recent systematic literature review of 66 Computer Science studies in the period 2016-2020 we found three common ways that Computer Science teachers typically design and implement innovative practice, which we label as 1) EDU 4.0 light, 2) Project-based/hands-on learning, and 3) Full EDU 4.0. These insights provide an in-depth insight how teachers are implementing Education 4.0 innovations. These three approaches will be used to inform our next stage of implementing JCCs.

What is the most exciting aspect of taking part in TEACH4EDU4?
It is great to work with so many exciting and innovative computer science teachers across Europe, and learn from their diverse and interesting perspectives. As technology and computer science is constantly evolving, there is a continuous buzz about how to design the next new skill, programme, or competence. In particular it is great that TEACH4EDU4 has a strong link to practice and employers who recruit our graduates. Listening to their perspectives and insights during our focus groups was really enlightening, and we look forward to work together with teachers and students on the JCCs.

In your opinion, which of the competences expected by the Industry 4.0 do you find most important?
From our focus group discussions with industry partners in March-April 2021 we found that one of the main gaps that CS graduates have are a lack of soft skills such as communication and teamwork. Similarly, according to graduate employers, CS graduates often struggle to apply their detailed theoretical knowledge to different practical contexts. The strengths CS graduates supply to the company mainly include knowledge of programming and interacting with clients and customers on a technical level. There were various suggestions in ways that these gaps could be addressed which include company placements, guest speakers and project-based learning. Areas that companies feel that they could work with their graduates to develop include areas such as confidence in their own abilities, knowledge, skills, and competences. This is exactly what we aim to achieve with the joined creative classrooms within TEACH4EDU4.

How can we can make students more engaged and motivated to develop these competences?
Expectation management and motivation are key. We need to help CS students and teachers to manage their expectations in terms of what industry is expecting, and how innovative approaches such as joined creative classrooms might help them to gain new skills and competences, including working together and work on complex, interdisciplinary and online projects. By designing interactive and effective JCCs and making it engaging and fun at the same time, we hope this will spark motivation and interest. At the same time, we appreciate that working online in project teams across space and time can be difficult, but exciting.

June, 2021

MEET OUR TEAMS

The Open University
Institute of Educational Technology

Professor Bart Rienties, PhD

The Open University's mission is to be open to people, places, methods and ideas. We promote educational opportunity and social justice by providing high-quality university education to all who wish to realise their ambitions and fulfil their potential. In 1969 one ambition changed the world, giving anyone, anywhere the power to learn. Established by the Royal Charter and globally recognised, The Open University (OU) has pioneered distance learning for over 50 years, delivering exceptional teaching and outstanding support to students across the UK and the world. Our mission is to make learning accessible to all, and together we've already helped over 2 million students to realise their ambitions.

How does TEACH4EDU4 project fit into this mission?
How teachers within Computer Sciences (CS) design effective learning approaches for the current and next generation of learners is of crucial importance to the OU mission. In order to keep advancing our mission to remain open and remain a beacon of light in distance learning, we need to educate our computer science teachers and learners how to design and implement the next Education 4.0 innovations that can help to fulfil our mission.

What is your role in the TEACH4EDU4 project?
Within TEACH4EDU4 we are primarily bringing our world-leading expertise of innovative pedagogy and technology. At the Institute of Educational Technology (IET) we have been trailblazing innovation in Educational Technology for over 40 years. By investigating together with our EU partners the state-of-the-art innovations in Education 4.0 in Computer Science and combining these with our world-leading expertise in learning design and learning analytics, we hope to provide an evidence-based platform for our EU partners to develop effective joined creative classrooms (JCCs). For example, in our