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Embrace The Technology: Digital technology as a responsibility for all

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Children are already constructing their own cloud- based services. My kids, aged eight and ten, are sitting in their bedrooms, creating server accounts to host gaming events with their peers around the world. They instantly turn to streaming media as a node for learning, where traditional search engines are no longer the norm. The facsimile approach to technology- enhanced learning and teaching needs to be challenged. The recent launch of the National Digital Learning and Teaching Strategy provides a vehicle to explore the equilibrium between pedagogy, policy and curriculum; empowering teachers to truly reflect on *when, how* and *why* they should use digital technology. There are many misconceptions within teaching and over the last 20 years or so, we have built a strong profession that is built upon a mutual understanding between disciplines, with more attention to multidisciplinary approaches to teaching. We still have much to learn about interdisciplinary agency, but we have worked long and hard to build a teaching workforce that was ultimately born from the industrial enlightenment.

The integration of technology into our lives has changed the way that we work, live and play, yet education can be slow to react. It is frustrating but to be expected. The need for a *broader* understanding of technology has never been greater. Likewise, we also need to continue our efforts to *deepen* our knowledge of the technology that we use; to understand the technological pedagogical knowledge that resides in learning. It is not acceptable to simply add a range of devices and online tools into a classroom without first acknowledging their best and most effective use. I become disillusioned when visiting schools, to find that a sole digital “champion” is leading the “cause”, and that their colleagues are dismissive or, worse still, they believe that the use of digital technology is “not their job”. I do believe that there has been a small shift in culture over the last few years, with fewer teachers falling into this category and with more embracing the transformational change that technology can afford.

As a member of the Education Scotland National Technologies Network and as the Principal Validator for Digital Schools Awards Scotland, I am lucky to find myself in a position where I speak to many educators about their use of technology. Digital learning and teaching is the professional responsibility of every teacher, and this can be realised through the curriculum. We now find it easier to integrate technology into the learning journey. It is now expected, with perceptions of tried and tested theories of learning (constructivism and cognitive-behaviourist theory) acting as the foundations for newer theories (social theory, constructionism and connectivism). In working against a multifaceted collection of digital frameworks, teachers are not the barrier to progress but rather the solution. Our challenge is more profound. At the “front end” of the system, celebrating creative integration of the technology and involving the learners themselves, as digital leaders and curators of knowledge, is the evolutionary next step in schools, where teachers act as role models and facilitators of learning. To succeed in this ambition, the “back end” of the system needs some fine tuning. That is, there are five areas where step change is required.

First, we need to carefully examine the IT procurement, resource and accessibility policies within local authorities. Some are excellent, others are not. I'm pleased to see locally forged strategies, but this is fragmented around the country. Second, we need to support the Scottish Government in its goal to provide superfast broadband and wireless services, indicating gaps in provision and insisting that resource is allocated where required. Third, we need to take a long, hard look at the place of digital learning within our national curriculum. At the time, it may have been logical to house *ICT to enhance learning in the Technologies*, but this is no longer acceptable. Like *literacy, numeracy and health and well-being*, it is a responsibility for all teachers regardless of their professional or curriculum stance. I cannot think of any discipline where digital technology is not used. As long as it exists within any one specific area of the curriculum, we are sending out mixed messages and that's just wrong. Fourth, we need to continue to work with our industry partners in developing the digital skills that the future workforce will need. This also includes digital life skills such as cyber resilience, digital literacy and digital citizenship (such as use of social media and electronic communications). Last, we must bring together student teachers (Initial Teacher Education), qualified teachers, the third sector, the academic community and colleagues within professional agencies (including HMIe) to build a basis for scholarship and evidence-informed approaches to teaching with technology. In doing so, we must realise that there is no "silver bullet" and that what works for one may not work for another. The message here is that teachers need the time, freedom and tools to be able to innovate and try new things. We should not just measure outcomes, but the digital journey that we have started.