PREAMBLE

We, members of an enlarged international community of researchers concerned with education and the digital world, met in Barcelona at the EDEN 10th Research Workshop, from 24 to 26 October 2018, to discuss the rapidly changing teaching practices and the transformation of teacher roles and identity.

- Acknowledging the pivotal role of teachers in the intersection between transformative European and global educational policies, increasing drive towards the use of technology, and student demand for authentic learning.

- In alignment with EDEN's aim of fostering "*developments in open, distance, flexible and e-learning providing a platform for all the regions and countries of Europe for cooperation and collaboration between institutions, networks companies and other agencies in the field*" as well as "*links with non-European associations and institutions*".

- Committed to the 2015 Incheon Declaration 'Education 2030: Towards inclusive and equitable quality education and lifelong learning for all' highlighting the need to "*ensure that teachers and educators are empowered, adequately recruited, well trained, professionally qualified, motivated and supported within well-resourced, efficient and effectively governed systems.*"

- Endorsing the 2016 'Teachers for Education 2030: México Declaration' of the 8th International Policy Dialogue Forum - International Task Force on Teachers reaffirming the central role of teachers in the Education 2030 agenda.

- Following the recommendations of the 2014 High Level Group on the Modernisation of Higher Education report to the European Commission 'New modes of learning and teaching in higher education' emphasizing that "*methods of teaching can be better tailored to individual students' needs and advances in learning analytics are enabling quicker feedback on students' performance.*"

- Following the concrete issues raised in the mandate of the High Level Group on Education and Training DGs ET2020 Working Group on Digital Education: Learning, Teaching and Assessment (DELTA), namely, "digital competences at all levels of learning, transparency, quality assurance, validation and recognition, as

well as promoting the use of ICT with the view to increasing the quality and relevance of education at all levels".

We promote, as conclusions of the EDEN research workshop regarding *the crucial and changing roles of teachers in supporting student learning in the digital world*, the adoption of the following actions based on identified statements and challenges.

1. Personalized learning: accompanying learners while addressing distinct learning needs, situations or preferences.

Statement: Personalization and adaptive teaching result in a productive combination of teachers supporting students' particular needs and reinforcing students' aptitudes. A whole set of learning and assessment methodologies enabled and enhanced by flexible and powerful technologies provide opportunities for more focused teaching tailored to students' prior knowledge, skills and achievements, their interests and their expectations.

Challenge: Most educational models rely on cohorts, understood more or less as homogenous groups sharing similar and general characteristics. But the classroom or the course is a space where teachers must be conscious of individual students' distinct learning needs, interests, aspirations, and cultural backgrounds. Managing groups and individuals, handling diversity, supporting different learning paths, providing rich-interactive learning resources, and administering timely feedback and assessment requires not only a skilful teacher but also an institutional commitment to support a substantive organizational transformation.

This could be achieved through the **following actions:**

    1.1. Develop teacher awareness on the importance of knowing students' personal traits and interests for learning engagement and success.

    1.2. Facilitate teachers with relevant information regarding student diversity with a focus on situations requiring special attention.

    1.3. Provide teachers with opportunities for learning about methodologies that encourage student agency through self-regulation and self-direction.

    1.4. Encourage teachers in the adoption of approaches integrating professional and workplace learning to the curriculum.

1.5. Promote teacher coordination in a joint effort for the development of 21st century skills.

1.6. Support teachers with flexible, usable, and accessible technologies for (individual and group) student guidance, communication and assessment.

1.7. Make available an integrated, usable and robust technological infrastructure supporting ongoing course and programme monitoring and tracking consistent with data protection regulations.

1.8. Produce readable information through learning analytics supporting the student learning process and achievements while ensuring student privacy.

1.9. Guide teachers' decisions with filtered and relevant data about student and course progress in accordance with ethical considerations.

1.10. Involve institutional leadership, key stakeholders and departments in a cross institutional effort for student retention, success and satisfaction.

2. Open education: making the most of openness to ensure student success.

Statement: Open education goes beyond the production and use of OER (Open Educational Resources). It is linked to the distributed and networked structure of knowledge in the digital age, as well as to the collaborative, flexible and sharing nature of social networked environments as potential learning contexts.

Challenge: Voices in the open education movement privilege a model of autonomous and self-directed OER / OEP (Open Educational Practices) based learning. In contrast, institutional priorities often focus more on issues of assessment and accreditation, neglecting opportunities for moving towards a model of independent, self-directed and self-assessed learning. There is thus a need to redefine teaching policy and practice in an open paradigm, to make the most of new learning architectures and ecologies, while ensuring learning quality and accessibility.

This could be achieved through the **following actions:**

2.1. Empower teachers to adopt open approaches in their daily work to enrich the teaching and learning experience, through understanding and embracing open values, developing an open online identity and

mobilising online opportunities for social and peer-to-peer networking, collaboration and shared practice.

2.2. Develop an open pedagogy by addressing the following four interrelated dimensions:

2.2.1. Opening up learning (co)design: sharing and reflecting on ideas, theories and plans about curriculum, courses, learning activities, learning technologies, etc. with colleagues, experts and students.

2.2.2. Opening up content: producing resources with open licenses, facilitating their sharing through OER repositories and other means, adapting, assembling and using OERs produced by others.

2.2.3. Opening up teaching: fostering the co-creation of public knowledge by and with students, through online and offline collaboration and networked communities.

2.2.4. Opening up assessment: implementing practices such as collaborative, peer and self-assessment, as well as external social feedback; but also through recognition of expertise and competence with the use of tools such as open badges and e-portfolios and taking into account informal and prior professional learning.

2.3. Conduct research on the most appropriate theoretical foundations for the design of open teaching and learning practices and environments, with particular focus on effectiveness and scalability with respect to learning support and engagement, especially in massive contexts such as MOOCs.

3. Teachers and learners' roles: rethinking teaching facilitation strategies using the potential of digital technologies.

Statement:

Teaching in higher education and vocational training institutions should embrace and integrate learners' differences, interests and needs putting the emphasis on student-centred learning, rather than teacher-centred teaching. Students need to develop competences to become lifelong learners who are able to engage in self-directed learning across boundaries of formal and informal settings and communities. Digital technology can facilitate a shift towards a more participatory pedagogy which fosters learners' autonomy by supporting a diversity of communication modes and the development of online learning communities.

Challenge

However, there is wide consensus that ICT continues to be primarily used to support traditional teaching practices, rather than fundamentally transforming them from the pedagogical point of view. Effective teaching today requires being able to engage the learner in the social process of knowledge development by taking full advantage of the possibilities offered by digital technologies and networks. Technology may help to rethink teaching and curriculum itself in order to create learning experiences and projects that are more participatory, flexible, authentic and interdisciplinary.

This could be achieved through the **following actions:**

3.1. Become a networked teacher by mobilising the potential of digital technology and social networks to improve teaching practice and to build social capital among diverse kinds of students.

3.2. Design an evidence-based framework for learning where learners can actively contribute with their ideas, discussions and connections from peripheral fields and contexts.

3.3. Establish a learning contract with learners, making clear the goals and expectations and allowing them to participate in the creation of their own curriculum, encouraging them to make choices as autonomous agents within the learning process.

3.4. Build and maintain learning environments that are meaningful to students and which support social interaction and learner regulation and autonomy.

3.5. Give and enable frequent and timely support and feedback to learners, staying present and playing a co-regulatory role.

3.6. Engage in reflective and inquiry-led practice, taking into account context and student needs, and identifying critical issues and opportunities for change and development.

3.7. Support and engage in dialogues to forge connections with students, creating partnerships with them to advance teaching and learning processes.

3.8. Participate in teachers' communities of practice and/or informal networks for professional development.

4. **Assessment for learning: reinforcing teacher-learner dialogue through feedback and the implementation of ipsative approaches.**

Statement: Formative assessment and feedback consider that the implementation of complementary *ipsative approaches* and the reinforcement of teacher-learner dialogue through different channels in networked environments enhance learning.

Challenge:

Formative assessment refers to the continuous assessment of student progress in order to identify learning needs and strategies, and to adjust teaching in accordance. Learners can benefit from useful feedback and appropriate formative assessment, but do not always take sufficient advantage of this. Furthermore, a focus on high visibility summative tests (e.g. exams) creates frictions with more classroom-based formative assessment approaches, and a lack of connection between systemic and classroom approaches to assessment.

This could be achieved through the **following actions:**

4.1. Learn how to design and implement different assessment approaches: defining the purpose (diagnostic, formative and summative); establishing who 'performs' the assessment; selecting the appropriate methods and instruments; choosing the appropriate tools; considering the implications of different certification contexts (traditional degree-awarding programme, open and flexible MOOC context, micro-credentials etc.).

4.2. Provide feedback as a strategy to encourage reflection and dialogue, not only between the teacher and student but also among students themselves.

4.3. Focus on feedback as a process, emphasizing not only the information about the learning process but also actions to be carried out in future tasks (feedforward).

4.4. Help students develop self-regulation strategies by identifying their own expectations and making decisions to improve their learning.

4.5. Integrate appropriate feedback when designing interactive assessment assignments (quizzes etc.) to support learners' awareness of their own progress.

4.6. Use data from formative assessment to adapt teaching approaches with a view to meeting diverse students' needs.

4.7. Promote ipsative approaches which compare students' results with previous achievements, enabling them to see whether or not they have implemented recommendations and feedback received previously.

4.8. Implement and evaluate the effectiveness of different methods, such as gaming, portfolios or journals, for dynamic formative assessment.

4.9. Use Learning Analytics systems to support the assessment process, in particular tracking learners' progress over several learning activities.