



Technology for  
employability toolkit



**'Technology for  
employability toolkit'**



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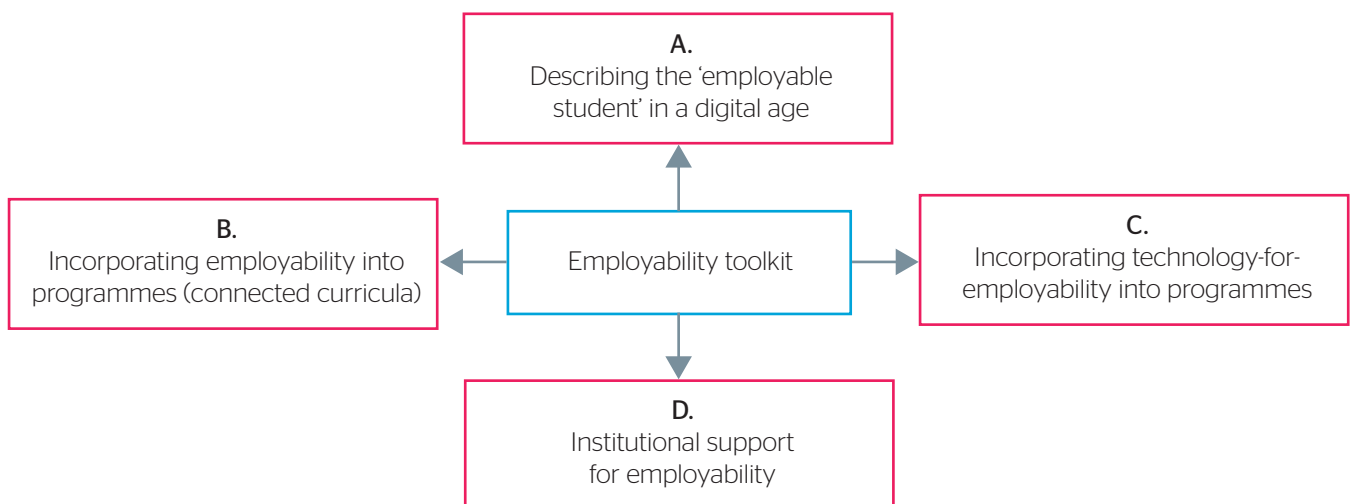
# Contents

1. Background and purpose of the toolkit	4
2. Who can use the toolkit?	5
3. Guide to using the toolkit	6
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A. Describing the 'employable student' in a digital age	7
B. Incorporating employability into programmes (connected curricula)	11
C. Incorporating technology-for-employability into programmes	18
D. Institutional support for employability	28

# 1. Background and purpose of the toolkit

This toolkit distills the ideas and guidance from the Jisc ‘**Technology for employability**’ [http://bit.ly/technology\\_for\\_employability](http://bit.ly/technology_for_employability) report into a useful and usable toolkit that can be used by Higher Education (HE) and Further Education (FE) educational providers to aid dialogue, decision-making and planning in respect of developing student employability and use of technology for employability.

It has four parts to it:



- » **Part A - Describing the 'employable student' in a digital age.** Use this to help shape what an 'employable student' will look like using our seven-dimensional model that aligns digital capabilities with employability capabilities
- » **Part B - Incorporating employability into programmes (connected curricula).** Use this to help re-design curricula to incorporate employability using a 'connected curricula' approach that has three key dimensions: (1) T-profile curricula for a digital world; (2) assessment for learning and (3) employer engagement
- » **Part C - Incorporating technology-for-employability into programmes.** Use this to help shape how technology can be used to incorporate employability into programmes with clearly defined benefits for students, employers and institutions
- » **Part D - Institutional support for employability.** Use this to help develop institutional facilitation for employability through, for example, enhancements to policies and plans and staff development

## 2. Who can use the toolkit?

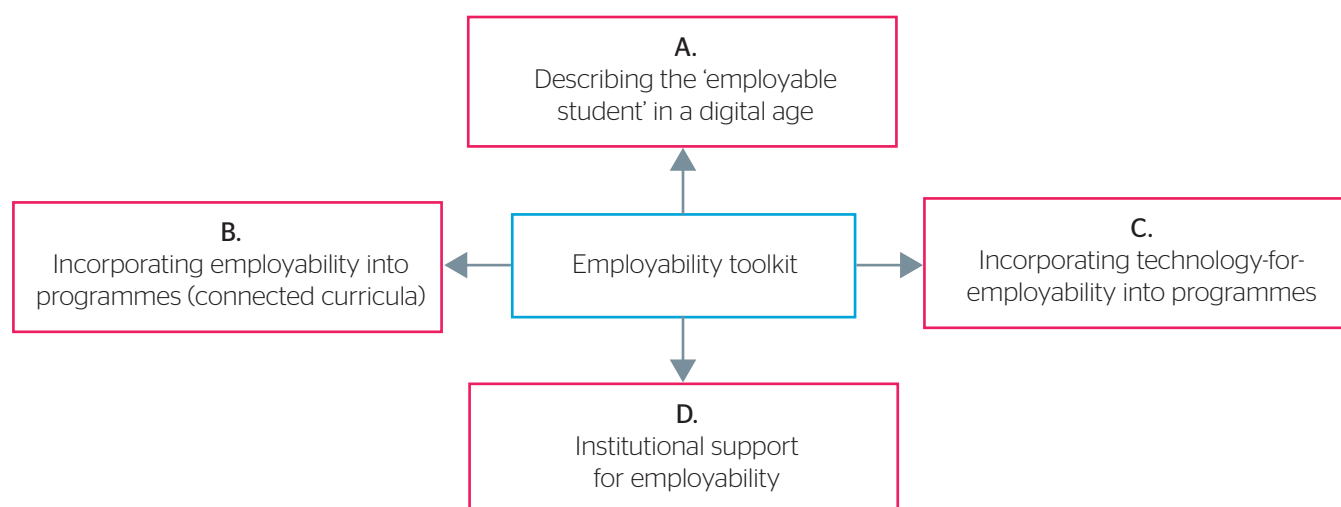
Suggestions for roles that will find the toolkit of use are given below for each part of the toolkit:

Part	Roles
A Describing the 'employable student' in a digital age	<ul style="list-style-type: none"><li>» Programme teams</li><li>» Faculty/school/department managers of Teaching, Learning and Assessment (TL&amp;A), Quality Assurance (QA), Quality Enhancement (QE), student experience, employability and employer engagement</li><li>» Staff developers, learning technologists</li></ul>
B Incorporating employability into programmes (connected curricula)	<ul style="list-style-type: none"><li>» Programme teams</li><li>» Programme professional support services e.g. learning technology, educational development, employability, IT, student experience, employer engagement</li></ul>
C Incorporating technology-for-employability into programmes	
D Institutional support for employability	<ul style="list-style-type: none"><li>» Institutional managers responsible for employability, employer engagement, IT, staff development, student experience, QA, QE.</li></ul>

## 3. Guide to using the toolkit

The toolkit is NOT meant to be a prescriptive set of rules for developing student employability. Rather, it provides a framework and useful guidance that can be adopted by teams to aid dialogue, decision-making and planning for developing student employability.

**There are four parts to the toolkit and these will each be of interest to different stakeholders as suggested in the previous section - 2. Who can use the toolkit?**

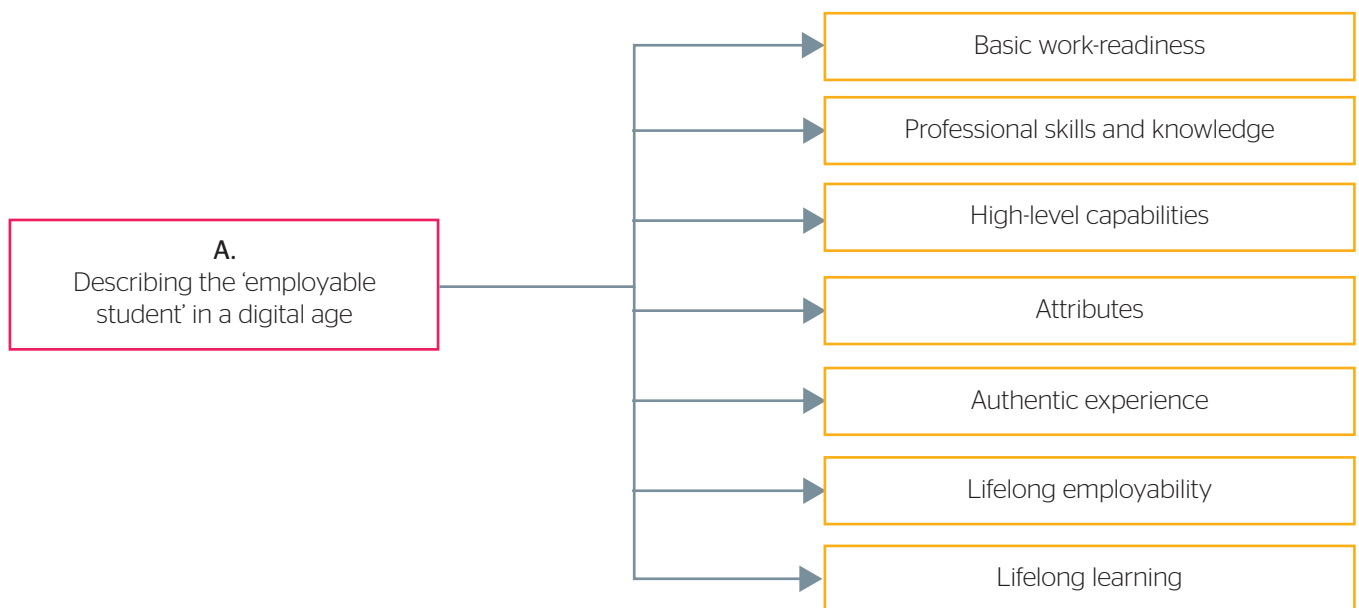


It is suggested that facilitated workshops are arranged to focus on each of the four areas and the guidance in this toolkit used as a framework to aid dialogue, decision-making and planning.

# A. Describing the 'employable student' in a digital age

Part A of the toolkit supports dialogue and decision-making in describing what the 'employable student' will look like in a digital age.

**There are seven dimensions for the 'employable student':**



For each dimension, there is a good practice point together with suggestions for the potential scope of each one.

In addition, there are suggestions for how digital capabilities map to each dimension which are described from an employer perspective.



## Describing the 'employable student' in a digital age

Good practice point	Potential scope	Key employer-related digital capabilities
Student's <b>basic work readiness</b> is developed	<ul style="list-style-type: none"> <li>» Ethical and moral behaviour</li> <li>» Appearance and presentation</li> <li>» Social skills</li> <li>» Numeracy</li> <li>» Spoken and written communication</li> </ul>	<ul style="list-style-type: none"> <li>» Understanding, managing, customising and efficiently using core ICT devices, apps, services and resources such as mobile devices, productivity software (e.g. word-processing, PowerPoint, e-mail, web browsing, Cloud tools)</li> <li>» Finding, managing, sharing and organising digital information in a range of media and ability to judge the quality, relevance, trustworthiness and value of information</li> <li>» Basic knowledge and management of digital safety, footprint, identity/reputation, security and compliance (e.g. data privacy and copyright)</li> <li>» Communicating effectively and with e-etiquette with different stakeholders, including employers, using a range of digital media, devices and tools e.g. e-mail, video conferencing, social media</li> </ul>
Student's <b>professional skills and knowledge</b> are developed	<ul style="list-style-type: none"> <li>» Collaboration, leadership and followship</li> <li>» Communication, influencing, negotiation and customer care</li> <li>» Enterprise, commercial and business awareness</li> <li>» Planning and organisation and project management</li> <li>» Investigation, analysis and problem-solving</li> <li>» Foreign languages</li> <li>» Self-management (e.g. goal setting, managing time, developing motivation and concentration, avoiding stress)</li> </ul>	<ul style="list-style-type: none"> <li>» Keeping up-to-date with collaboration, communication and information and management tools</li> <li>» Choosing and implementing appropriate collaboration, communication, information and management tools for use by teams</li> <li>» Following effective practices and key principles for efficient digital communication, collaboration, information management, productivity and self/team management</li> <li>» Influencing and motivating team members to use chosen digital tools and guiding them to appropriate awareness-raising, training and support</li> <li>» Managing risks with teams when using digital tools e.g. privacy, identity/reputation, data protection, security</li> <li>» Everyday self and team compliance in using digital tools e.g. privacy, data protection, Intellectual Property Rights (IPR), libel and slander, security</li> <li>» Using and managing digital tools in teams to underpin research, investigation, evaluation, analysis and problem solving</li> <li>» Knowledge of how digital tools can be used efficiently and cost-effectively in pursuit of key business objectives e.g. product/service development, sales, public relations (PR), marketing and customer communication and service</li> </ul>



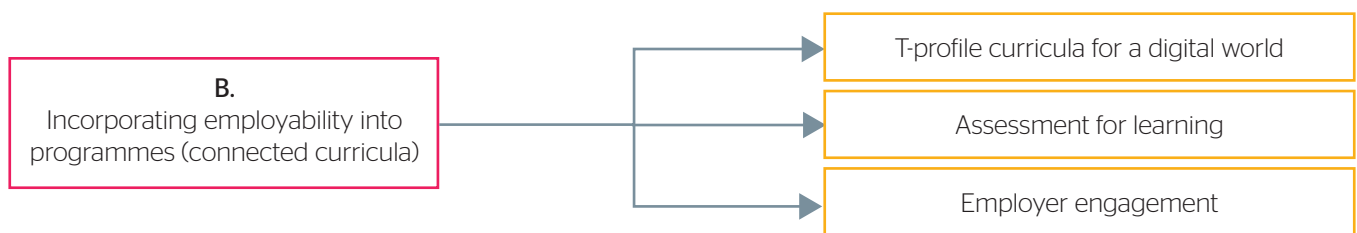
Good practice point	Potential scope	Key employer-related digital capabilities
Student's <b>high level capabilities</b> are developed	<ul style="list-style-type: none"> <li>» Creative problem identification and solving in new contexts</li> <li>» Entrepreneurship</li> <li>» Enquiry, research and critical analysis</li> <li>» Coaching / mentoring</li> </ul>	<ul style="list-style-type: none"> <li>» Applying computational modes of thinking</li> <li>» Advanced information searching, sharing and management</li> <li>» Advanced knowledge of data/digital compliance – laws, regulations and codes of practice</li> <li>» Advanced communications and engagement using digital media and tools with ability to influence, champion, coach and mentor using digital media and tools</li> <li>» Effective practitioner at using digital tools for complex research, data gathering, engaging public with research and data analysis and presentation</li> <li>» Digital entrepreneurship – ability to creatively shape and influence the use of digital media in pursuit of employer goals e.g. new product development, new sales and marketing channels, operations, staff continuing professional development (CPD)</li> <li>» Trouble-shooting digital issues including finding work-arounds, quality assurance and preventing future problems</li> </ul>
Key <b>student attributes</b> are developed	<ul style="list-style-type: none"> <li>» Adaptability, flexibility and working under pressure</li> <li>» Confidence (balanced by humility), assertiveness and emotional intelligence</li> <li>» Aspiring, motivated and persistent ('grit')</li> <li>» Awareness and sensitiveness to different contexts e.g. cultural, business, political, sustainability, globalisation, internationalisation</li> </ul>	<ul style="list-style-type: none"> <li>» Adaptability and flexibility in embracing new digital tools, ways of working/learning and innovations</li> <li>» Confidence and assertiveness in team-working and leading use of digital tools and new innovations</li> <li>» Net-etiquette in engaging in different contexts e.g. cultural, business, political, sustainability, globalisation, internationalisation</li> <li>» Resilience and perseverance with implementing change and use of digital tools</li> </ul>
Students are provided with <b>authentic learning experiences</b> , based on real work-place learning	<ul style="list-style-type: none"> <li>» Experience of working with e.g. employers, charities, community and voluntary groups</li> <li>» Application of learning, knowledge, skills, attributes and experience to new broader contexts</li> <li>» Reflecting and learning from authentic experience</li> <li>» Demonstrating, communicating and evidencing learning from authentic experiences</li> </ul>	<ul style="list-style-type: none"> <li>» Digital tools are used to support communications, information management, project management and engagement between students, staff, employers and other relevant stakeholders</li> <li>» Students design, plan and apply digital tools creatively to support their learning experiences and employer initiatives and objectives</li> <li>» Students use digital tools such as personal learning spaces to plan, record/evidence their learning experiences with employers as well as reflecting on these experiences and encourage staff and employers to engage with their reflections and evidence</li> </ul>

Good practice point	Potential scope	Key employer-related digital capabilities
<p><b>Lifelong employability in a digital world</b> needs to be a core student capability - with students encouraged to take ownership early on</p>	<p>'Lifelong employability' is a key employability capability in its own right which encompasses:</p> <ul style="list-style-type: none"> <li>» Developing self-awareness and critically evaluating personal, social and professional capabilities, skills and attributes</li> <li>» Horizon scanning and developing intelligence on careers, markets, jobs, self-employment, alumni, employers and employer bodies</li> <li>» Identifying career, sector, job, self-employment options and skills required</li> <li>» Developing personal strategic plan for career and graduate job, aligning with aspirations, goals, needs, values and strengths</li> <li>» Networking and engagement for employability</li> <li>» Developing engagement 'collateral' e.g. CV, digital resources, evidence of skills and attributes</li> <li>» Effective communication and presentation of skills, knowledge, attributes and experience</li> </ul>	<ul style="list-style-type: none"> <li>» Use of personal learning spaces such as e-portfolios, blogs, web-sites and wikis for self-directed personal and professional learning (planning, reflection, managing, evidencing, review, showcasing)</li> <li>» Digital feedback and engagement with a variety of stakeholders facilitated by technologies such as e-portfolios, wikis and social media</li> <li>» Identifying, choosing and using technology-enhanced self-diagnostics and development resources to aid self-review and training/personal and professional development</li> <li>» Advanced use of social media to support development of intelligence on careers, markets, jobs etc and identification of skills required</li> <li>» Management of digital identity/reputation</li> <li>» Advanced use of digital tools e.g. multimedia, social networks, e-portfolios to develop digital 'collateral' for self-presentation and evidencing of skills</li> <li>» Participation in digital networks of practice</li> </ul>
<p>Student's <b>lifelong learning capabilities</b> are developed</p>	<ul style="list-style-type: none"> <li>» Self-directed identification of learning needs and planning, assessment and review for lifelong learning</li> <li>» Learning from informal, non-formal, social and formal contexts</li> <li>» Self-directed development/updating of skills and knowledge</li> <li>» Seeking feedback from peers, tutors, employers, mentors</li> <li>» Recording, reflecting, articulating and evidencing learning</li> </ul>	<ul style="list-style-type: none"> <li>» Skills and knowledge in choosing, using and managing digital tools to aid life-long learning e.g: <ul style="list-style-type: none"> <li>» Using social media effectively to support informal and collaborative learning</li> <li>» Using appropriate digital learning resources including diagnostics tools and learning content</li> <li>» Using e-APEL/RPL tools to support recognition of prior learning</li> <li>» Using personal learning spaces to support CPD including planning, managing, evidencing, applying, evaluating and show-casing learning</li> <li>» Using digital assessment tools</li> </ul> </li> <li>» Continual horizon-scanning and evaluation of new technology innovations to support learning and working</li> <li>» Participation in digital networks of practice</li> </ul>

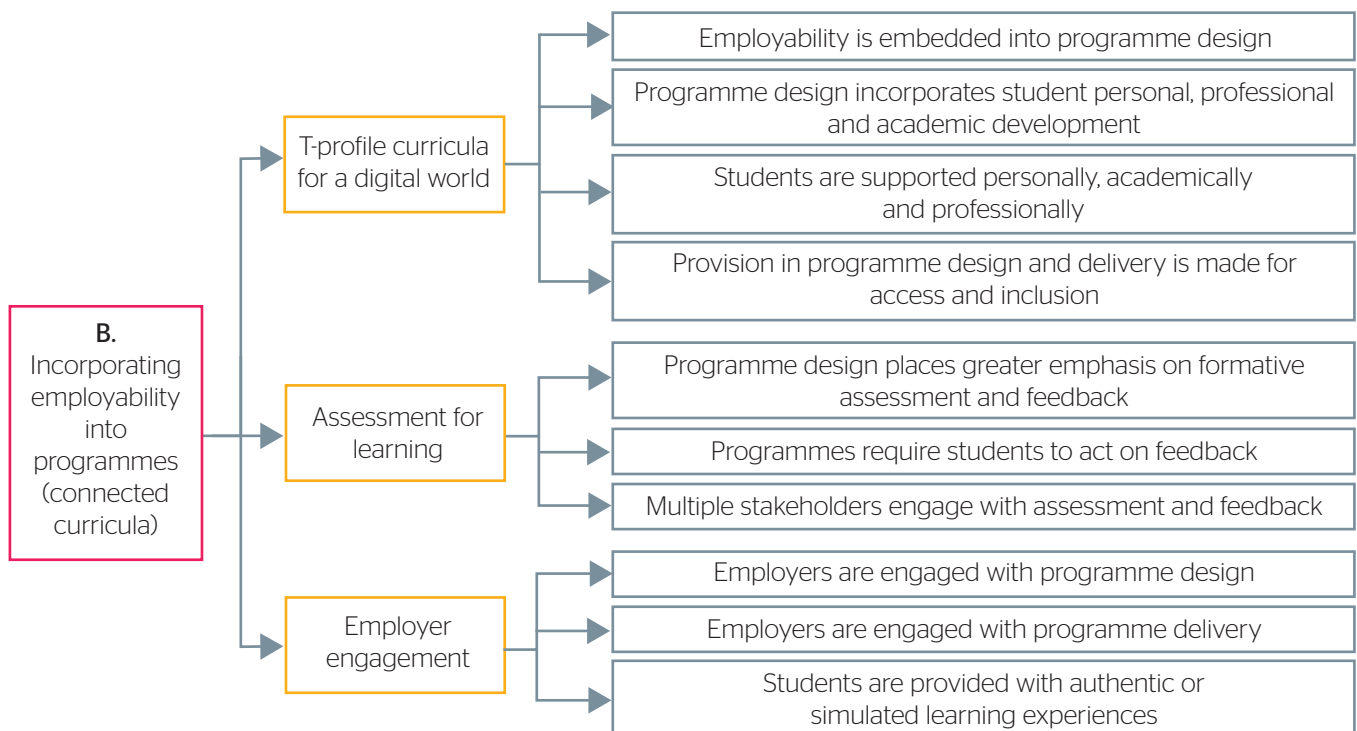
## B. Incorporating employability into programmes (connected curricula)

Part B of the toolkit supports dialogue, decision-making and planning in incorporating employability into programmes.

**There are three dimensions for ‘connected curricula’:**



For each dimension a number of good practice points are given:



... and for each practice point, there are further details provided as well as a set of resources which include useful information/guidance sites and/or case studies.

## Dimension 1: T-profile curricula for a digital world

Good practice point	Details
Employability is embedded into programme design through a 'connected curricula' approach	<ul style="list-style-type: none"> <li>» Curricula design requires students to take ownership and self-direct their lifelong employability from early on in their programmes of study, and prepare them for lifelong working and learning where employability skills and use of technology will be ever-changing</li> <li>» Curricula design requires students to continually identify, develop, reflect on and communicate their employability skills and capabilities</li> <li>» Employability (however it is defined) is embedded into curricula learning outcomes and assessment using a T-profile which balances discipline learning with employability development</li> <li>» Towards the completion of programmes, students should be capable of self-review of their employability</li> <li>» Curricula design aligns with the QAA <b>Flexible Curricula framework</b> <a href="http://bit.ly/Flexible_Curriculum">http://bit.ly/Flexible_Curriculum</a></li> </ul>
Programme design incorporates student personal, professional and academic development	<ul style="list-style-type: none"> <li>» Planning for student personal, professional and academic development</li> <li>» Continuous formative reflection on personal, professional, academic development and alignment with learning outcomes</li> <li>» Dialogue and engagement between the student and stakeholders involved in their development e.g. employers, mentors, assessors, tutors, peers</li> <li>» Rehearsing/showcasing learning and development for formative assessment points</li> <li>» Showcasing development and engaging with external stakeholders e.g. employers</li> <li>» Learners have access to personal spaces to support planning, reflecting and recording evidence of employability which can be used in tutorial and supportive conversations</li> </ul>
Students are supported personally, academically and professionally	<ul style="list-style-type: none"> <li>» Students are provided with suitably trained personal tutors who provide appropriate support for their personal, professional and academic development. Such support time is recognised as part of staff workloads</li> <li>» Appropriate induction workshops are provided to students to equip them for the relevant learning, assessment and development models with topics such as reflective learning, how to articulate employability skills, using technologies in such learning - helping them make the connection between developing self-regulatory abilities and employability</li> <li>» Students have access to a range of resources and guidance to support skills diagnostics, skills development and skills presentation</li> <li>» Students have access to a range of resources to help identify and prepare for careers and jobs</li> <li>» Students are prepared and supported to study and work with digital technologies</li> </ul>
Provision in programme design and delivery is made for access and inclusion	<ul style="list-style-type: none"> <li>» Guidelines on accessibility and inclusivity are provided to students, including the use and benefits of assistive technologies</li> <li>» Learning <b>outcomes</b> and assessment in respect of employability are designed to incorporate accessibility and inclusion</li> <li>» Learning content and activities in respect of employability are designed to incorporate accessibility and inclusion e.g. making content available in a variety of media and with formatting optimised for a variety of devices</li> </ul>

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Case studies

- » Case study: University of Edinburgh
- » Case study: Glasgow Caledonian University
- » Case study: University of Greenwich
- » Case study: Keele University
- » Case study: University of Southampton
- » Case study: Staffordshire University
- » Case study: University of Northampton
- » Case study: City of Glasgow College
- » Case study: Reading College
- » Case study: South Devon College
- » Case study: The Mindset
- » Case study: The Welsh Baccalaureate
- » Case study: St Helens College

For all case studies see, for HE:

<http://bit.ly/employability-HE-case-studies>

and for FE

<http://bit.ly/employability-FEandSkills-casestudies>

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Resources

- » Higher Education Academy (HEA)
    - › Employability framework: **Defining and developing your approach to employability: a framework for higher education institutions**, [http://bit.ly/Defining\\_Developing\\_Framework](http://bit.ly/Defining_Developing_Framework), 2015
    - › **Flexible learning: a practical guide for academic staff**, [http://bit.ly/guide\\_for\\_academic\\_staff](http://bit.ly/guide_for_academic_staff)
    - › **Flexible learning: a practical introduction for students**, [http://bit.ly/introduction\\_for\\_students](http://bit.ly/introduction_for_students)
    - › **Enhancing employability through enterprise education: Examples of good practice in higher education**, [http://bit.ly/Enhancing\\_Employability](http://bit.ly/Enhancing_Employability)
    - › **Pedagogy for employability**, [http://bit.ly/Pedagogy\\_for\\_employability](http://bit.ly/Pedagogy_for_employability)
  - » Jisc
    - › Guide: **Getting started with e-portfolios**, [http://bit.ly/Getting\\_Started\\_eportfolios](http://bit.ly/Getting_Started_eportfolios)
    - › **The e-portfolio implementation toolkit**, [http://bit.ly/eportfolio\\_toolkit](http://bit.ly/eportfolio_toolkit),
    - › Guide: **Effective practice with e-portfolios**, [http://bit.ly/effective\\_practice](http://bit.ly/effective_practice)
    - › Guide: **e-Portfolios**, [http://bit.ly/Guide\\_eportfolios](http://bit.ly/Guide_eportfolios)
    - › Guide: **Emerging Practice in a Digital Age**, [http://bit.ly/Emerging\\_Practice\\_In\\_Digital](http://bit.ly/Emerging_Practice_In_Digital)
  - » QAA **flexible curricula toolkit**, [http://bit.ly/Curriculum\\_Toolkit](http://bit.ly/Curriculum_Toolkit)
  - » Manchester Metropolitan University's **employability analysis tool**, <http://bit.ly/EmployabilityAnalysisToolNov15>
  - » BIS **Enterprise for all: The relevance of enterprise in education**, [http://bit.ly/Enterprise\\_In\\_Education](http://bit.ly/Enterprise_In_Education)
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## Dimension 2: Assessment for learning

Good practice point	Details
Programme design places greater emphasis on formative assessment and feedback	<ul style="list-style-type: none"> <li>» Curricula adopt 'assessment for learning' approaches with strong emphasis on continual formative assessment and longitudinal Assessment and Feedback (A&amp;F) throughout a programme and based on key assessment and feedback principles (see <b>Assessment and Feedback Principles: Rationale and formulation</b>, <a href="http://bit.ly/Assesment_and_Feedback_Principles">http://bit.ly/Assesment_and_Feedback_Principles</a>)</li> <li>» Formative assessment and feedback requires students to reflect on and articulate their evolving employability, in the context of the programme learning outcomes</li> <li>» There is strong emphasis on continual feedback and dialogue on feedback - relating to both discipline and employability learning outcomes</li> </ul>
Programmes require students to act on feedback	<ul style="list-style-type: none"> <li>» Tutors, mentors and assessors require students to take action on their feedback and monitor this throughout a programme</li> </ul>
Multiple stakeholders engage with assessment and feedback	<ul style="list-style-type: none"> <li>» Tutors, mentors and assessors provide regular feedback to students on their employability development and how they reflect on and articulate their evolving capabilities</li> <li>» Feedforward approaches are adopted to reflect on prior feedback to inform future assignments, learning and development</li> <li>» Tutors, mentors and assessors encourage student peer interaction through e.g. feedback, marking and dialogue</li> <li>» Employers are engaged in assessment and feedback</li> <li>» Authentic assessments (where tasks and conditions are more closely aligned to the work-place) are incorporated into curricula design</li> </ul>

Case studies	Resources
<ul style="list-style-type: none"> <li>» Case study: University of Edinburgh</li> <li>» Case study: Glasgow Caledonian University</li> <li>» Case study: University of Greenwich</li> <li>» Case study: Keele University</li> <li>» Case study: University of Southampton</li> <li>» Case study: Staffordshire University</li> <li>» Case study: Bath Spa University</li> <li>» Case study: University of Northampton</li> <li>» Case study: City of Glasgow College</li> <li>» Case study: Reading College</li> <li>» Case study: South Devon College</li> <li>» Case study: The Welsh Baccalaureate</li> <li>» Case study: St Helens College</li> </ul> <p>For all case studies see, for HE:  <a href="http://bit.ly/employability-HE-case-studies">http://bit.ly/employability-HE-case-studies</a>  and for FE  <a href="http://bit.ly/employability-FEandSkills-casestudies">http://bit.ly/employability-FEandSkills-casestudies</a></p>	<ul style="list-style-type: none"> <li>» Guide: <b>Changing assessment and feedback practice: How to approach large-scale change in assessment and feedback practice with the help of technology</b>, <a href="http://bit.ly/Changing_Assessment_And_Feedback">http://bit.ly/Changing_Assessment_And_Feedback</a></li> <li>» Guide: <b>Transforming assessment and feedback case study: Viewpoints as a catalyst for change</b>, <a href="http://bit.ly/Viewpoints_as_a_catalyst_for_change">http://bit.ly/Viewpoints_as_a_catalyst_for_change</a>, Harper Adams University and Cardiff Metropolitan University</li> <li>» Guide: <b>Feedback and feed forward: Using technology to support learner longitudinal development</b>, <a href="http://bit.ly/Feedback_and_Feed_Forward">http://bit.ly/Feedback_and_Feed_Forward</a></li> <li>» Guide: Transforming assessment and feedback: <b>Employability and assessment</b>, <a href="http://bit.ly/Employability_and_assessment">http://bit.ly/Employability_and_assessment</a></li> <li>» Guide: Transforming assessment and feedback: <b>Assessment design</b>, <a href="http://bit.ly/Assessment_design">http://bit.ly/Assessment_design</a></li> <li>» Guide: <b>Enhancing student employability through technology-supported assessment and feedback: How the curriculum can help develop the skills and competencies needed in the world of work</b>, <a href="http://bit.ly/Enhancing_Student_Employability">http://bit.ly/Enhancing_Student_Employability</a></li> <li>» <b>Assessment and feedback principles overview</b>, <a href="http://bit.ly/Assessment-and-feedback-principles">http://bit.ly/Assessment-and-feedback-principles</a></li> <li>» Case study on <b>enhancing employability through assessment</b>, <a href="http://bit.ly/Employability_University_Exeter">http://bit.ly/Employability_University_Exeter</a>, and <b>video case study</b> <a href="http://bit.ly/Transforming_Assessment_video">http://bit.ly/Transforming_Assessment_video</a>, at the University of Exeter</li> <li>» Webinar (Online Conference): <b>Transforming assessment for learning in a digital age</b>, <a href="http://bit.ly/Transforming_Assessment_for_Learning">http://bit.ly/Transforming_Assessment_for_Learning</a>, David Boud</li> <li>» Webinar: <b>Peer review and the development of evaluative skills webinar</b>, <a href="http://bit.ly/Evaluative_Skills_Webinar">http://bit.ly/Evaluative_Skills_Webinar</a>, Professor David Nicol</li> <li>» <b>Effective Assessment in a Digital Age: A guide to technology-enhanced assessment and feedback</b>, <a href="http://bit.ly/Effective_Assessment_in_a_Digital_Age">http://bit.ly/Effective_Assessment_in_a_Digital_Age</a></li> <li>» <b>A view of the Assessment and Feedback Landscape: baseline analysis of policy and practice from the JISC Assessment and Feedback programme</b>, <a href="http://bit.ly/A_view_of_the_Assessment_and_Feedback_Landscape">http://bit.ly/A_view_of_the_Assessment_and_Feedback_Landscape</a></li> </ul>



### Dimension 3: Employer engagement

Good practice point	Details
Employers are engaged with programme design	<ul style="list-style-type: none"> <li>» Employers are involved in curricula design, including supporting the development of learning outcomes and assessment approaches that incorporate student employability</li> <li>» Curricula provide students with opportunities for engaging with employers for example, in working on real-world authentic issues</li> <li>» Assessment, feedback and action on feedback relates directly to such engagement</li> <li>» Where it is not feasible or practical to provide such authentic learning experiences, technology solutions e.g. simulations and virtual reality can be an alternative approach</li> <li>» Novel and creative approaches can be adopted to support student-staff-employer engagement such as the setting up of student-staff consulting to employers, which can exploit student distinctiveness e.g. for creativity, digital literacy and cross-discipline working</li> </ul>
Employers are engaged with programme delivery	<ul style="list-style-type: none"> <li>» Where appropriate, employers are engaged as student mentors and provide employer-related feedback, aligned to employability skills</li> <li>» Where appropriate, employers can provide employer-related assessment</li> <li>» Alumni networks are set-up to allow engagement between students and alumni</li> <li>» Employers and employer, professional and sector bodies can set challenges for students and student groups to work on in order to provide real-world authentic learning experiences. Such challenges can potentially span cohorts and could also introduce competitive elements</li> </ul>
Students are provided with authentic or simulated learning experiences	<ul style="list-style-type: none"> <li>» Programmes incorporate authentic learning experiences as part of curricula/co-curricular design (e.g. via placements, work-based learning, apprenticeships)</li> <li>» Authentic learning should ideally require students to contribute usefully to employers at the appropriate student skill levels with active and real-world learning experiences that develop employability skills</li> <li>» Students are required to continually reflect on their learning experiences and articulate the employability skills developed with feedback from both tutors and employers</li> <li>» Simulated experiences are adopted where appropriate e.g. helping to overcome issues such as health and safety and large costs issues of authentic learning</li> <li>» FE, in particular, can provide real environments in which to learn e.g. kitchens, workshops, garages, salons etc.</li> </ul>

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- » Case study: City of Glasgow College
- » Case study: South West College, Northern Ireland
- » Case study: Loughborough College
- » Case study: Portland College
- » Case study: Reading College
- » Case study: S&B Autos Automotive Academy, Bristol
- » Case study: South Devon College
- » Case study: The Mindset
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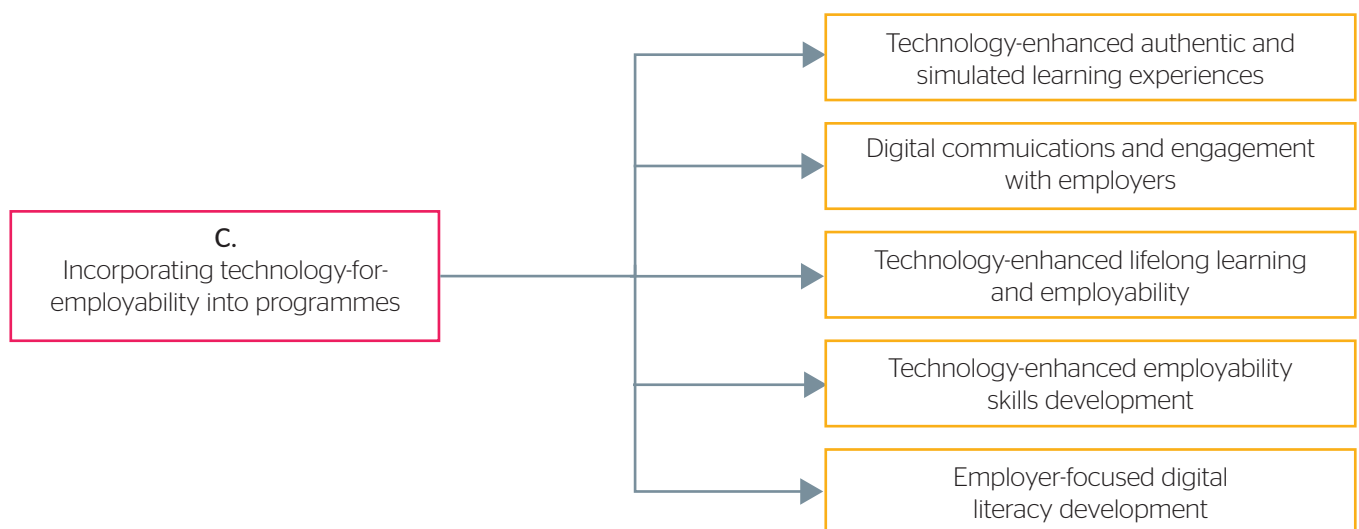
## Resources

- » Jisc
  - › Guides: Transforming assessment and feedback: **Employability and assessment**, [http://bit.ly/Employability\\_and\\_assessment\\_2](http://bit.ly/Employability_and_assessment_2)
  - › Case study on **enhancing employability through assessment**, [http://bit.ly/Enhancing\\_employability\\_skills\\_through\\_assessment](http://bit.ly/Enhancing_employability_skills_through_assessment), and **video case study**, [http://bit.ly/Transforming\\_Assessment\\_video](http://bit.ly/Transforming_Assessment_video), at the University of Exeter
  - › **Learning from Employer Engagement Programmes**, [http://bit.ly/Leep\\_Final\\_Report](http://bit.ly/Leep_Final_Report), (LEEP) Project; JISC Business and Community Engagement Programme
- » HEA
  - › HEA publication on employer engagement and work-based learning, [http://bit.ly/Flexible\\_pedagogies](http://bit.ly/Flexible_pedagogies)
  - › Quality and responding to employer needs, [http://bit.ly/Quality\\_and\\_responding](http://bit.ly/Quality_and_responding)
  - › Work-based learners' engagement with the university, [http://bit.ly/Work-based\\_learners\\_engagement](http://bit.ly/Work-based_learners_engagement)
  - › Work-based learning - illuminating the higher education landscape, [http://bit.ly/Higher\\_Education\\_Landscape](http://bit.ly/Higher_Education_Landscape)
  - › Work-based learning - impact study, [http://bit.ly/learning\\_Impact\\_Study](http://bit.ly/learning_Impact_Study)
- » Best Practice in Employer Engagement, [http://bit.ly/Best\\_Practice\\_in\\_Employer\\_Engagement](http://bit.ly/Best_Practice_in_Employer_Engagement), National STEM Centre
- » Exploring employers' perceptions of employer engagement, [http://bit.ly/exploring\\_employers\\_perceptions](http://bit.ly/exploring_employers_perceptions), Learning and Skills Development Agency
- » Engaging employers to enhance teaching and learning, [http://bit.ly/Engaging\\_employers\\_to\\_enhance\\_teaching\\_and\\_learning](http://bit.ly/Engaging_employers_to_enhance_teaching_and_learning), University of Reading
- » Supporting Employer Engagement through E-portfolios, [http://bit.ly/E-Portfolios\\_support](http://bit.ly/E-Portfolios_support), Centre for Recording Achievement
- » A Review of Business–University Collaboration, [http://bit.ly/A\\_Review\\_of\\_Business-University\\_Collaboration](http://bit.ly/A_Review_of_Business-University_Collaboration), Prof Sir Tim Wilson, February 2012
- » Stepping Higher - Workforce Development through employer-higher education partnership, [http://bit.ly/Stepping\\_higher](http://bit.ly/Stepping_higher), HEFCE and CBI
- » Integrated Professional Development (IPD) (a 'shell' award framework developed as part of the Higher Skills Pathfinder for the SW Region), [http://bit.ly/Programme\\_Specification](http://bit.ly/Programme_Specification), University of the West of England
- » The costs of alternative modes of delivery, [http://bit.ly/The\\_costs\\_of\\_alternative\\_modes\\_of\\_delivery](http://bit.ly/The_costs_of_alternative_modes_of_delivery), A study for HEFCE by JM Consulting Ltd
- » Employer Engagement with Higher Education: Defining, Sustaining and Supporting Higher Skills Provision, [http://bit.ly/A\\_Higher\\_Skills\\_Research\\_Report](http://bit.ly/A_Higher_Skills_Research_Report), CIHE, HEFCE, HERDA, University of Exeter

## C. Incorporating technology-for-employability into programmes

Part C of the toolkit supports dialogue, decision-making and planning in incorporating technology-for-employability into programmes with an emphasis on identifying clear benefits to three different stakeholder groups: Learners, Employers and Institutions

**There are five dimensions for ‘technology for employability’:**



For each dimension the following are given:

- » Specific technologies
- » How these technologies can be applied
- » Examples of how the technologies are being applied

In addition, the benefits associated with each dimension of technology application are provided.

## Dimension 1: Technology-enhanced authentic and simulated learning experiences

- » Active and real world learning experiences supported by technologies that develop employability skills
- » Simulated experiences

Technologies	Applications	Examples
Wiki	Student cohorts working with employers to collaboratively develop knowledge bases that help to address real employer issues.	Glasgow Caledonian University – business students develop their employability skills through collaborating on problem-solving with employers on real issues.
Simulations and games	Creation of online simulations, games and real environments (such as workshops and garages). These represent authentic working environments and support students in practising their employability skills. They also help to overcome issues such as health and safety and large cost issues of authentic learning.	<ul style="list-style-type: none"> <li>» Birmingham City University – online simulations and games for development of employability skills in health students</li> <li>» R&amp;D Autos Bristol using a simulation Paint Spray Shop to teach panel painting skills</li> <li>» Students at Portland College (for students with disabilities) video their work competencies to share with prospective employers</li> </ul>
Specialist systems	Specialist online systems that support engagement between employers, students and the wider community.	<ul style="list-style-type: none"> <li>» University of Greenwich – Virtual Law Clinic</li> <li>» Innovation Centre – South West College who partner SMEs with students on real work projects and problems</li> </ul>
<ul style="list-style-type: none"> <li>» VLE</li> <li>» Cloud collaboration tools</li> <li>» Social media</li> </ul>	Use of a variety of online tools to support collaboration, communications, document management and project management for authentic learning experiences.	<ul style="list-style-type: none"> <li>» Duale Hochschule Baden-Württemberg-Ravensburg (DHBW-R), Germany and Oregon State University (OSU) – Formula Student collaboration</li> <li>» Bath Spa University – virtual internship programme</li> <li>» University of Southampton – Mission Employability</li> <li>» Numerous examples of FE and HE students creating LinkedIn accounts and using Twitter to collect prospective employers as followers e.g. St Helens College</li> </ul>
» Vocational-specific technologies	Such as are used in kitchens and garages on campus.	

For all case studies see, for **HE** ([http://bit.ly/HE\\_case\\_studies](http://bit.ly/HE_case_studies)) and for **FE** ([http://bit.ly/FE\\_and\\_Skills\\_case\\_studies](http://bit.ly/FE_and_Skills_case_studies))

Benefits to learners	Benefits to employers	Benefits to institutions
<ul style="list-style-type: none"> <li>» Authentic learning experiences can be highly effective in developing employability skills and motivating/engaging students</li> <li>» Provides opportunities for students to experience different working environments to aid decision-making with careers and jobs</li> <li>» Technology-supported collaboration can provide opportunities for students to work with overseas and remote companies</li> <li>» Provides insight into industry requirement of technology</li> <li>» Different student groups can try new skills as 'tasters' or options for personal development</li> </ul>	<ul style="list-style-type: none"> <li>» Employers can benefit from student creativity and digital skills in problem-solving real issues for them together with staff support</li> <li>» Supports employers in evaluating students for potential recruitment</li> <li>» Students are more likely to have a 'work-ready' mind-set</li> </ul>	<ul style="list-style-type: none"> <li>» Technology-supported collaboration provides opportunities for students and staff to work with overseas and remote employers</li> <li>» Technology-supported collaboration can build capacity and efficiency with numbers of students working with employers</li> <li>» Simulations and games can be a cost-effective method for developing learners, as they bring savings in costs of materials, avoidance of health and safety concerns, scalability of student numbers experiencing simulated learning</li> <li>» Provides opportunities for university staff and employers to collaborate and better understand each other's needs and issues which can lead to enhanced course development</li> </ul>

## Dimension 2: Digital communications and engagement with employers

- » Researching, identifying and developing contacts and relationships with employers
- » Developing 'digital' and 'employability' identity
- » Developing 'digital collateral' as evidence of student 'rounded self'
- » Showcasing student 'rounded self' to employers and personal clients
- » Sharing industry identified problems for learning opportunities

Technologies	Applications	Examples
<ul style="list-style-type: none"> <li>» Social media</li> <li>» Multi-media</li> <li>» Mobile devices</li> <li>» Cloud collaboration tools</li> <li>» E-portfolios and other personal learning showcasing tools</li> </ul>	<ul style="list-style-type: none"> <li>» Students using a range of online, mobile and multi-media tools to better engage and build relationships with employers including development of their digital identity/reputation and rehearsing and showcasing their digital resources</li> <li>» Mobile devices support capturing of evidence (eg talking head testimonials) that students can also use to showcase their skills and in digital story-telling</li> <li>» LinkedIn is a particularly effective network to support students in engaging with employers including development of professional relationships via sharing identified problems for learning opportunities</li> </ul>	<ul style="list-style-type: none"> <li>» Birmingham City University – Creative problem solving using digital story-telling</li> <li>» University of Southampton – Mission Employable and use of social media</li> <li>» University of Bolton – Digital Storytelling for employability</li> <li>» Numerous colleges using Mapping Portfolios for work based learning now using video capture through mobile devices to capture evidence of competencies</li> <li>» Reading College have moved from sharing technologies (Moodle) to personal Technologies for all students, their teachers and their managers (the full range of Google EduApps). Students still collaborate but from personal spaces</li> <li>» Creative Advertising students at Falmouth University use personal folders such as dunked.com to tell the story of campaigns and design work to show to prospective employers and clients</li> <li>» University of Edinburgh School of Art and Design</li> <li>» St Helens College use of LinkedIn</li> </ul>
Mapping portfolios for apprenticeships and bespoke short training	Use of mapping portfolios to capture and map up to 300 competencies to demonstrate skills, used in work-based learning and apprenticeships	<ul style="list-style-type: none"> <li>» Hadlow College now using only electronic methods of capturing competencies in work based learning</li> <li>» Awarding bodies are looking to present 'byte-size' learning packages</li> <li>» Heart of Worcestershire College are offering so-called 'learning objects' for collection and use by students</li> </ul>

Benefits to learners	Benefits to employers	Benefits to institutions
<ul style="list-style-type: none"> <li>» Opportunities for students to efficiently use social networks and multimedia to better network and engage with a range of employers in pursuit of their careers and professional development</li> <li>» Opportunities for students to build a broad range of digital 'collateral' that can help them to better rehearse and showcase their 'rounded self' to employers and personal clients – compared to a written CV</li> <li>» Opportunities for students to shape their online identity to include employability and digital skills</li> </ul>	<ul style="list-style-type: none"> <li>» Supports student recruitment, allowing employers to better identify potential employees that match their needs – by seeing the student beyond the qualification</li> <li>» Allows employers to evaluate potential recruits efficiently using a broad range of student digital 'collateral' that can demonstrate and evidence student experience, skills, knowledge and attributes</li> </ul>	<ul style="list-style-type: none"> <li>» Potential to efficiently engage alumni with student learning and projects for mentoring students</li> <li>» Opportunities for institutions to better and more efficiently engage with a broader range of employers including SMEs and with professional, sector and regulatory bodies.</li> <li>» Opportunities to increase income from bespoke training</li> </ul>



### Dimension 3: Technology-enhanced lifelong learning and employability

- » Self-directed personal and professional learning (planning, reflection, managing, recording, review) – supported by technology
- » Digital feedback and engagement with a variety of stakeholders including employers to help develop learner self-regulatory skills
- » Employer-supported/ related assessment for learning

Technologies	Applications	Examples
<ul style="list-style-type: none"> <li>» E-portfolio</li> <li>» Personal learning space</li> <li>» Online badges</li> </ul>	<ul style="list-style-type: none"> <li>» Using tools such as e-portfolios (or other personal learning spaces such as blogs, web-sites and wikis) which are student 'owned'. These support self-directed personal and professional learning (planning, reflection, managing, recording, review) including reflecting on co/extra-curricular activities. Also they support engagement and dialogue with stakeholders including employers, mentors and assessors</li> </ul>	<ul style="list-style-type: none"> <li>» University of Edinburgh – e-portfolios in School of Art and Design</li> <li>» Keele University – e-portfolios for student employability</li> <li>» University of Greenwich – professional development portfolios for science and engineering students</li> <li>» Abertay University Law School – use of online badges</li> <li>» Birmingham City University – learning from extra-curricular activities using e-portfolios</li> <li>» University of Nottingham –exploring use of e-portfolios and how students reflect on their year in industry (industrial placement) and how this gives the students evidence for the Registered Scientist status</li> <li>» Staffordshire University – Staffordshire Graduate Employability project using e-portfolios</li> <li>» City of Glasgow College – a bespoke e-portfolio for use by Stonemasons to capture examples of work and experiences gained by students during the 85% of time spent working with employers as part of their apprenticeship</li> </ul>

For all case studies see, for HE ([http://bit.ly/HE\\_case\\_studies](http://bit.ly/HE_case_studies)) and for FE ([http://bit.ly/FE\\_and\\_Skills\\_case\\_studies](http://bit.ly/FE_and_Skills_case_studies))

Benefits to learners	Benefits to employers	Benefits to institutions
<ul style="list-style-type: none"> <li>» Learning and development using portfolios can offer learner-centric approaches compared with course-based e-learning systems</li> <li>» E-portfolios offer highly efficient ways for students to support their lifelong learning, helping them to make judgements and evaluate and manage their own learning</li> <li>» Students should be able to own and store their e-portfolio data enabling it to be used how, when and where they like</li> <li>» Learners have the opportunity to receive feedback from a range of stakeholders</li> <li>» Students can use their own devices to capture evidence for e-portfolios</li> <li>» Students can learn to self-validate their own work and ask others to critique it rather than seek assessment of a teacher</li> </ul>	<ul style="list-style-type: none"> <li>» Portfolio-based learning means assessments can be employer-focused</li> <li>» Employers benefit from graduates who are equipped for lifelong learning and employability where there is greater focus on capabilities of graduates to adapt to new needs, contexts and constraints, rather than having skills of the moment</li> <li>» Students can marshal personal content to show what is relevant only in an order that is helpful to each employer</li> </ul>	<ul style="list-style-type: none"> <li>» Portfolio-based learning is highly supportive of learner self-directed, self-review, assessment for learning and longitudinal progression approaches and can therefore act as a Trojan horse for enhancing curricula</li> </ul>

## Dimension 4: Technology-enhanced employability skills development

- » Learner skills diagnostics
- » Technology-enhanced development for skills gaps
- » Computer-aided assessment

Technologies	Applications	Examples
<ul style="list-style-type: none"> <li>» Online diagnostics</li> <li>» VLEs</li> <li>» OERs</li> <li>» E-learning content including e-books and multimedia content</li> <li>» Computer-aided assessment including electronic management of it</li> <li>» Online badges</li> </ul>	<ul style="list-style-type: none"> <li>» Provision of a range of tools, resources and services to support students in self-reviewing, planning and developing their employability skills</li> </ul>	<ul style="list-style-type: none"> <li>» University of Northampton - self-directed approaches to evaluation, planning and development of employability skills via engagement with social innovation and enterprise where students have access to a range of diagnostic, planning and development resources</li> <li>» Birmingham City University - A series of resources as part of the toolkit Creating Futureproof Graduates that helps student develop a number of key skills demanded by employers</li> <li>» University of London Careers Group – <b>careers and employability MOOC</b>, <a href="http://bit.ly/UOL_CAREERS_MOOC">http://bit.ly/UOL_CAREERS_MOOC</a></li> <li>» South Devon College ask students to complete a Moodle course based on examining and demonstrating the work skills asked for by local employers that students are able to demonstrate</li> <li>» City &amp; Guilds are working to offer Mozilla badges to students to demonstrate 'work ready' skills</li> <li>» Abertay University Law School use of online badges</li> </ul>
<ul style="list-style-type: none"> <li>» Online careers and transition services</li> </ul>	<ul style="list-style-type: none"> <li>» Online systems to support careers and student transition including for example</li> <li>» Visualising career pathways</li> <li>» Career planning</li> <li>» Career news</li> <li>» Self-assessment</li> <li>» Self-development (eg e-learning materials)</li> <li>» Job hunting</li> <li>» Interview training</li> <li>» Developing a CV</li> </ul>	<ul style="list-style-type: none"> <li>» Liverpool Hope University – Abintegro – career management and transition e-learning</li> <li>» <a href="http://myworksearch.co.uk">Myworksearch.co.uk</a> provides a mechanism for student self-assessment of skills and interests and suggests employment routes and gaps in skills portfolio to fill</li> <li>» Abingdon and Whitney College worked with local employers to provide on-line mock interviews and provide feedback to students on presentation</li> </ul>

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**Benefits to learners**

- » Supports students in diagnosing their own employability skills
- » Supports students in flexible and efficient approaches to developing and reviewing their employability skills
- » Provides students with information to manage their own learning needs

**Benefits to employers**

- » Graduates have the capability of independently diagnosing their own skills and exploiting online resources to develop their skills
- » Showing and evidencing personal improvement through analysis and making remedial choices is a strong employability skill itself

**Benefits to institutions**

- » Institutions can build in employability skills assessment into electronic management of assessment systems
  - » Provision of online resources for diagnostics and development of employability skills can be highly efficient and cost-effective, particularly if Open Educational Resources (OERs) are used
-

## Dimension 5: Employer-focused digital literacy development

- » Developing student technology-enhanced employability skills

Technologies	Applications	Examples
» All!	<ul style="list-style-type: none"> <li>» Developing student technology-enhanced employability skills</li> <li>» Developing digital entrepreneurialism</li> </ul>	<ul style="list-style-type: none"> <li>» Glasgow Caledonian University – business students develop their employability skills through collaborating on problem-solving with employers on real issues</li> <li>» Birmingham City University – Creative problem solving using digital story-telling</li> <li>» University of Southampton – Mission Employable and use of social media</li> <li>» The Young report asked that every FE student be able to develop an enterprising mindset as part of their educational development</li> <li>» City and Guilds are making opportunities in their qualifications and in Learning Assistant to evidence examples of 'soft skills in action'</li> <li>» The Welsh Government are offering an Enterprise course as part of their Welsh Baccalaureate and have classified digital literacy as the third 'essential skill' along with literacy and numeracy</li> <li>» Loughborough College – webinars with employers</li> </ul>

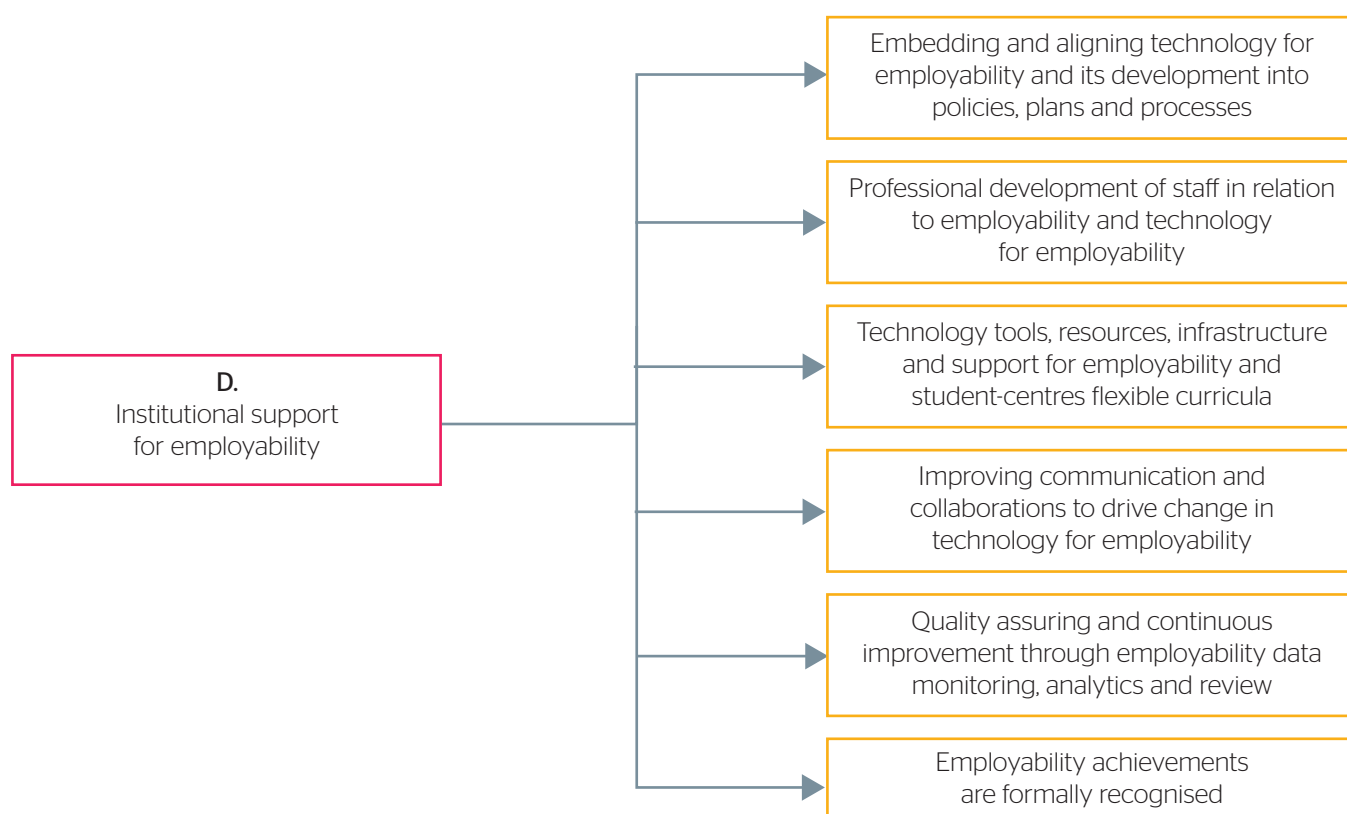
Benefits to learners	Benefits to employers	Benefits to institutions
<ul style="list-style-type: none"> <li>» Students develop a better understanding of how to identify and apply technology to employer contexts and needs</li> <li>» Students will potentially be more employable</li> </ul>	<ul style="list-style-type: none"> <li>» Graduates are better able to unleash their digital skills and understanding in pursuit of business objectives in creative and innovation ways</li> <li>» Graduate can help to inspire and influence employer IT departments</li> </ul>	<ul style="list-style-type: none"> <li>» Students and graduates are better equipped to meet the needs of employers</li> <li>» Students can be used by institutions as digital change agents, focusing on institutions as employers</li> </ul>

For all case studies see, for **HE** ([http://bit.ly/HE\\_case\\_studies](http://bit.ly/HE_case_studies)) and for **FE** ([http://bit.ly/FE\\_and\\_Skills\\_case\\_studies](http://bit.ly/FE_and_Skills_case_studies))

## D. Institutional support for employability

Part D of the toolkit supports dialogue, decision-making and planning in what can be achieved at an institutional level in support for programme teams incorporating employability and technology-for-employability into programme design:

**There are six dimensions for institutional support:**



## Institutional support for employability

Good practice point	Details
Embed and align technology for employability and its development into policies, plans and processes.	<ul style="list-style-type: none"> <li>» Institutional strategies and policies require programme teams to enhance curricula design using a connected curricula approach</li> <li>» Institutional strategies and policies require programme teams to fully support student personal, professional and academic development throughout a programme using learner-centred technologies</li> <li>» Institutional strategies and policies require students to be provided with personal tutors focused on the their personal, professional and academic development</li> <li>» Faculties, schools and departments are required to embrace connected curricula in their business/operational polices and plans which are monitored and evaluated centrally</li> <li>» Institutional strategies and policies in respect of technology infrastructure, tools and resources meet the needs for learner-centred teaching, learning and assessment</li> <li>» Institutional strategies and policies place emphasis on effective employer engagement at the local level</li> <li>» In HE, consideration is given to integrating technology and processes for the HEAR with student personal learning</li> <li>» Employability development and support is approached coherently by programme teams and professional support services (e.g. careers, employability, employer engagement, learning technology departments) working together</li> </ul>
Professional development of staff in relation to employability and technology for employability	<ul style="list-style-type: none"> <li>» Professional development of staff incorporates a range of topics focused on development of student employability and adoption of technology tools to facilitate this</li> <li>» Staff professional development is supported through activities such as peer review and communities of practice, in recognition of the centrality of teachers sharing ideas and practice as means of effecting change</li> <li>» Teachers need to take responsibility for maintaining their own employability and continual professional development using technology, including the use of personal learning spaces</li> </ul>
Technology tools, resources, infrastructure and support for employability and student-centred flexible curricula	<ul style="list-style-type: none"> <li>» Institutions regularly review, benchmark and evaluate their technology infrastructure, tools and resources against identified needs and sector benchmarks</li> <li>» A one-stop-shop support service is provided to faculties, schools, departments and programme teams – that brings together the various departmental support teams such as IT, Teaching, Learning and Assessment (TL&amp;A), Technology-enhanced Learning (TEL), employability, careers, student experience, inclusion</li> <li>» Resources are provided for staff to self-review, plan and develop their skills, knowledge and capabilities in relation to student employability and use of technology</li> <li>» In HE, consideration is given to integrating technology and processes for the HEAR with student personal learning technologies</li> </ul>



Good practice point	Potential scope
Improving communication and collaborations to drive change in technology for employability	<ul style="list-style-type: none"> <li>» Faculties, schools, departments and programme areas in FE (i.e. at the local level) undertake a range of communications and engagement activities</li> <li>» Students as change leaders and innovators initiatives focus on employability and employer engagement</li> <li>» Encourage alumni to offer mentoring through on-line technology and in FE, use apprentices to talk to prospective apprentices about the world of work</li> </ul>
Quality assuring and continuous improvement through employability data monitoring, analytics and review	<ul style="list-style-type: none"> <li>» QA processes are fully defined and communicated</li> <li>» Data monitoring, analysis and evaluation processes are set up</li> <li>» Analysis of trends and individual student performance data informs students and staff in (formative) approaches for enhancing student performance</li> <li>» In FE consider how to demonstrate employability credibility in line with the <b>Common Inspection Framework</b> <a href="http://bit.ly/Common_inspection_framework">http://bit.ly/Common_inspection_framework</a></li> </ul>
Employability achievements are formally recognised	<ul style="list-style-type: none"> <li>» HE students are encouraged by tutors and mentors to develop their HEAR record through curricula, cocurricular and extra-curricular activities - the HEAR should become part of student culture</li> <li>» For HE, HEAR is incorporated into student personal, professional and academic development, tutoring and support</li> <li>» Specific skills are recognised through e.g. online badges</li> <li>» Employability awards should, where possible promote a learner-centred approach to the development and evidencing of skills</li> </ul>

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