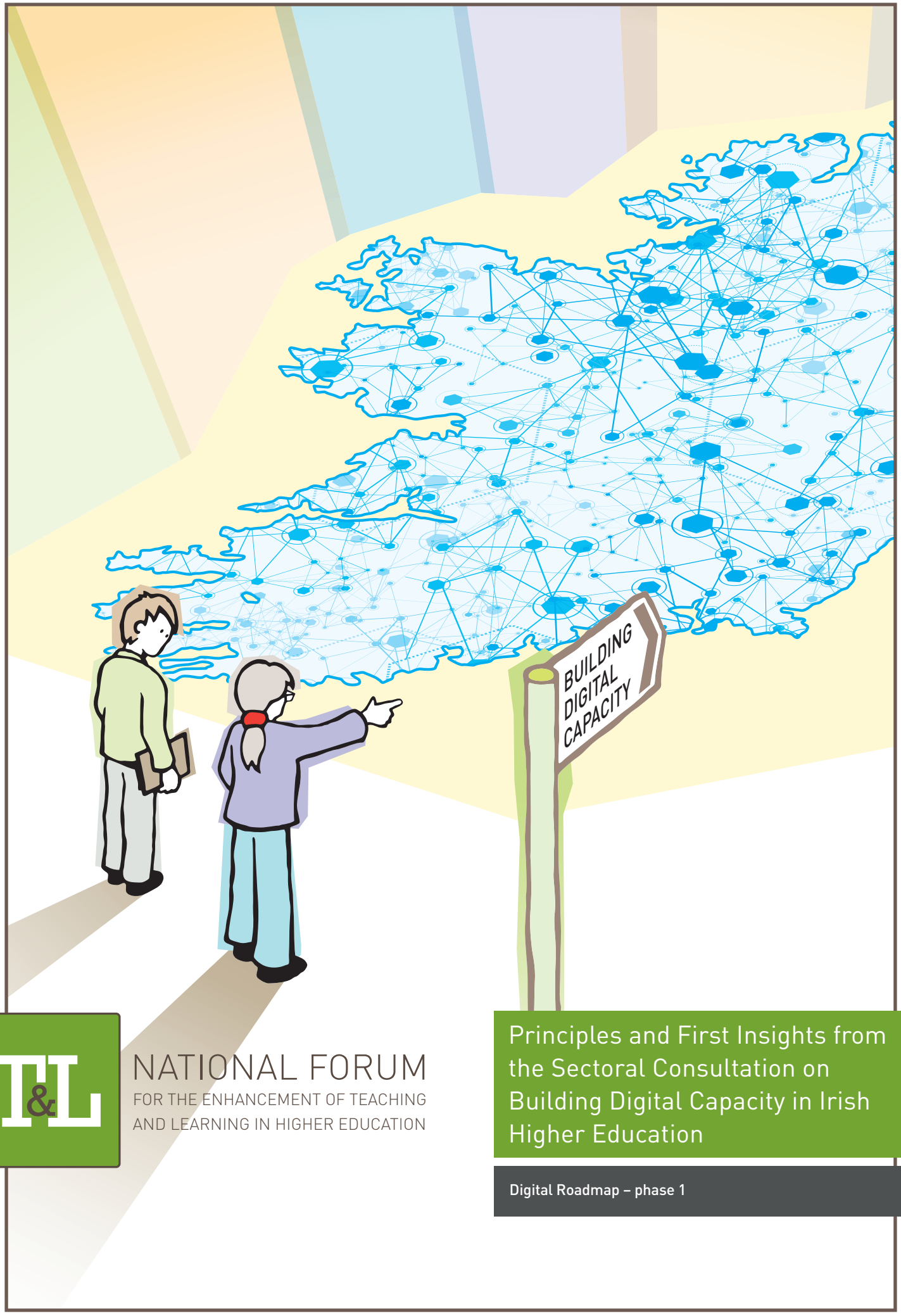


NATIONAL FORUM
FOR THE ENHANCEMENT OF TEACHING
AND LEARNING IN HIGHER EDUCATION

Principles and First Insights from the Sectoral Consultation on Building Digital Capacity in Irish Higher Education

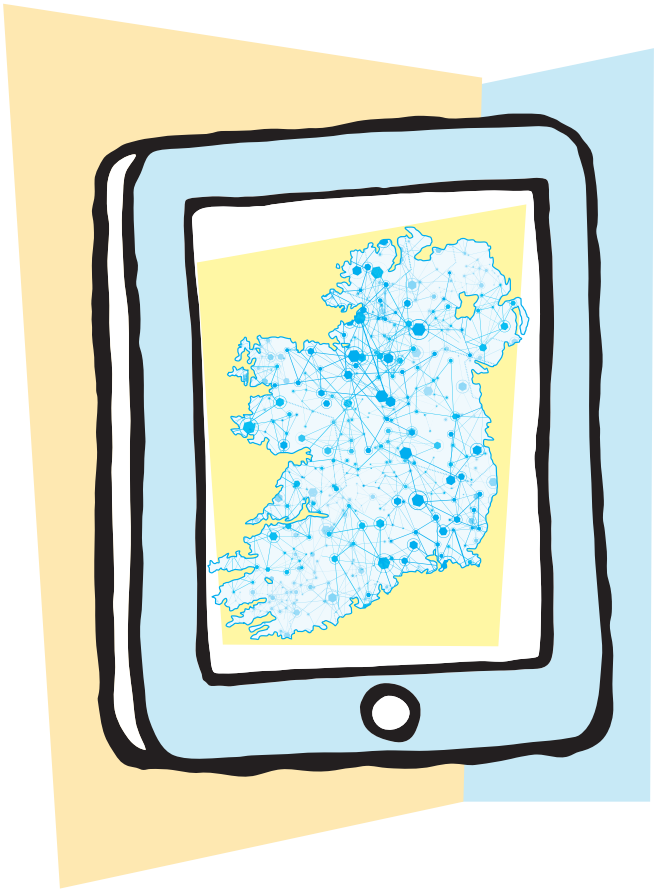
Digital Roadmap – phase 1

NATIONAL FORUM
FOR THE ENHANCEMENT OF TEACHING
AND LEARNING IN HIGHER EDUCATION

BUILDING DIGITAL CAPACITY IN HIGHER EDUCATION

Principles and first insights from the sectoral consultation – with preliminary recommendations and actionable first steps

May 2014



CHAIR'S Preface

The work of the National Forum for the Enhancement of Teaching and Learning must be genuinely consultative. We commit to seeking views and mobilising expertise across the entire sector. This is one of the key values that has underpinned the work of the National Forum since its initiation – and it is why I am so pleased with the tremendous response that we have had from all institutions in the sector to the call for consultation that has preceded and informed this document. Building digital capacity is a vital part of the National Forum's work plan, but it is not the only part. It must be strongly linked to the other dimensions of enhancement that the Forum is working to facilitate, including professional development, scholarship in teaching and learning, rewarding and celebrating excellent teaching, and the development of strong partnership and collaboration.

What has become increasingly clear during our consultations is that the challenge of building digital capacity is something that the entire sector must embrace together. It is a challenge that will not be met unless all parts of the higher education sector are involved, and unless different kinds of expertise and activity are integrated to create an education system that is characterised by the fullest and most impactful use of the potential that digital technology presents.

We have also learned that while there are legitimate concerns about aspects of digital technology and how best to use it in higher education teaching and learning contexts, there is also a widespread commitment to utilise its potential to support and engage students and their learning. Our challenge now will be to address these concerns and realise the potential. It is encouraging to see similar priorities emerging in discussions on primary and secondary education too.

This document articulates an emerging national vision. It states why we must build digital capacity and highlights what next steps we should take to utilise digital technology in the best ways possible – in order ensure a creative, engaging exciting and effective learning environment for our students. It also sets the context for the allocation of the enhancement funding in this area – funding that the sector so badly needs. This call for funding proposals will be released shortly.

I commend the members of the National Forum team led by Dr Terry Maguire for the energy that they have brought to this work. I am deeply appreciative of all the National Forum Board members and our panel of international advisers for helping to guide and shape this process. Mostly, I am grateful to the very many of you who have made time to contribute to this emerging vision and to all our institutions who share a determination to make teaching and learning in higher education the best that it can be.

Professor Sarah Moore

Chair, National Forum for the Enhancement of Teaching and Learning in Higher Education

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AN EMERGING VISION FOR DIGITAL CAPACITY IN IRISH HIGHER EDUCATION

Digital Capacity: The skills, competences and attitudes that enable people to work, live and learn in a complex world that is increasingly digital.[1]

The Irish higher-education sector will be characterised by learning environments in which:

- there is a culture that fully embraces digital learning and digital innovation
- digital technology is utilised to enhance teaching and learning, to connect teachers and students, and to increase the level and quality of learning-related communication
- digital literacy and digital skills for teaching and learning are developed and supported
- students will have access to a range of technological supports to enhance their learning in a manner that enables them to become lifelong learners in an increasingly digital world
- teachers will be fully enabled to use digital technologies where appropriate, in order to enhance student learning within their disciplines
- institutions collaborate with each other, and link with schools in order to build digital capacity for teaching and learning, with students as key partners in the process

1 Digital capacity can be expressed at the individual, organisational and national levels.

Introduction

'There is a quiet revolution taking place in education....But despite the opportunities that are opening up I worry that many of these recent and valuable developments in technology will be held back by a natural, and in some cases understandable, educational conservatism. It's quite possible these fears will get in the way of the type of ambitions that could allow Ireland to become an educational exemplar to the rest of the world.'

David Puttnam, Irish Times, 20 May 2014

It is not a question of whether or not digital technology will transform Irish higher education, but rather it is a question of who will lead that transformation. The current approach to building digital capacity in the sector is not cohesive, sustainable, or sufficiently evidence-based. The relentless stream of innovation in the digital world and the interests of commercial enterprise are increasingly dictating the pace of change and the process in how higher education makes use of technology; whether this is the best way forward is open to question.

We need to alter our approach to building digital capacity across the sector.

Institutions have tended to act alone in responding to the digital culture that has emerged over the past two decades. Many institutions have articulated strategies for exploiting digital capacity, and many are working to engage in research, develop new approaches and build skills that aim to embrace and exploit more fully the use of technology for teaching. A national roadmap will support, connect, and enhance efforts at local or regional levels, and will help to point to the collective ways in which the sector can work to build digital capacity to enhance and develop learning in Irish higher education.

We must take ownership and leadership of the strategic development of digital capacity in Irish higher-education institutions.

A digital roadmap cannot solve all the challenges that face us as we work to generate a clear mission for the enhancement of teaching and learning in higher education – but it can set out the terrain on which we stand, it can declare the principles and values on which digital capacity for education should be built, it can highlight challenges and blocks to development and it can recommend ways in which such difficulties can be overcome.

We must acknowledge that the voices of key stakeholders in the sector are best placed to identify current needs, and thereby scope a future vision for technology-enhanced learning.

The development of a sectoral roadmap aims to reflect priorities, ambitions and challenges from across the whole sector and to impact at local level, supporting and enabling local strategies. This preliminary document outlines how our ongoing consultation process will seek to elaborate and develop policy and strategy over the coming months. It identifies immediate next steps which will lay the foundation for a comprehensive strategy and indicate how the roadmap approach will mobilise, energise and guide the sector in a coherent way to achieve a measurable national vision for digital capacity in higher education.

The salient question is not 'where are we going?', but rather 'where do we want to go?

Context

National context

Nationally, locally and globally there has been much discussion about the promise digital technology brings to the learning environment. At the national level, there have been key strategic documents focussing on aspects of digital capacity. *The National Digital Strategy for Ireland* refers to digital technology's potential and its increasingly important role in higher-education teaching, learning and research. *The National Strategy for Higher Education to 2030* speaks of the internet as 'potentially a game changer in education', notes that at higher level 'eLearning is becoming an increasingly important part of the process of teaching, learning and research', and points to the potential that technology has to stimulate active learning among students (pp. 22–23, 52).

It is encouraging to see similar concerns emerging in national discussions at the primary and secondary levels of education (see the December 2013 consultative paper *Building Towards a Learning Society: A National Digital Strategy for Schools)*. As the schools sector and higher education are at similar phases in their development, there is a national opportunity for the coherent and connected development of digital capacity across the entire education sector. Such a coherent and connected approach would facilitate smoother transitions for students through different phases of their education.

Local contexts

There are local examples of pedagogical innovation across disciplines and institutions all over Ireland. Most teachers use technological resources for course management and for teaching and learning in some way and, for very many, the use of technology has become a standard part of how they teach. The emergence of 'web 2.0' technologies has enabled much more online interactivity and collaboration and has fostered a digital culture in both scholarship and society that were unimaginable a decade ago. Yet, for a number of reasons, technological potential is not being utilised as fully or as creatively as it could be in higher-education environments. Flexible and online teaching remain the exception rather than the rule in most Irish institutions, and digital technology often remains under-utilised for on-campus programmes (National Strategy for Higher Education to 2013, p36).

The economic crisis of recent years has resulted in diminished investment in computer software, hardware and technical infrastructure, while the freeze on employment in the public sector has meant that those employed in higher education have had to do more with less time, equipment and support. Concurrently, many technologies deployed in our institutions have become obsolete before being fully exploited. The constant emergence of newer and better tools has often resulted in confusion among staff regarding the best tools to recommend and use, and to develop and learn about in their teaching and learning practices. This may go some way towards explaining the emerging evidence suggesting that key digital resources (for example, virtual learning environments) are not being used to their full pedagogical capacity (see Risquez et al., 2013; National Forum survey, 2014 – Appendix E).

European and global context

In line with the Digital Agenda for Europe (DAE), which aims to reboot Europe's economy and help Europe's citizens and businesses to get the most out of digital technologies, the roadmap must acknowledge issues such as cybersecurity, personal privacy and identity, copyright, interoperability and standards, and the importance of digital literacy as a necessary life skill for all EU citizens, students and staff alike. Following the DAE, the development of Ireland's digital roadmap for higher education should provide a framework that will facilitate a move from *pockets* of innovation towards *networks* of innovation and excellence.

The recent economic downturn has brought with it a recognition of Ireland's position in the globalised economy: in order to shape our educational destiny in the substantial context of our democratic ideals rather than of our economic vulnerabilities, it is evident that vision and leadership are required to plan for the digital future. Irish higher education needs to set its own agenda, in the context of the existing EU framework, and to chart its own deliberate course. This means that the roadmap should impact at local level, enabling strategies to be devised within each institution to clearly demonstrate how the challenges of the emerging digital culture are being recognised and faced. These challenges involve not only preparing our students for jobs and technologies that are not yet invented, but it is also about achieving a level of awareness and criticality in the face of those technologies and the unknown future.

Outline of the document

This document presents initial insights from a sectoral consultation process (April–May 2014). This process has been informed by national and international research and by recent and current developments across the sector. It has sought inputs from academics, tutors, researchers, managers, librarians, technologists, students, leaders and policy makers, both in face-to-face sessions and through online contributions. The key perspectives of these stakeholders underpin much of what is discussed here and are included in more detail elsewhere in the document (see appendices F, G & H).

The document identifies a number of recommendations that have emerged from the consultation and also points to a set of immediate actions that can be initiated in order to use technology to modernise higher education in line with national and European ideals. The document highlights key tensions, paradoxes and challenges when it comes to developing digital capacity, and presents a set of values and principles that should underpin the building of digital capacity in higher education in Ireland.

Process of consultation with institutions and key stakeholders

The National Forum for the Enhancement of Teaching and Learning has engaged in an intensive initial consultation process during the early part of 2014. It will continue to seek input from across the sector in the coming months in order to finalise the roadmap by September (see appendices B & C).

The consultation process has been devised to be inclusive and open. This first phase of consultation has included almost 1,000 voices from all parts of the sector.

The face-to-face consultation sessions focused on four interlinked themes: Digital Pedagogy, Digital Literacy, Technical Infrastructure, System & Policy Infrastructure (appendices A & C). Almost every higher-education institution contributed to these face-to face discussions (see Appendix I for details).

Several additional consultation activities were also completed during the same timeframe to target the voice of key groups including:

- Focus groups with students, in partnership with the Union of Students of Ireland (Appendix H)
- A national online survey of teaching staff in higher education '20 Questions on Technology Enhanced Learning' (c.500 respondents, Appendix E)
- Telephone interviews with academic support staff (27 respondents, Appendix F)
- Interviews (face-to-face and by phone) with senior management (22 total, Appendix G)
- Consultations with national and international experts (Appendix J)
- A review of relevant research literature and significant documents
- A profile of teaching and learning supports in the higher-education sector (completed in partnership with the designated contacts within each institution; Appendix O)
- A dedicated online consultation facility was available throughout the consultation process for further comment or contributions

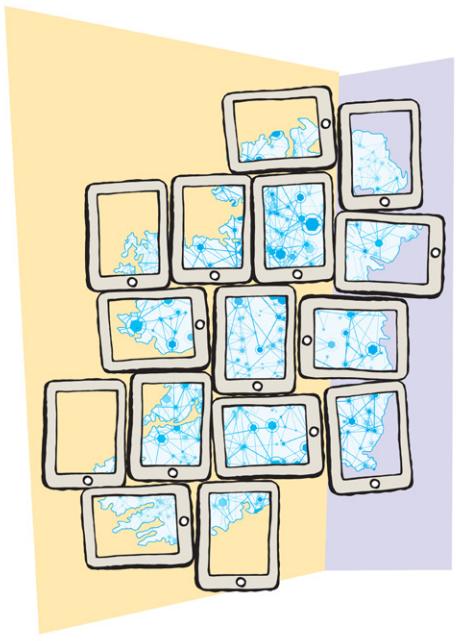
Key paradoxes and perceived tensions

It would be wrong to say that there is full or uncomplicated consensus when it comes to the issues we grapple with in building digital capacity. The table below summarises what are emerging as key paradoxes and tensions that the digital roadmap will aim to reconcile:

Table: Key paradoxes and perceived tensions

1. Strong foundations for developing digital capacity on the one hand, with serious current resource constraints on the other
2. Developing self-sufficiency among teachers, while also promoting interdependency and collaboration
3. Recognising the high-tech and low-tech dimensions of excellent teaching (differentiating between learning technology and learning innovation)
4. Recognising the efficiencies that can come with digital capacity, but without compromising effectiveness
5. Commitment to exploiting digital potential on the one hand, while recognising perceived dangers and risks on the other

Despite these paradoxes and tensions, clear recommendations have emerged, identified by stakeholders as being key to building digital capacity. By implementing these recommendations, Irish higher education will be positioning itself to face the emerging digital challenges as a cohesive sector, while empowering students and staff alike to achieve full citizenship of the digital age.



Recommendations for Building Digital Capacity in Higher Education

The following recommendations, which emerged from the consultation process, will form the basis of the developing Digital Roadmap.

- Prioritise the strategic development of digital capacity in institutional and national policy and quality frameworks
- Develop a consistent, seamless and coherent digital experience for students in Irish higher education
- Engage with students and teachers to develop digital literacy
- Strengthen and support collaboration within and between institutions, and with different parts of the higher-education sector
- Develop shared policies and infrastructure that reflect the complexity of an increasingly digital learning environment
- Develop digital capacity in tandem with a strong evidence base for enhanced pedagogy

These recommendations are further expanded below.

Prioritise the strategic development of digital capacity in institutional and national policy and quality frameworks

- Ensure that strategic leadership in teaching and learning is explicit about how the effective use of technology to enhance pedagogy can be achieved
- Establish a national student-identity policy that is transferable across institutions
- Document current initiatives in building digital capacity across the education sector at all levels and ensure that they are strategically aligned
- Develop a co-ordinated, multi-level approach to foster digital literacy among students from the earliest stages of education
- Ensure that national quality-assurance policies act as a catalyst to develop digital capacity and to foster new modes of learning
- Review funding models to remove barriers to flexibility for students in how they want to learn
- Agree a common language of core concepts relating to digital-capacity building for teaching and learning – and ensure this language is shared between the education sector, policy makers and funding bodies

Develop a consistent, seamless and coherent digital experience for students in Irish higher education

- Ensure that the technologies available to students are accessible and perform consistently across all devices, where appropriate
- Develop and adopt a statement of open-education principles for Irish education that links to EU policy initiatives and academic research ideals
- Ensure that institutions have a clear policy about the use of technology for communicating, teaching, learning and assessing to enable a coherent digital experience.

Engage with students and teachers to develop digital literacy

- Ensure that learning technologists, educational developers and instructional designers are available and resourced to support teachers and students to develop digital literacy
- Integrate digital-literacy development into programmes, and support digital literacy institutionally
- Ensure that institutions are explicit about the levels of digital literacy required of students for particular programmes
- Establish and integrate a framework for developing digital literacy into the emerging national professional development framework
- Ensure that sector-led continuous professional development for digital literacy among teachers is pedagogically focused, with an emphasis on learning design
- Incorporate teaching and learning resources into local institutional digital repositories

Strengthen and support collaboration within and between institutions, and with different parts of the higher-education sector

- Institutions should pilot stronger team-based approaches (teachers, students, IT and academic support staff) to teaching and learning, curriculum design and programme development; new modes of learning and innovation should be considered from the outset of such pilots
- Students must become active partners in the integration of technology into programme/module design and assessment
- Policies and processes that enable innovation and development in a regulated environment must be devised, and should facilitate opportunities for inter-institutional collaboration around programme development and delivery

Develop shared policies and infrastructure that reflect the complexity of an increasingly digital learning environment

- IT support services must be resourced to provide a fit-for-purpose campus infrastructure (including e.g. high quality ubiquitous Wi-Fi) for the continued progress and mainstreaming of technology-enhanced learning within institutions

- Higher education institutions should work collaboratively with organisations such as HEAnet to achieve better efficiencies of shared digital services, thereby exploring and leveraging the potential of, for example, learning analytics and big data
- Policies must be developed to address the security of individual digital identity, ethical considerations and professional standards
- A fit-for-purpose copyright regime which works at all levels of education for creators, users and owners must be developed

Develop digital capacity in tandem with a strong evidence base for enhanced pedagogy

- Support must be provided to encourage high-impact scholarship in digital pedagogy and to build links with international communities of research
- A process must be developed to provide ongoing appraisal/analysis to inform the successful evolution of sustainable digitally-enhanced learning
- Assessment methodologies that leverage the potential of digital technologies to support student learning must be developed
- All higher-education institutions nationally should consider open-access policies with regard to hosting research, teaching and learning outputs in institutionally and appropriate national and international repositories
- Institutional policies should promote parity of esteem between research and teaching: the time and cost involved in programme development and delivery should be taken into account in staff workloads and professional development/progression

The recommendations are underpinned by clear values and principles, and are strongly informed by the consultations, particularly the face-to-face sessions that took place (see Appendix B, for more detail). These principles will inform and underpin our emerging digital roadmap.

Values and principles underpinning the digital roadmap – key insights from the sector

The following section is a preliminary outline of the key values and principles that have emerged from the consultations.

The values and principles underpinning the digital roadmap are:

A. Shared recognition of the collaboration imperative

B. The shared need for a strong understanding of the current context

C. A commitment to the development of digital literacy among teachers and students – along with the time and support this development requires

D. A responsibility for recognising differences – among students, disciplines and institutions

E. A commitment to the development and use of a strong evidence base

F. Educational responsibility for identifying risks and concerns about an increasingly digital world, as well as opportunities and benefits

G. A commitment to including students as key partners in the education process

H. A focus on assessment and feedback as key routes to digital-capacity development and innovation

I. The adoption of the principles of open education to support future development in higher education

A. Shared recognition of the collaboration imperative

i) A wider definition of who our teachers are

Those who lecture/teach in classroom environments are not the only people who play a teaching role in our higher education institutions. Technicians, researchers, learner support roles, advisers, tutors, lab assistants, librarians, educational technologists, curriculum designers, industry experts and students: all engage in teaching-related activities which support learning. A learning environment that supports collaboration in the decision-making and teaching development processes should be nurtured.

ii) A team approach to teaching and learning enhancement and to exploiting digital technology

The role of the academic-support staff (librarians, centres for teaching and learning, IT staff, educational technologists and learner-support staff) is central to facilitating collective practice. At an institutional level it is important that the academic-support staff roles and that of an institution's centre for teaching and learning are supported and seen as key players in the development of digital capacity for teaching and learning. By developing a team approach to the planning and design phase of programme development the application of digital technology can be appropriately embedded.

iii) Good channels of communication and strong interactivity between all levels of education can inform and nourish our work in higher education

Learning from and communicating with educators at primary and secondary levels as well as further education, adult learning and professional bodies, will be an important principle to promote if we are to develop sound digital capacity and competence among teachers, students and the higher-education institutions in which they operate.

iv) The value of sharing and developing across institutions

Collaboration and sharing of best practices both within and across institutions will be a major enabler of building national digital capacity. Collaborative initiatives between institutions have already become established. Guidelines and best practices for the change management involved in establishing digital literacies should be identified and shared between colleges. Through a mixture of previous funding mechanisms (e.g. SIF, NDLR etc.) and disciplinary level collaboration, there have been many previous examples in the sector of the sharing of practice, resources, approaches and, in a small number of cases, joint programmes. There are many other examples of inter-institutional collaboration on which it will be possible to build in order to develop digital capacity within and between disciplines.

B. The shared need for a strong understanding of the current context: sustainability and resource issues

In our current context, it will serve the higher education sector to be innovative and resourceful when it comes to working with what we have, and mobilising existing resources in collaborative and inventive ways. But when it comes to developing new ways of exploiting technology in learning environments it is also important that we do not ignore the real need for resources, including time, skills development and support.

The changing environment in which learners live and learn, and the evolving nature of scholarship in an information-rich and increasingly digital world must also be recognised. The proliferation of mobile devices such as tablets and smartphones is one area that is impacting on the technological infrastructure. This is evidenced in the huge growth in demand for Wi-Fi that is being reported across the sector. This also offers pedagogical opportunities that are beginning to be recognised, explored and exploited.

C. A commitment to the development of digital literacy among teachers and students – along with the time and support this development requires

A focus on skills development, time and support for experimentation and an incentive structure that recognises and rewards effective innovation in the use of technology is required. A main priority identified in the consultation process is the provision of support and training to teachers on a continuous basis throughout the year, allowing them to manage their learning and avail of training and support at times suitable to them. It is critical to the development of innovative and engaging learning through technology that teaching staff are provided with the resources, space and time to design and develop their ideas.

In particular there is a need to develop the digital literacy of staff and students alike, providing them with IT skills and competencies, equipping both to adapt to a complex world that is increasingly digital. The importance of digital professionalism and digital identity, along with the associated ethical and legal considerations, are important issues that must be addressed across the sector.

D. A responsibility for recognising differences – among students, disciplines and institutions

i) Avoiding stereotypes about students' digital abilities

A strong and dominant insight emerging from the consultation emphasises how important it is not to make assumptions about students' digital access, literacy and competence. Students are different – not all of them are 'digital natives' and even though they live and learn in an increasingly digital environment, the skills they need to engage digitally within their disciplines are not a given.

ii) Avoiding generalised assumptions about disciplines

Different disciplines have different signature pedagogies that can be enhanced, improved and transformed with technology. Sometimes these technologies have become associated with one discipline for sound pedagogical reasons, but in many cases there is potential for transfer across disciplinary domains that have not been exploited. Digital technology can work and be used differently in different disciplines as appropriate.

iii) A spectrum of innovation

The speed and impact of technological change on Irish higher education over the past 20 years has been forceful, yet uneven. It is important to recognise that what is innovative in one discipline may be standard practice in another. Innovative use of digital technology will vary in different contexts.

E. A commitment to the development and use of a strong evidence base

i) A strong evidence base for good pedagogy in a digital age must be established.

There must be a commitment to evaluating the effect and impact that digital technology has or can have on student learning. New sources of evidence such as the recently piloted Irish Survey of Student Engagement can help to gain greater understanding of students' experiences of Irish higher education learning environments. The commitment to a strong evidence base should also incorporate the experiences and professional intuition of teachers from across the disciplines who often have had to adapt and respond in very specific and nuanced contexts.

ii) Linking teaching and research, and creating parity of esteem for teaching and research

Teaching and curricular innovation should be valued equally with research, and a key component of teaching and curricular design in contemporary education is the digital environment. We need to foster a stronger culture of experimentation, and to consider parallel incentives that mirror the promotion of research activity. There is also scope in the digital realm for increasing synergies between teaching, scholarship and research.

F. The educational responsibility for identifying risks and concerns about an increasingly digital world, as well as opportunities and benefits

Many contributors to the consultation process were keen to emphasise that technology is not always necessarily benign or used as a force for good. There is a strong view that our roadmap must acknowledge issues such as cybersecurity, copyright, plagiarism, and privacy in teaching and learning environments. Of particular concern is the idea that students need private, disconnected, protected spaces in which to learn, and that such spaces may become less available as digital identities and digital communication becomes the norm.

G. A commitment to including students as key partners in the education process

There is a strong commitment to including students as active collaborators in the process of building digital capacity. This is consistent with international trends in enhancing staff and student partnerships in enhancing teaching and learning more generally (see, for example, Healey et al., 2014). Including and partnering with students has clear benefits, embracing different talents and perspectives, empowering learners, promoting trust and respect between teachers and students, enlisting active engagement among students and generating a sense of shared responsibility for learning environments.

H. A focus on assessment and feedback as key routes to digital-capacity development and innovation[2]

Building digital capacity to advance new, sustainable and innovative approaches to assessment and feedback offers very strong potential for immediate development. Assessment plays a pivotal role in all forms of teaching and learning, not just in the demonstration of learner achievement but also in shaping learners' approaches to study, in providing emphasis, setting standards and in facilitating a reflective, developmental metacognition. An effective approach to assessment is one in which there is alignment between the teaching objectives, teaching methods, learner tasks and the assessment tools used. Digitally-supported learning is no different in this regard. The technologies can provide considerable support for the development and management of a range of forms of assessment, but their particular use requires careful pedagogical consideration. Effective and efficient assessment systems also require sustainable investment, a robust infrastructure, technical support and training.

2 Extended to provide context for actionable first step identified.

A focus on assessment and feedback provides an important route to linking digital capacity to new ways of teaching and learning, and offers a strong basis for action and development when it comes to building digital capacity in higher education. Firstly, there has been much discourse among students and teachers that assessment systems are not 'fit-for-purpose'. Despite a diversity of views, there is a persistent and increasing concern that assessment does not function in a way that prepares students for the increasingly digital environment in which they will be working and learning. Students often say they don't get enough feedback on their performance, and that when they do receive feedback, it is often inadequate, difficult to interpret, or too late. The possibilities around building digital capacity in order to enhance and develop teaching and learning could help to address this persistent concern.

Secondly, knowledge and research in teaching and learning repeatedly emphasise the centrality of assessment and feedback in good learning and teaching environments – how assessment and feedback focuses and drives learning, and how important it is for assessment and feedback to be constructively aligned, not just to learning outcomes but also to learning contexts. Technology can enable quicker, more customised, more diverse and more inclusive routes to connecting and interacting with students when it comes to giving feedback and conducting assessment.

Three key associated challenges relate to how we build digital capacity for assessment and feedback in a way that:

- enhances learning to equip students for an increasingly digital world
- uses enabling features of technology in order to increase student knowledge, competence, motivation and engagement
- improves value for teacher effort and time, and enhances timeliness and impact of feedback on student outcomes

Using technology to enhance the effectiveness of assessment and feedback involves strong consideration of issues associated with digital pedagogy, digital literacy, technical infrastructure and systems infrastructure. Building digital capacity by focusing on enhancing assessment and feedback could provide a useful sectoral test-bed for addressing all four of the overarching themes that have been part of this consultation process.

I) The adoption of the principles of open education to support future development in higher education[3]

Open education in the context of higher education is underpinned by the understanding that education and knowledge should be publicly available and shared, and that scholarship can be better when we work together, whether it is across disciplines, institutions or borders. At the heart of open access is the free availability of information – but the key challenge is managing that information, supporting the infrastructure and the individuals who make use of these resources, and facilitating their sound pedagogical value. Open access can help to transform not only the way academic staff work and teach, but how students learn. While modern open-access repositories and other sources of online information

3 Extended to provide context for actionable first step identified.

can be simply accessed via browser searches, there are key digital literacy skills associated with judging the quality of materials, managing information and undertaking systematic search.

In 2012 the Department of Jobs, Enterprise and Innovation issued the National Principles for Open Access which clearly states the importance of open access in adding value to research, the economy and society. Globally, there is a growing perception that open-access content and services are critical components in any scholarly communication system. Ireland is well developed with regards to open-access dissemination of research, largely through a network of institutional repositories and the National Research Portal (RIAN). While staffing levels vary within institutions, most repositories are managed by librarians whose expertise ensures they meet uniformly defined professional standards. The continued development of open access nationally is supported by a National Steering Committee on Open Access Policy (http://openaccess.thehealthwell.info/welcome-open-access-ireland).

Parallel to the development of institutional repositories for research outputs, the National Digital Learning Resources (NDLR) service (2006–12) was developed as an open-access system supporting excellence in teaching and learning, facilitating collaboration of academic staff and sharing of teaching resources. This led to the development of an extensive network of Communities of Practice in Ireland. The NDLR 3-stage user model provided a cohesive framework for supporting 'bottom up' innovation in technology-enhanced teaching and learning across the higher education sector (McAvinia & Maguire, 2011). Almost 27,000 users accessed the portal and almost half a million downloads were reported (NDLR, 2012). Open-access initiatives such as the NDLR allow teachers to share learning design, resources, and approaches within and across disciplines.

A key issue for national repositories of any kind is the issue of sustainability. The need for a single portal to access a repository is becoming increasingly redundant; given the development in search tools, the adoption of standard metadata and multi-server data harvesting, we now have access to a wide ecosystem of repositories and databases. Nationally, all public higher education institutions either host or have access to a repository, and smaller institutions tend to partner with larger institutions to achieve this goal. (In private colleges, access to an institutional repository is less well developed.)

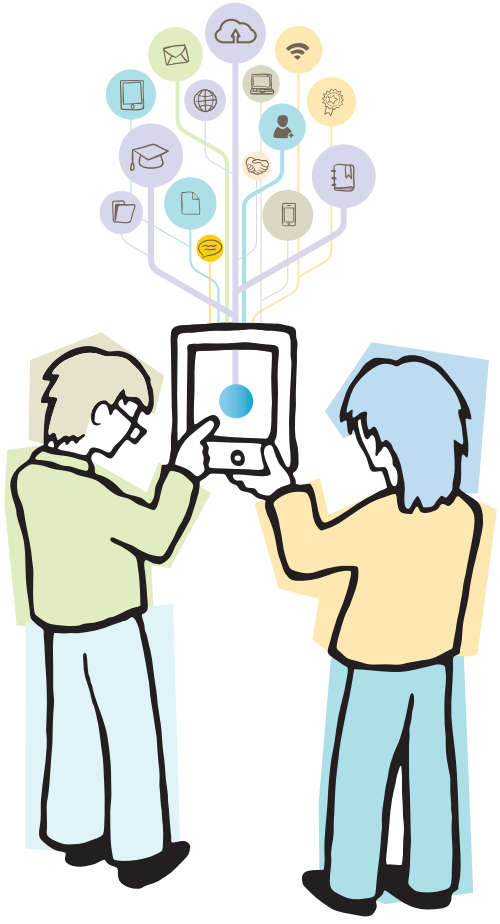
Open access in Irish higher education provides a potentially excellent sustainable approach to supporting digital capacity in research and teaching in the sector. In terms of research publication and citation, institutional repositories have proved their effectiveness. The NDLR demonstrated the need for a specific space to enable teachers to share teaching resources and approaches to learning design. There is a clear role for institutional repositories to play in meeting this need. We have the opportunity to bring a cohesion to the sector that will drive development in research and teaching in higher education in Ireland through the coordinated use of a national network of institutional repositories that is underpinned by the principle that shared, publicly available information leads to collaboration and innovation. This open dissemination and sharing in research and teaching provides a springboard for collaboration within and across institutions.

Teaching and Learning Enhancement Fund 2014

The teaching and learning enhancement fund will be applied to the development of multi-institutional developments and innovations in digital capacity across Irish higher education.

The recommendations that have been outlined in this document capture a number of issues that will need to be addressed if we are to achieve coherence in digital capacity across the higher education sector in the coming years. Some of the recommendations need to be considered at the level of national policy, driven by the Department of Education and Skills, and will be considered over the longer term. Through a strong process of consultation it has been possible to generate these national recommendations and put them on the agenda in order to systematically address them over time. However the sector and its institutions can take immediate ownership of a number of the emerging issues. This will provide a strong foundation for building digital capacity in higher education over the next three years. Teaching and learning enhancement funding must prioritise building digital capicity at this crucial time.

This document forms the basis for further consultation that will take place over the coming months, leading to a comprehensive roadmap and implementation plan. In conjunction with this, a number of actionable steps have been identified that should be addressed with immediate effect. In this way the implementation of the roadmap for higher education will be better informed, and the process of building of digital capacity will gain immediate momentum and encourage initial coherence to our approach and provide further evidence to support future financial investment.



Actionable First Steps

1. In order to set the scene for effective, ongoing inter-institutional collaboration, higher education institutions should each develop a strategy and review process that clearly outlines how the development of digital capacity will be addressed at an institutional level. The strategy should include a strong focus on teaching and learning, and an explicit review process that ensures the strategy remains up to date in a rapidly developing technological environment.

2. A systematic review of technical infrastructure across the sector should be undertaken. This will identify clearly the current status and the specific technical infrastructural developments that need to be resourced to support building digital capacity in the future. This review should involve all stakeholders (senior management, IT specialists, teachers, students, other stakeholders e.g. HEAnet), and results should be published by end of 2014.

3. The establishment of a collaborative approach to the development of policies and practices for the sector that enable digital innovation for teaching and learning in an increasingly regulated environment. These policies and approaches should be made available nationally.

4. The development of new approaches to assessment and feedback that leverage the potential of digital technologies (including new media) to enhance and transform student learning in ways that support their performance and prepare them for a world that is increasingly digital.

5. A strategic approach to programme development (inter or intra institutional) should be piloted and evaluated. This should include all stakeholders in the design process, leverage digital technology in provision and assessment, and actively integrate and support the development of digital literacy of staff and students.

6. The adoption of open-education principles by all higher education institutions to support the active development of institutional repositories for research outputs and teaching and assessment resources.

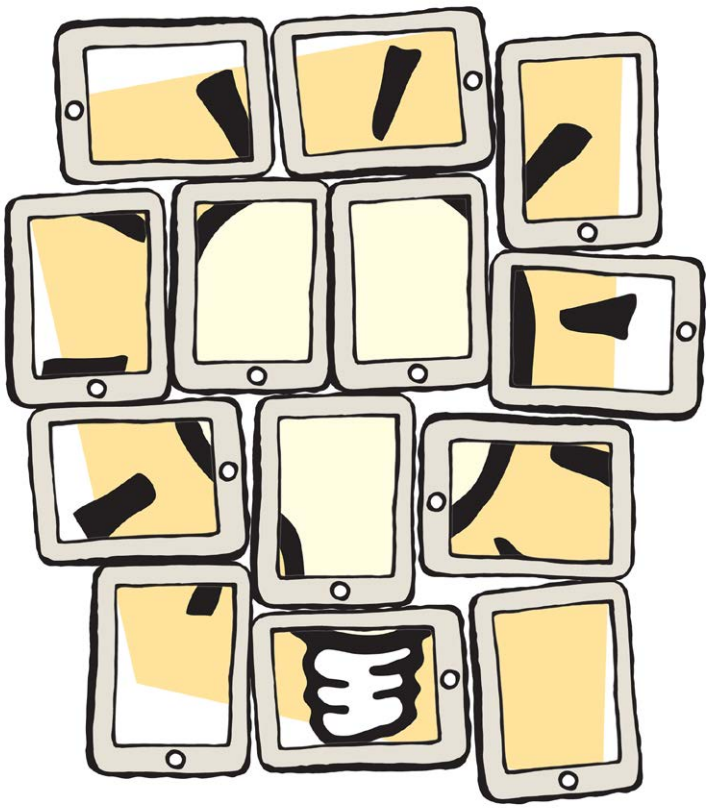
7. A coherent approach to academic and technical support-provision and sharing should be piloted as a model for the development of future supports across institutional clusters in an environment of constrained resources

A national call for applications from the sector for enhancement funding to support initiatives aligned to these actionable steps will issue in early June.

Further Consultation

Our initial analysis from the consultation process demonstrates clearly that there is a strong commitment to **digital innovation and development in Irish higher education.** This principle comes with the strong caveat that **technology needs to be exploited in the interests of learning.** Additionally, we have been reminded by very many people across the sector that if we view digital capacity simply as a way of increasing our ability to transfer information, we will miss out on the rich potential it has to enrich, support and develop learning in new and exciting ways.

Over the coming months the National Forum will continue to analyse the inputs from the consultation process with a view to producing a more in-depth roadmap for building digital capacity in September 2014. In the interim, we invite all stakeholders to submit contributions for consideration in the final roadmap document. This process will be coordinated through the Forum website online consultation facility. The online facility will be available until the 30 August 2014 at www.teachingandlearning.ie



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Developing a roadmap for building digital capacity in higher education

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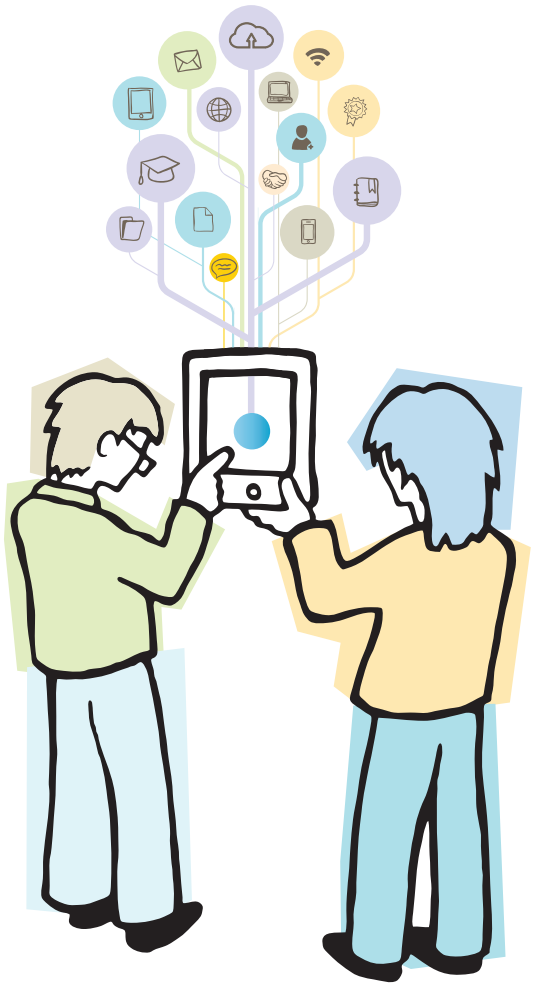
Please note:
All appendices are available as a separate document available at www.teachingandlearning.ie



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