



Net Positive Valuation of ICT in Online Education

THE PROBLEM Online education has been evolving in the American undergraduate education system over the last two or three decades, and the use of information and communication technology (ICT) for this purpose has exploded since the 1990s. Has this online revolution had a net positive effect on higher education?

THE CLIENTS Center for Technology and Responsibility, BSR, Dell

THE SERVICE ASU Sustainability Scientists from the university-wide Julie Ann Wrigley Global Institute of Sustainability, including the W.P. Carey School of Business, the Ira A. Fulton School of Engineering and the Global Sustainability Solutions Services of the Walton Sustainability Solutions Initiatives addressed this issue through an analysis of ASU Online, the university's online education arm.

The group developed high-level models of key stakeholders and variables and populated them through structured interviews of ICT platform experts across the education landscape, with a focus on Arizona State University and ASU Online. In addition, a literature review of published studies in areas relevant to net positive assessment of online education was conducted. The unit of analysis used is the delivery and completion of undergraduate degrees.

THE SOLUTIONS/CONCLUSIONS In the end, the contribution of ICT and ASU Online to the net positive position of the ASU complex is substantial and is based almost entirely on increased access and affordability of under-graduate degrees. Simultaneously, it is lowering the environmental footprint required to produce those degrees.

The important point is that ICT is enabling innovation in education in general and in online education specifically. The ratio of positive benefits of producing a college graduate to the resources required to do so, including emissions, is growing larger quickly due to the maturation of online education and the dedication of higher education institutions to making it so. ICT plays a central and critical role.

THE OUTLOOK The big impacts nationally are the economic and social returns to a degree. The longer-term net positive story is one of innovation in a dynamic global market with its overwhelming need to educate students in developed, emerging and developing countries. Online education may be the only hope for 9.5 billion people to get a quality education in the years approaching 2050.

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“Dell is extraordinarily excited to collaborate with Arizona State University, the largest public university in the country, on this research. The study findings show that technology can unlock multiple layers of social, economic and environmental value, especially in the field of education, enabling ASU to plan for a growing student population while staying within existing resource limitations. At Dell, we are committed to working with partners and customers to ensure that the net positive value of the technology we provide, creates 10 times more benefit than the resources it takes to manufacture and use those products. This net positive approach is a capstone goal of Dell’s Legacy of Good 2020 Plan and the findings of ASU’s net positive research reinforce that aspirational goal.”

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