DIGITAL EDUCATION MANIFESTO

The promise of education is to provide individuals with the requisite tools and skills to empower them to prosper in daily life and have a meaningful role in society. In the last century, this promise held true. Massification of education brought with it a historically-unprecedented rise in living standards demonstrated by: the explosion of the middle class; increases in health and lifespan; and greater democratic participation[1].

In much of Western Europe, the foundations of this promise of education are being challenged. The middle class is shrinking and employment rates, even amongst tertiary education graduates, are decreasing. Multiple surveys show skills gaps between what is taught and what is needed – both in terms of life skills and skills for employment. Uneven uptake of competences for a digital society are creating a new digital-divide. The Internet, the emergence of smart, personal technologies and the mass uptake of the social web are further challenging long-standing power relations between education institutions and those they prepare for their lifelong learning and employment journey. Our educational systems are faltering in their ability to deliver on their core promise - leading to broader social questioning of the value of education, expertise or even the scientific method as a whole.

Our manifesto is the result of a two-day gathering in January 2017 held under the auspices of Malta's EU Presidency. The speakers in the Digital Education Conference[2] included global policy-makers, thought-leaders, education practitioners and activists from organisations including MIT Media Lab, Creative Commons, UNESCO, Open Society Foundations, Joint Research Centre of the European Commission, Learning Machine and the Commonwealth of Learning.

We were charged with mapping the state and future of digital educationin six key areas. For each of these areas, we present the priorities for moving towards our desired futures.

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THE MANIFESTO

FUTURE TRENDS IN DIGITAL EDUCATION

While technology has continued to develop unchecked, the conversations around its applicability and relevance to mainstream education continue to be polarised: from the basic mistrust of technology in the classroom, misunderstandings on digital pedagogy and fear of educators being 'replaced' by technology - to techno-utopianism. Such polarisation has until now held back the full potential of the digitalisation of education – particularly in a discipline concerned with the development of human potential. For education to influence these trends, it needs to **lead** rather than **react to** technological change, and, in particular by proposing a vision for the digital revolution to enrich rather than replace traditions of humanism.

As an example: for decades, technology has been increasing both the quantity and quality of information to which we are exposed. Yet a failure by the education establishment to identify and teach for a desirable scenario –in this case the ability to filter and critically evaluate information developed and shared online - means that media literacy remains at its infancy when trying to understand the contribution of social media algorithms to the development of fake news. On a pragmatic level, this means that curriculum design needs to focus more on translating technological threats into **competences to enable desirable future scenarios**.

BEST PRACTICES IN POLICY DESIGN FOR DIGITAL EDUCATION

As described above, wherever the massification wave has been largely completed, current policies in education are beginning to reach their limit, in terms of their ability to achieve desired social outcomes.

Innovation theory says that an industry which has plateaued in terms of meeting customer demand cannot fully meet all the demands customers place on it: when it has largely operated on an unchanged model for an extended period of time, it
is ripe for disruption.

Just the same as in every other industry which has been disrupted, the disruption comes not from technology, but from those new business/ operational models which best manage to take advantage of technologies to address people's needs.

The key question for the future of digital education is not how to adapt education to digital technologies and a digital world, but how to leverage digital technologies to fundamentally change educational systems so that they may again fulfil their promise of continually expanding human potential.

Significant evidence suggests that maintaining the relevance of our education at this time requires enacting policies to prioritise the discovery and development of disruptive innovations over continual incremental improvements.

OPENNESS & EQUITY IN HIGHER EDUCATION

Equity in Higher Education is the aspiration to ensure that the student body "reflects the diversity of our populations[3]". Open education is about removing barriers and making education accessible to all. Contemporarily, it is mostly realised through the use of digital technologies, and proposes changes in education systems by promoting openness at various levels: content and digital resources, pedagogies, technologies, accreditation and recognition of learning, research, new forms of collaboration and leadership, to cite a few.

In its full form, open education should also be understood as an approach that empowers educators and learners to break away from a textbook-based mass education model developed in the nineteenth century. Open resources and pedagogies enable an education process that is constantly innovating, and is more flexible and therefore better suited to the varied and changing needs of individual learners.

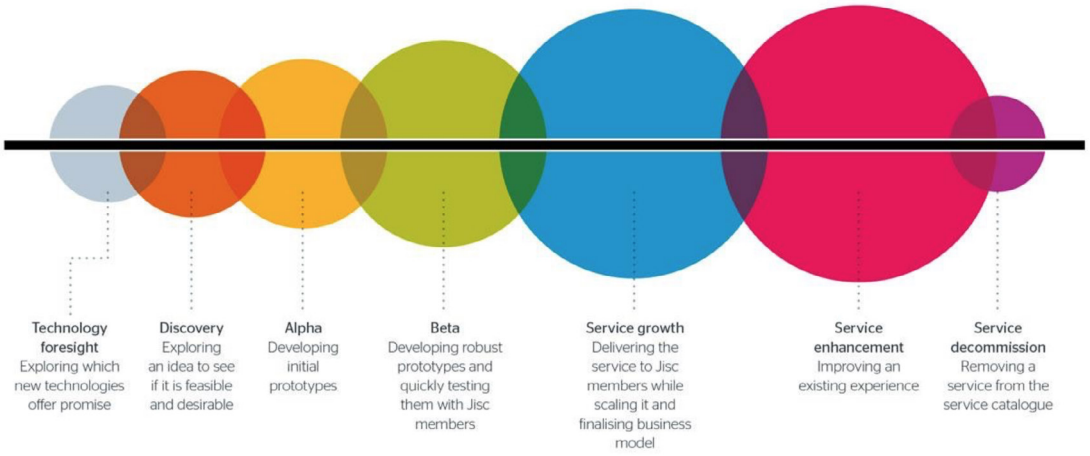
Open Education policies have had some success in removing barriers to access and participate in education; for example, by making educational resources freely available as open educational resources (OER), as well as by using e-learning to allow learning to take place anywhere and at any time.

However, most cases of inequality, social deprivation and limited participation in education can be attributed to multiple deprivation factors. Merely 'opening up' educational systems has, until now, had little to no effect on overall equity in education.

3

Open education needs to be deployed in conjunction with other existing (and yet to be discovered) methods for increasing equity. To this end, Europe needs to create an innovation pipeline for educational equity, providing support for experimentation discovery and the scaling up of specific methodologies which utilise open and digital education, in tandem with any other applicable business processes, scientific discoveries or social practices to achieve measurable improvements in social outcomes.

The combination of MOOCs[4] and European publicly-funded education provides such a 'marriage' of a technology with a methodology – in this case European governments' mandate to provide free or low-cost high quality-education to the maximum number of students possible. As such, the use of MOOCs for widening access and participation in education for disadvantaged groups should be a significant focus for such an innovation pipeline.



Jisc Innovation Pipeline ©Jisc CC BY-NC-ND

4

SYSTEMS FOR ACCREDITATION AND QUALITY ASSURANCE OF ONLINE LEARNING

Although online learning is now widespread throughout education, all too often it is considered to be an inferior, alternative, emerging or non-core educational activity, leading to its exclusion from current quality assurance systems. The most evident symptom of this phenomenon is the massive increase in online qualifications which offer non-credit awarding certificates, in conjunction with the rise of MOOCs.

Thanks to research in the last two decades, the strengths and weaknesses of online learning vs face-to-face learning are well documented. Different perspectives on the purposes of education are reflected in various quality models which synthesise a set of requirements for a quality education, together with the methods to run quality digital education courses and indicators to measure such quality.

In the meantime, the lack of widespread adoption of these quality and accreditation standards in the area has led to a proliferation of low quality providers, which tarnishes the reputation of the industry as a whole. While our understanding of quality education will continue to evolve with the emergence of new social demands and new educational methodologies, the most urgent issue regarding accreditation and quality assurance of online learning involves the scaling up of existing methodologies.

In the short term, the policy imperative needs to shift from developing quality assurance for digital and online learning to requiring the implementation of already-developed quality systems by educational organisations across the board. In the meantime, quality assurance systems need to shift increasingly from solely measuring 'academic' quality to measuring the broader social benefits of education – research into online education quality in turn will need to increasingly answer how it contributes towards these social benefits.

INNOVATION & DIGITAL PEDAGOGIES

(Formal) education research is largely based around experimenting with various educational strategies at classrooms levels. However, the science of learning is largely dealt with by the fields of cognitive psychology and neuroscience – with only extremely limited cross-pollination of the fields currently happening, despite the obvious benefits from integrating the overall body of knowledge on learning into a cohesive whole.
To this end, we recommend that evidence-based policy-making in the field of education needs to expand to include stakeholders from all three fields, and in particular to promote and prioritise trans-disciplinary initiatives among the fields.

For example, just one insight from cognitive psychology on the effectiveness of retrieval learning (short videos followed by immediate assessments) has led to the rapid development and growth of an entire ecosystem of micro-credentials, and the foundation of multiple new educational providers.

Current educational organisations who aspire to excel in this new form of education in the face of countless new entrants will need to evolve a capacity to learn from all three fields and implement these lessons into their management systems.

TEACHERS, LEARNERS AND DIGITAL EDUCATION

As technology continues to disrupt more aspects of life at an ever-increasing rate, digital competences become ever more important: the rate at which entirely new competences are invented is increasing exponentially. While ten years ago the conversation centred around digital natives vs. digital migrants in education, now digital natives include consumers, creators and communicators and influencers on social media. Education is woefully unprepared for these rates of changes: education institutions are failing to focus on the role of the educator in a digital environment; learners are frequently better-skilled in the use of key technologies than educators.

Addressing this concern requires a significant increase in the resources devoted to the continual professional education of teachers, based around four pillars:

1. Establishing mechanisms to identify emerging social trends as well as emerging trends in learning, and translate these into training-of-trainers' materials as rapidly as possible;

2. Regularly conducting skills' assessments of individual teaching staff as well as of the faculty as a whole, to ensure sufficient acquisition of new (digital) competences;

3. Drastically enhancing the number of continuing professional development hours offered to teachers, to allow them the opportunity to master rather than just obtain necessary digital competences; and

4. Gradually increasing the requirement for all educators to have prescribed digital competencies.

Teachers need to adapt to a new role, not as conveyors of information but as role models for a new generation, and facilitators of students' own personalised learning pathways.

SIGNATORIES

The prominent personalities named below all participated in the Maltese EU Presidency Conference on The State of the Digital Education. Their presentations to the conference inspired this manifesto, and they all have agreed to attach their names to it.

- Evarist Bartolo
- Bryan Alexander
- Antoaneta Angelova-Krasteva
- Genevieve Barrons
- Anthony F. Camilleri
- Andreia Inamorato Dos Santos
- Alex Grech
- Cable Green
- Jeff Haywood
- Joe Hironaka
- Chris Jagers
- Sandra Kucina Softic
- Catherine Mongenet
- Philipp Schmidt
- Balaji Venkataraman
- Emanuel Zammit

[1] Vide: OECD (2017), Education at a Glance

[2] See Digital Education Conference Magazine at:
https://education.gov.mt/en/digitaleducation/Documents/conference_magazine.pdf

[3] 2007 Bologna Communique

[4] For the purposes of this manifesto, we consider any form of open online education to fall under the wider 'MOOC' category