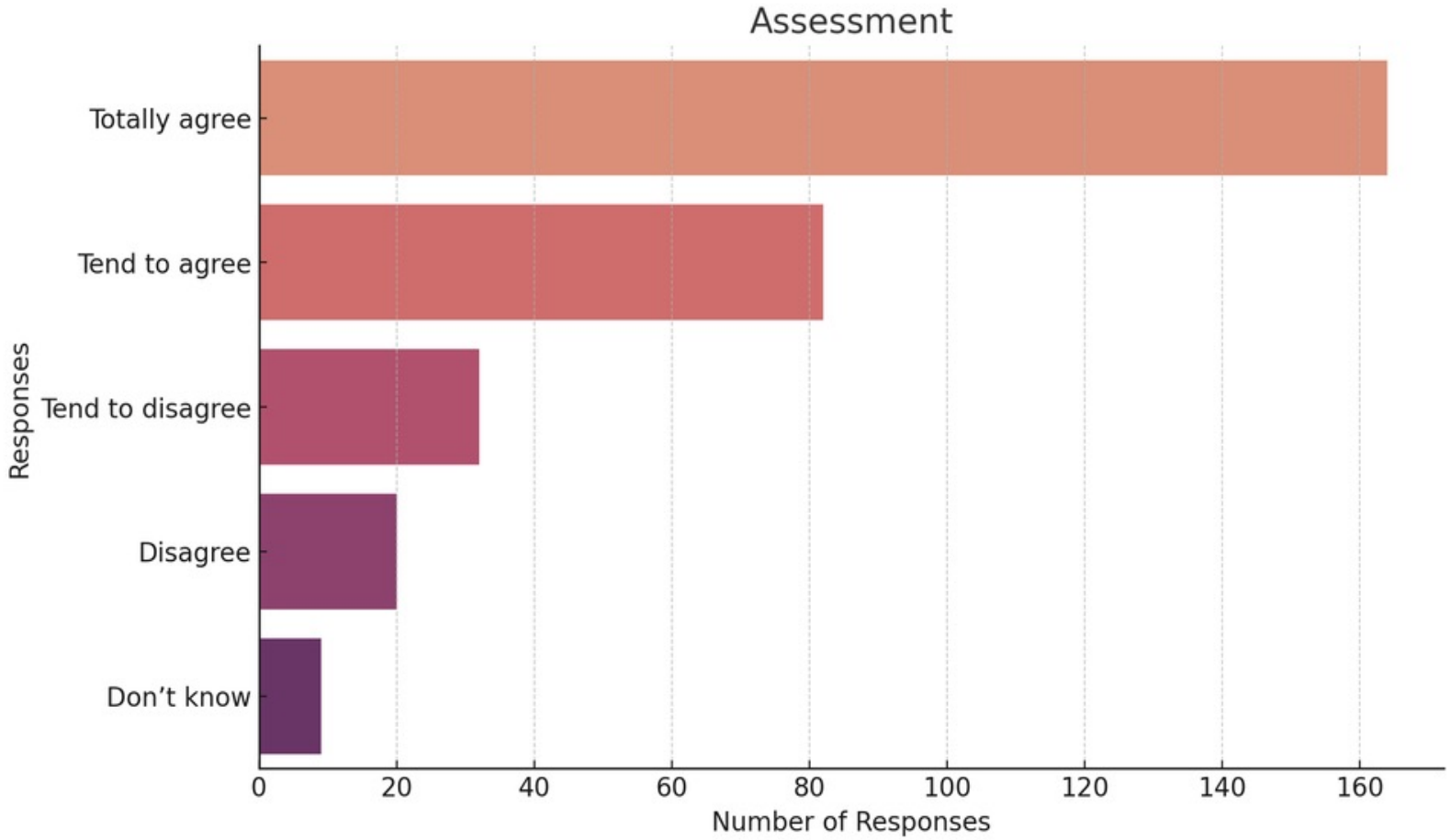
- Lack of Data
- Bias and Fairness
- Technical Complexity
- Ethical Considerations
- Limited Access and Adoption
- Resistance to Change

Skills needed to incorporate AI into teaching practices

- Data Literacy
- Computational Thinking
- Ethical Considerations
- Collaboration and Communication
- Technical Skills
- Curriculum and Pedagogy

Areas of DIGCOMPEDU AI can be applied

- Totally Agree: 164 responses
- Tend to Agree: 82 responses
- Tend to Disagree: 32 responses
- Disagree: 20 responses
- Don’t Know: 9 responses



Interviews with key stakeholders

Opportunities and advantages

- Enhanced Vocational Training
- Personalised Learning Experiences
- Simulation of Real-World Situations
- Educational Process Integration

Challenges or concerns

- Privacy and Data Security
- Implementation and Adoption Challenges
- Ethical and Social Implications
- Teacher and Student Roles
- Cheating and Misuse of AI
- Technological Disparity and Accessibility
- Assessment and Policy Development

Assessment

AI competencies in assessment include utilizing AI tools for efficient and effective student evaluation. This can involve automated grading systems, AI-driven analytics for assessing student progress, and using AI to provide personalized feedback and support.

Activities

- Implement AI-Powered Grading Tools
- Analyze Student Performance with AI Analytics
- Conduct Workshops on Ethical AI Assessment
- Design AI-Enhanced Assessment Activities
- Stay Informed about AI Assessment Trends
- Promote Academic Integrity in AI-Assisted Assessments
- Share Best Practices in AI Assessment

Assessment - Progression levels and Competencies

Progression	Proficiency statements
Newcomer (A1)	• **Basic Understanding:** Recognizes the potential of AI in enhancing assessment practices, such as automated grading or feedback. • **Initial Use:** Begins to experiment with basic AI tools for assessment, like using simple quiz platforms with automated scoring. • **Awareness:** Gains awareness of the benefits and limitations of AI in assessment, understanding the need for human oversight.
Explorer (A2)	• **Exploratory Integration:** Actively explores different AI assessment tools, integrating them into some assessments to enhance efficiency. • **Data Interpretation:** Starts to interpret and utilize data generated by AI assessment tools for understanding student performance. • **Feedback and Adjustments:** Provides feedback on AI-assisted assessments and makes adjustments based on student responses and outcomes.
Integrator (B1)	• **Regular Application:** Regularly uses AI tools for a variety of assessment tasks, enhancing the assessment process's efficiency and effectiveness. • **Data-Driven Decisions:** Utilizes AI-generated data to inform teaching strategies and identify areas for student improvement. • **Collaborative Sharing:** Shares experiences and strategies with peers for integrating AI in assessment, contributing to professional learning communities.
Expert (B2)	• **Advanced Techniques:** Expertly employs advanced AI assessment tools, such as predictive analytics and adaptive testing, to tailor assessments to individual learner needs. • **Innovative Assessment Design:** Designs innovative assessment strategies that leverage AI capabilities, improving accuracy and insights into student learning. • **Professional Development Contributor:** Leads training and professional development sessions on AI in assessment, sharing expertise with other educators.

Progression	Proficiency statements
Leader (C1)	• **Strategic Implementation:** Strategically implements AI in assessment practices at an organizational or departmental level, influencing broader assessment policies. • **Mentorship and Guidance:** Mentors colleagues in the effective use of AI in assessment, providing guidance and support. • **Systemic Improvement:** Initiates and leads projects that significantly improve assessment practices through AI integration, impacting educational standards and practices.
Pioneer (C2)	• **Pioneering Research:** Contributes original research or innovative practices in the field of AI-enhanced assessment, advancing the field. • **Influencing Policy and Practice:** Influences policy and practice at a systemic level, driving changes in how AI is integrated into assessment in educational settings. • **Thought Leadership:** Recognized as a thought leader in AI in assessment, shaping the future direction of educational assessment practices and frameworks at a national or international level.

Assessment - Challenges

- Accuracy and Reliability of AI Assessments
- Bias and Fairness
- Ethical and Privacy Concerns
- Teacher and Student Acceptance
- Integration with Traditional Assessment Methods
- Technical Infrastructure and Resources
- Professional Development for Educators
- Dependence on Technology

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Thank you !

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