

## 2. Key issues in the learning, technology and organisational landscape

**Rationale:** Digital capabilities are a strategic concern for educational organisations because the landscape in which they operate is changing to the extent that they need to rethink their core business, how their staff carry out core business functions, how they enable their staff and learners to thrive, and how the organisation itself will thrive going forwards. Making this case requires us to clearly identify what the significant changes are. Feedback emphasised the value of thinking through digital capability in terms of key issues facing organisations:

*'Digital literacies are not themselves set in stone but provide a foundation for adopting and adapting to emerging practices'*

*'Useful for engaging Senior Management/other in this agenda when wanting to argue for change.'*

The original 'key issues' were taken from a variety of sources e.g. Horizon reports, UCISA surveys, government think tank reports, Gartner, Jisc foresight work (references available). In fact commentators added little that was substantial, suggesting that the issues were already well identified or well known, or perhaps that there was little point refining them further. The document was considered mainly valuable as a support for '*discussion and planning*' (4 comments), '*to help support an understanding of and articulate aspirations for staff and organisational development*', '*for strategy development*', '*to consider possible issues/trends*'. However, it was also felt that organisations would need to identify their own specific drivers and map staff capabilities from these, rather than using the general set. This was the document that elicited most commentary about institutions being different, proceeding at different rates of change, having different agendas etc.

*'I think it could be used by institutions at several levels, however it would have to be mapped to their current priorities.'*

*'some of the changes you have identified as happening now, are not happening in all institutions. I think there might be a need to recognise that HE and FE move at different paces'*

It seems that there is some value in Jisc identifying 'key issues' for discussion within the community, but that most institutions will require support to translate their own priorities, market position, and technology opportunities/risks into a strategic plan which includes the development of appropriate digital capacity. This kind of activity may be covered in the Jisc digital leadership offer.

## Key issues (slightly revised to incorporate feedback)

Assimilating now: assimilating next 3 years; assimilating beyond 3 years??

<b>Changes in the ICT landscape</b>	BYO (device, service, content, skills) Cloud computing and open infrastructures Ubiquitous wifi and mobile networks Learners expect seamless access to digital services and networks	Enhanced capacity to learn/work in virtual spaces Open content, publication, resources, data Open accreditation e.g. badges, international competence standards Mobile devices dominate learner use: personal, portable, always-on (Learning) data analytics	Maker culture, coding and app/game making Wearable technologies Internet of things/people Semantic/machine-readable competence mapping. Highly personalised information and data services via multiple personal devices.
<b>Changes in the learning landscape</b> ( <i>new pedagogies</i> )	Blended pedagogies and hybrid learning spaces 'Flipped' learning as dominant blended paradigm MOOCs, especially for CPD Collaborative delivery Internationalisation of curriculum offer	Open pedagogies and borderless classrooms Mainstreaming of MOOC methods Focus on measuring/recording of learning Personal profile/e-portfolio of learning and achievements 'Digital divide' narrower but deeper Learners with coding skills becoming the norm	Students as co-creators Flexible/adaptive learning Advanced diagnostics Anytime, anywhere (continuous) learning and recording of achievement
<b>Changes in the research environment</b>	Managing research data at scale Mapping and geo-locational data Data visualisation Virtual research environments and online collaborations Open publication	Open research, public scholarship Big data, big science, social data Emphasis on applied (mode 2) knowledge and interdisciplinary research problems Research metrics and impact measures	Data collected continuously e.g. from IoT, wearables Massive, continually updated open datasets Research in virtual space (simulation-based, advanced analytics, virtual impacts) App, interface, service development as part of research process
<b>Changes in libraries and content</b>	E-books and e-journals becoming dominant Information literacies embedded into library work and into the curriculum Learning content uses a range of media Open publishing models for academic content	Digitisation of valued human knowledge more or less complete ('digital first') Open access journals the norm: open peer review, including post-publication review Micro-payment for content on demand Academic publication becoming multi-modal – visualisations, simulations, animations etc	Paper-based records and resources rarely used. Highly personalised (filtered) content and information services Libraries managing a range of content generated within as well as without the organisation Open publication of academic textbooks the norm
<b>Changes in the organisational environment</b> ( <i>funding, policy, risk, opportunity</i> )	Ongoing funding constraints Growth in PG/CPD market esp online/flexible/work-based Learners' digital practices changing expectations/ experiences of learning C21st skills agenda (digital skills, employability) New learning markets, esp work-based, international New modes of delivery, esp online e.g. M/VOOC Return on ICT investment, organisational efficiencies Brand building and recognition Rising student numbers, falling funding per capita	New KPIs around delivering productivity and skills Teaching inspection regime? Preparing graduates for complex, uncertain working lives Changing nature of work inside HE/FE (contracts, hours, locations): relationships more insecure, organisations more agile / flexible New generation of lecturing and professional staff New providers including publishers entering market Local/regional rationalisations; international partnerships and collaborations	Learning across providers; diverse, portable, disaggregated provision More stratified/variegated landscape of provision Credible alternatives to traditional degree e.g. e-portfolio, open credits/badges, standard competence frameworks (pressure to justify relative cost of HE) Diverse partnerships e.g. publishers, prof bodies, research users, schools/colleges/communities