

Digital literacy: from a definition to a graduate attribute to a measure of learning gain

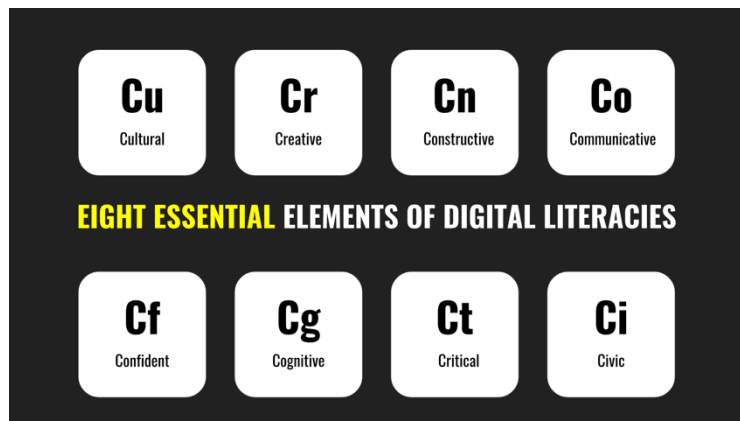
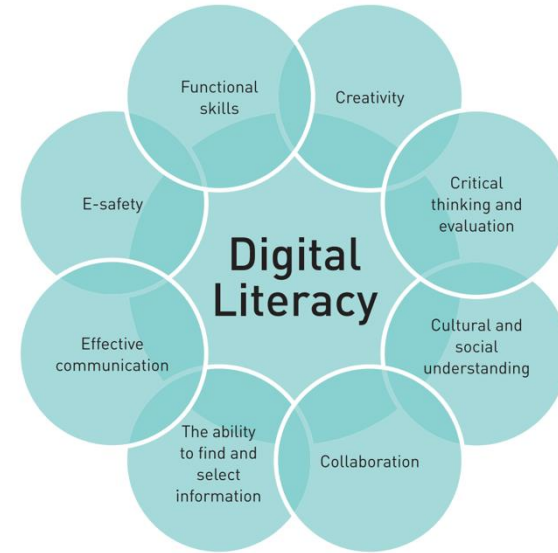
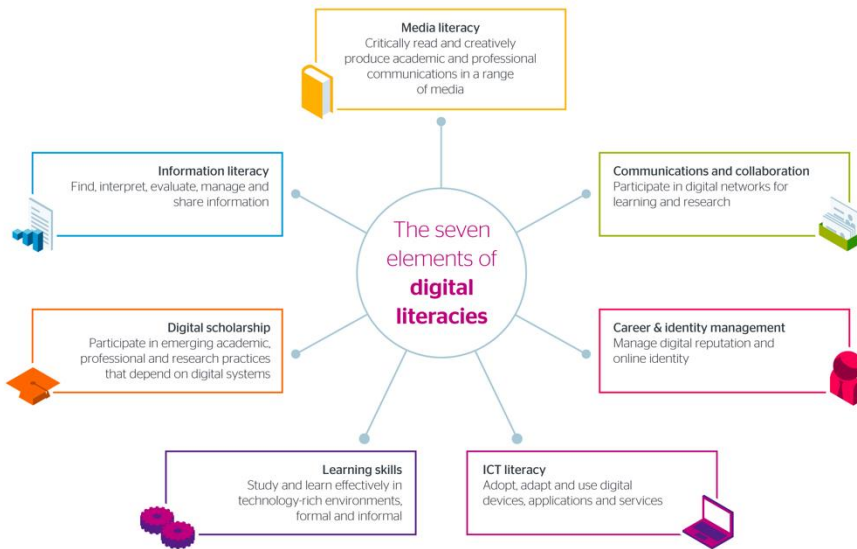
Professor Rhona Sharpe
Department of Technology Enhanced Learning
@rjsharp

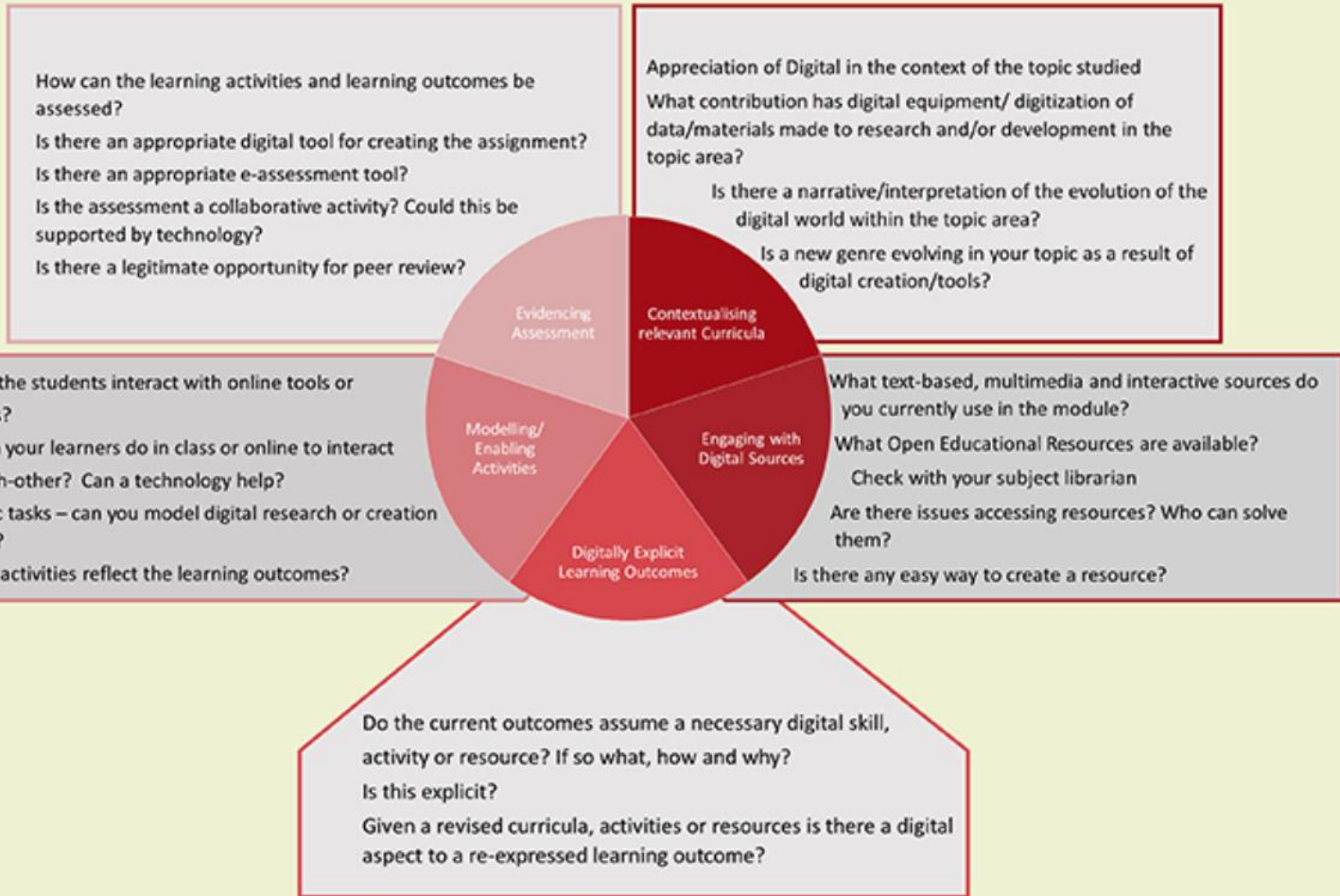


Defining

Digital literacy as ...?

Digital literacy frameworks





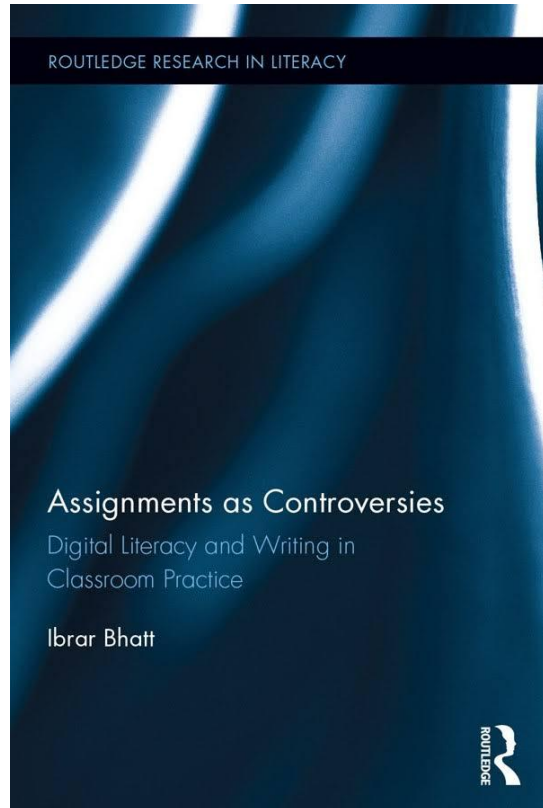
Digital literacy looks beyond functional IT skills to describe a richer set of digital behaviours, **practices** and identities.

What it means to be digitally literate changes over time and across **contexts**....

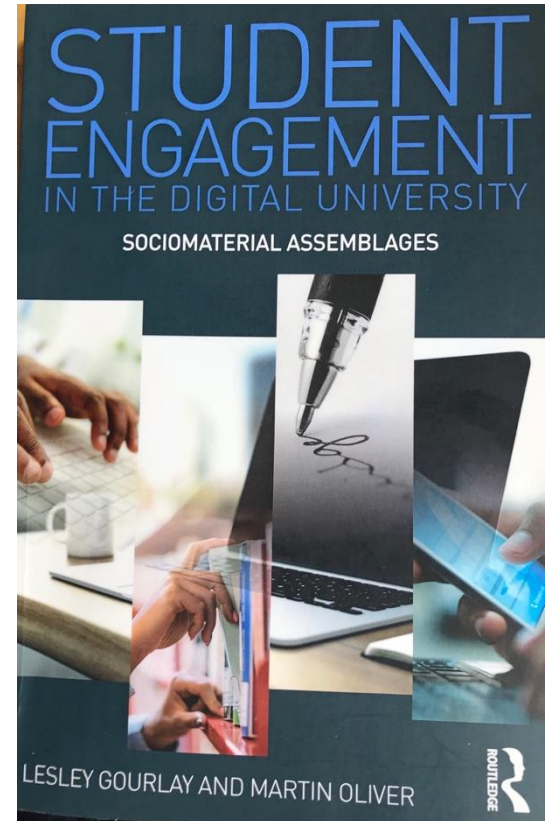
....so digital literacies are essentially a set of academic and professional **situated practices** supported by diverse and changing technologies.

Jisc, 2014

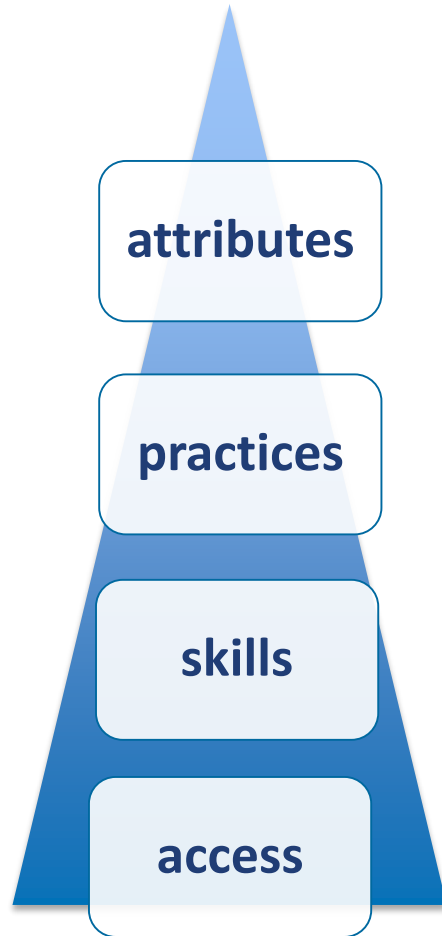
<https://www.jisc.ac.uk/guides/developing-digital-literacies>



Ibrar Bhatt, 2017



Lesley Gourlay &
Martin Oliver, 2018



*“The functional **access, skills** and **practices** necessary to become a confident, agile adopter of a range of technologies for personal, academic and professional use.”*

Oxford Brookes University Strategy for
Enhancing the Student Experience, 2010

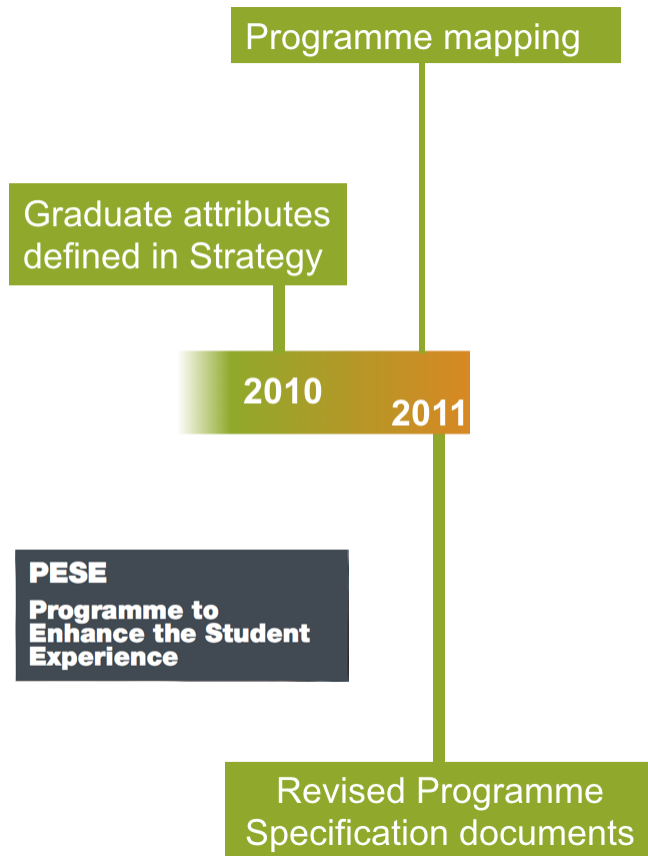
“Abilities, dispositions or qualities that... graduates will need in order to translate and apply their disciplinary knowledge to new contexts”

Oxford Brookes University Strategy for
Enhancing the Student Experience, 2010

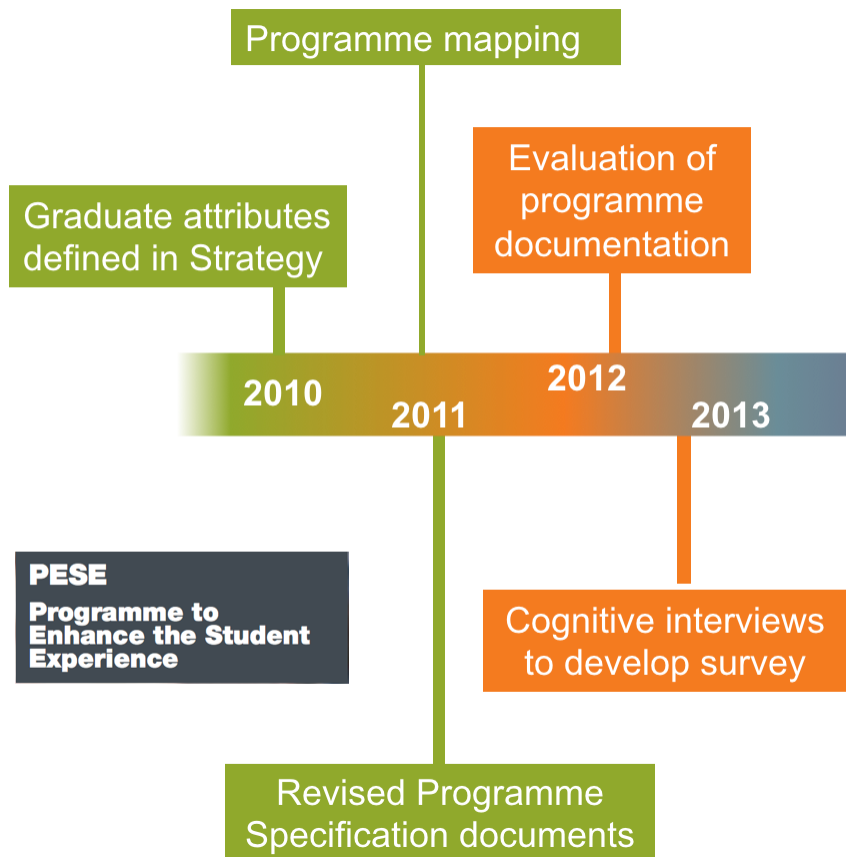
“The complexity of what is being referred to in shorthand as ‘graduate attributes’ is often masked by simplistic formulation of graduate skills lists”

Barrie et al (2007) cited in Normand & Anderson (2017)

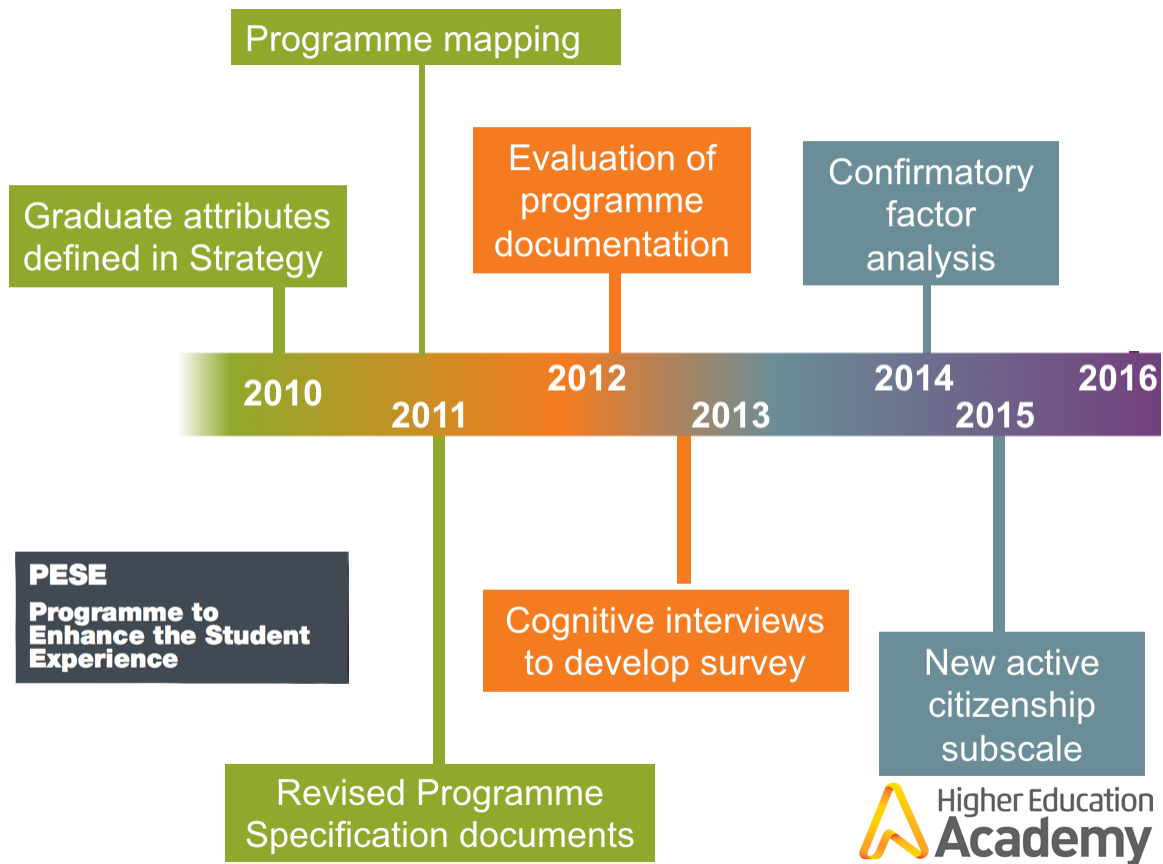
Embedding graduate attributes at Oxford Brookes



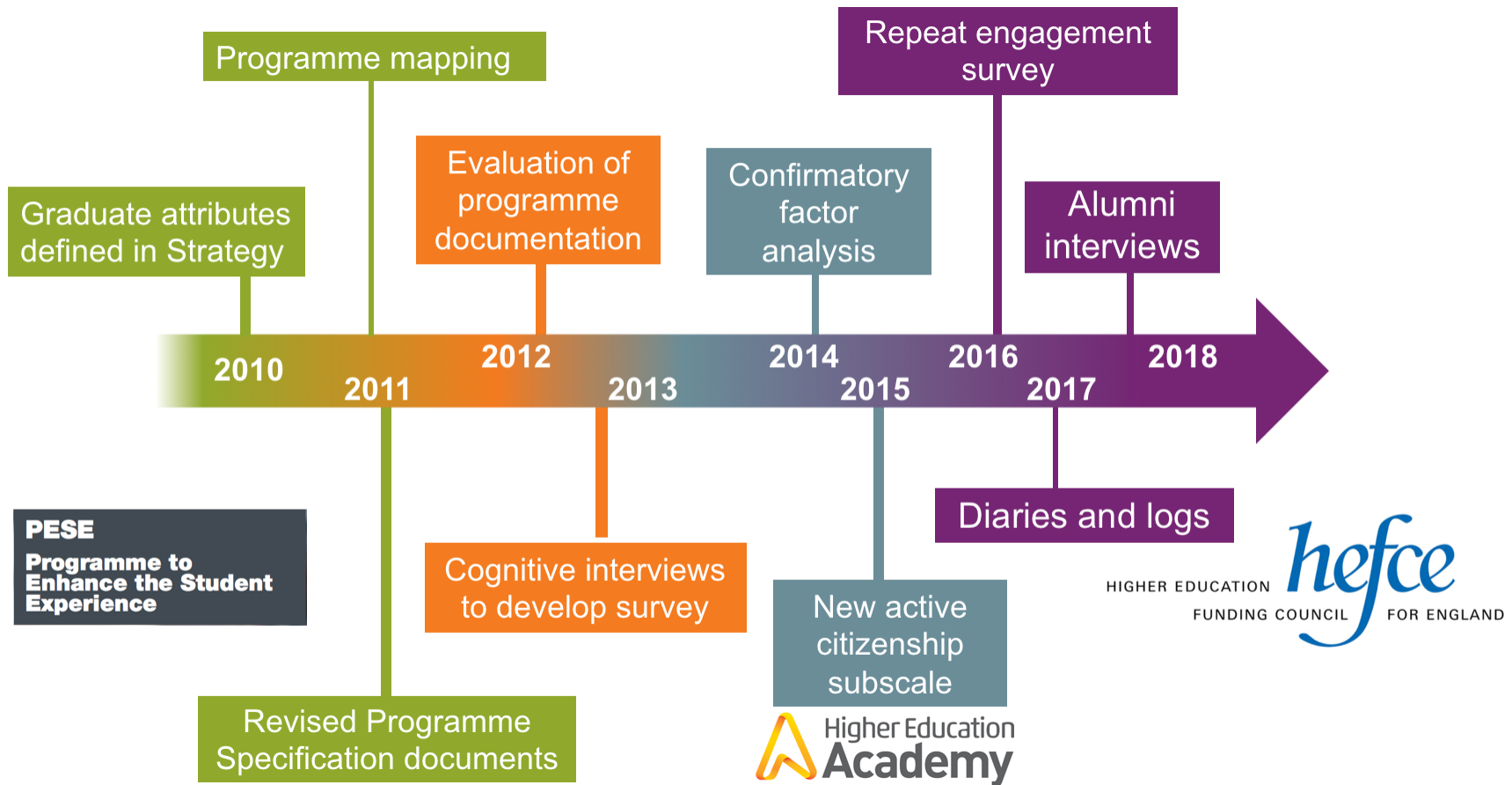
Embedding graduate attributes at Oxford Brookes



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Embedding graduate attributes at Oxford Brookes



Embedding

**Digital literacy
from the student perspective**

- Ubiquitous free-at-the-point-of-use access. Easy to connect any number of personal devices to the network.
- A VLE populated with comprehensive organisational information and course related materials.
- Teaching staff who have a good grasp of how to use established digital technology and incorporate technology into their teaching in an appropriate manner.

Are students motivated to develop digital skills?

81% of HE learners feel that digital skills will be important in their career

40% agree they have been made aware of any digital skills they need to improve

50% agree that their course prepares them well for the digital workplace



Jisc digital student experience tracker, 8190 learners from 29 HEIs, July 2017

Are students motivated to develop digital skills?

81% of HE learners feel that digital skills will be important in their career
15% neutral, 3% disagree

40% agree they have been made aware of any digital skills they need to improve
25% neutral, 33% disagree

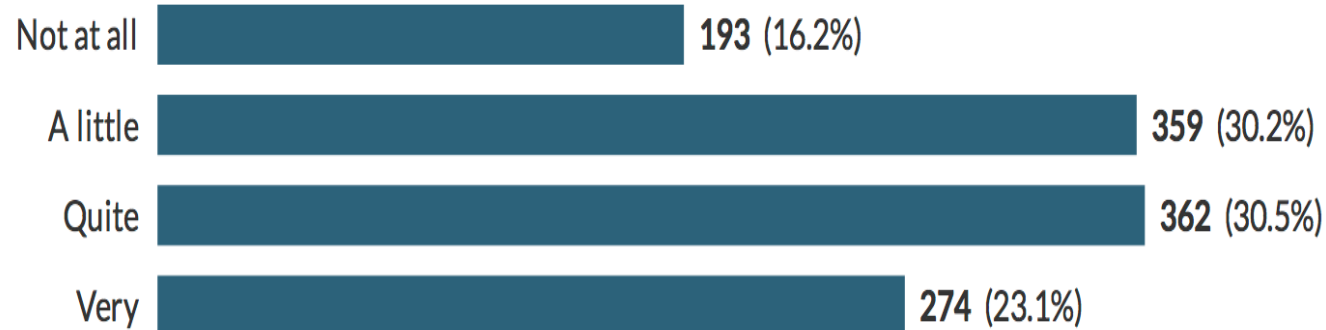
50% agree that their course prepares them well for the digital workplace
33% neutral, 17% disagree.



Jisc digital student experience tracker,
8190 learners from 29 HEIs, July 2017

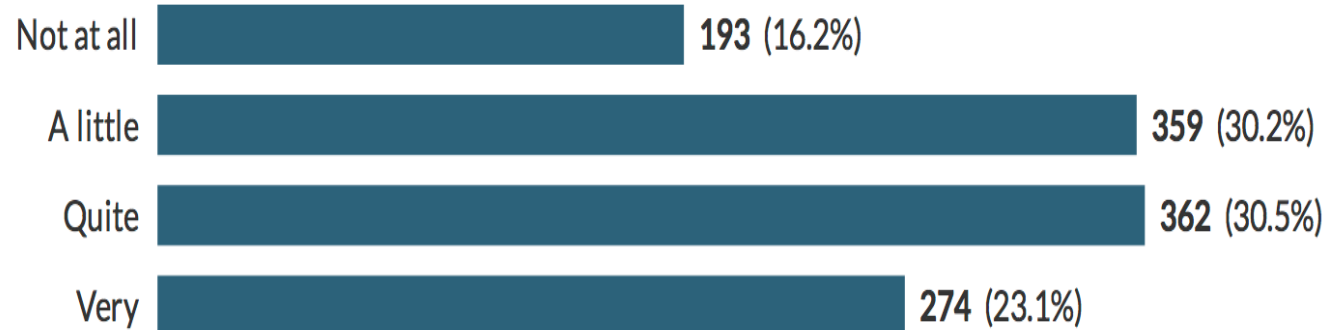
Importance of this at university?

Using digital technologies in innovative or creative ways



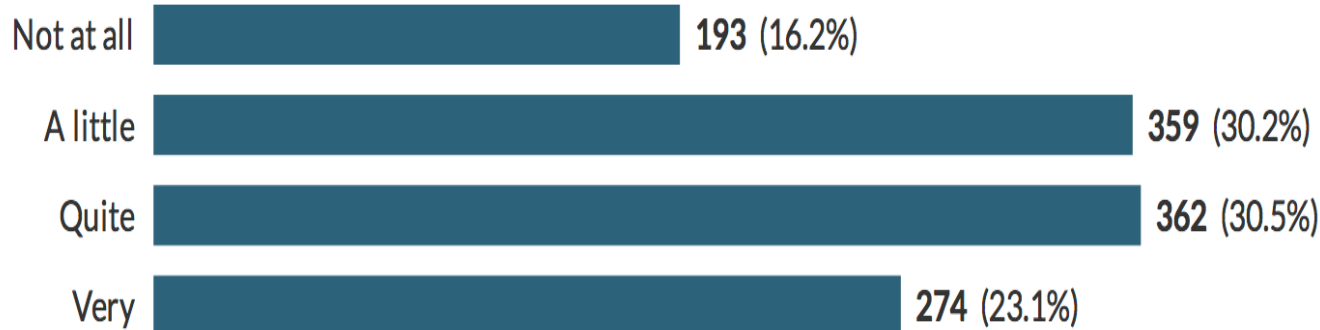
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Importance of this at university?

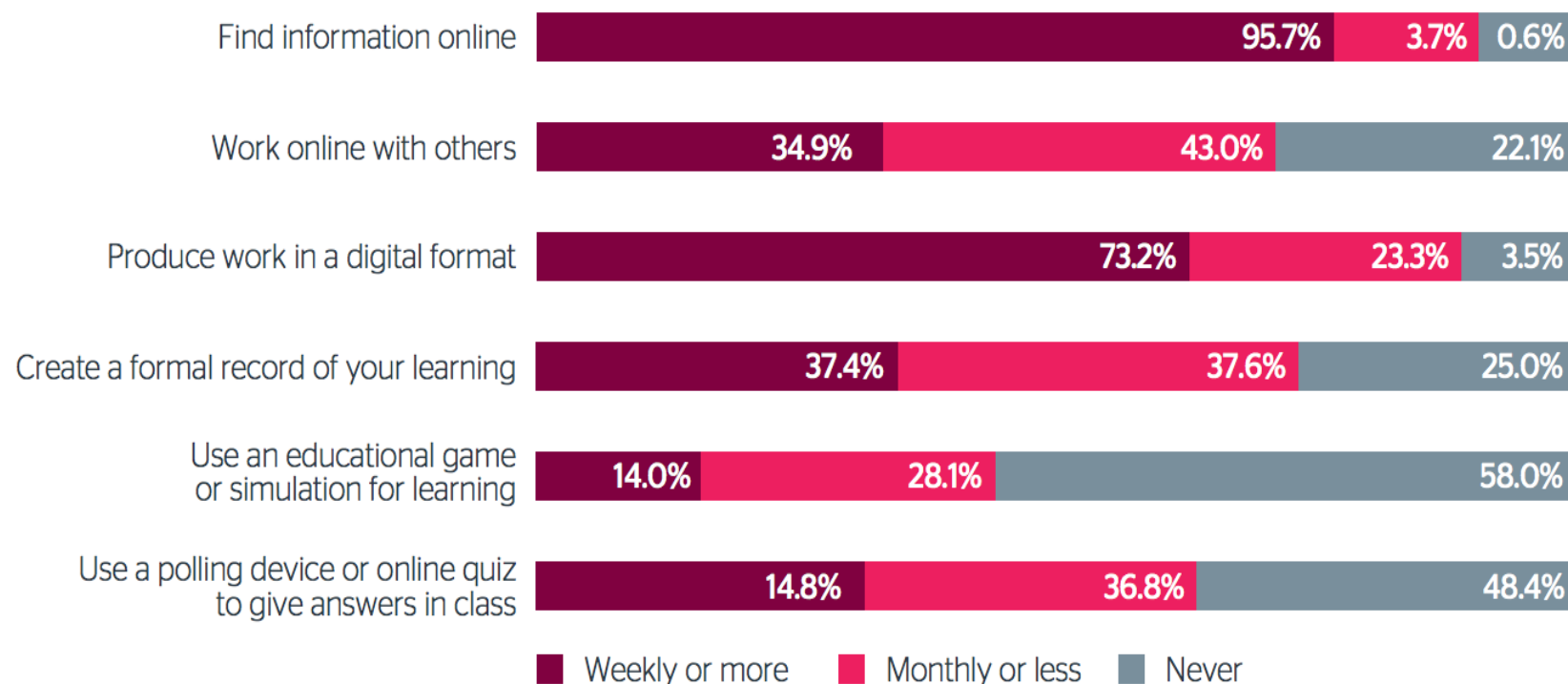
Using digital technologies in innovative or creative ways

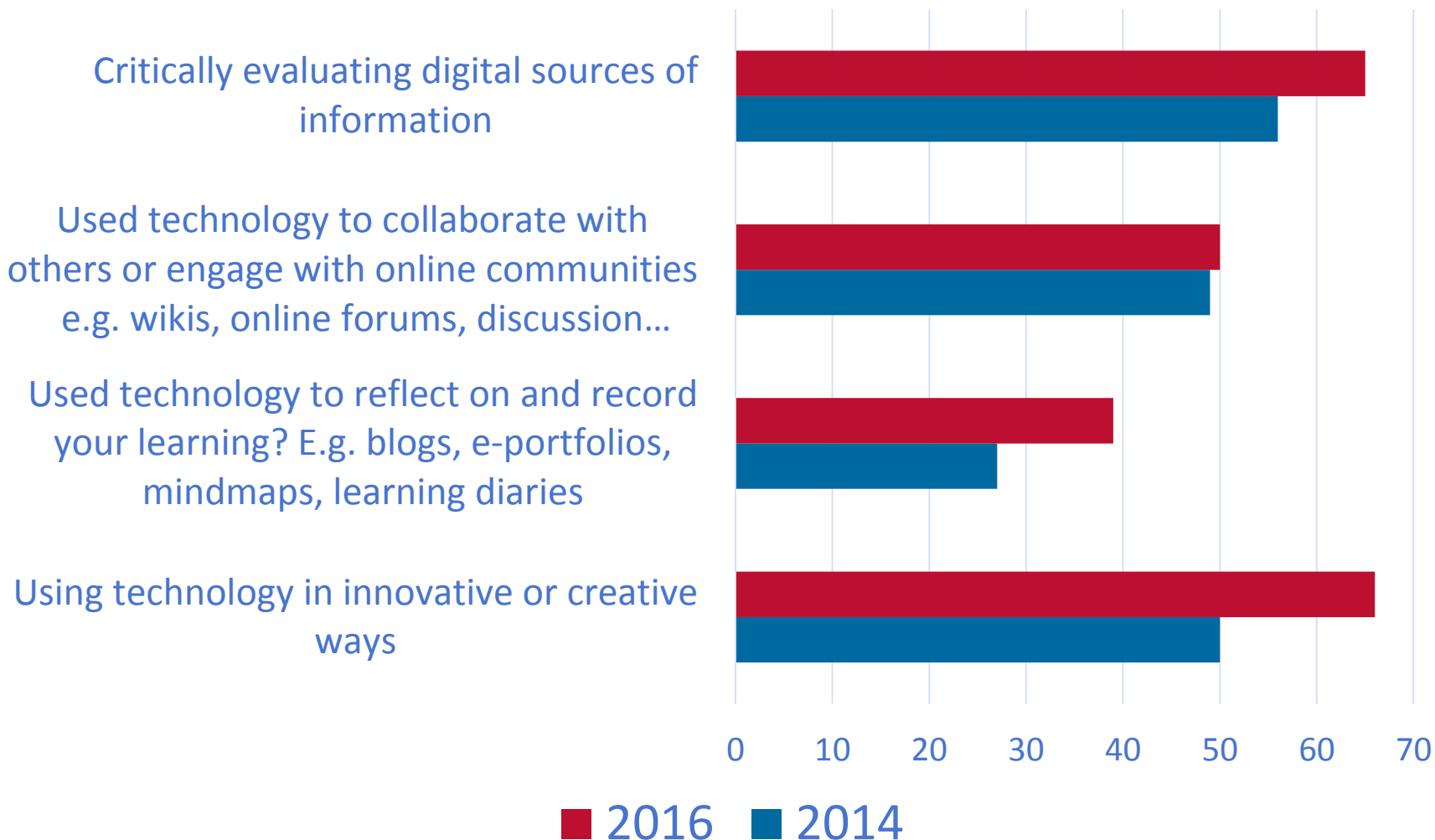


Gaining knowledge, skills and qualification that will help me have a fulfilling car



Figure 3. The percentage of HE learners who said that during their course they carried out the following digital activities either weekly or more, monthly or less, or never





% responding 'very much &' quite a bit' or 'very often' & 'often'

What has been the most useful examples of technology-based learning that you've experienced so far in your university course?' 'Please explain why these were particularly helpful/useful'.

1. Organizing and managing the logistics of studying (46.9% of respondents).
2. Flexibility of place and location (32.7%)
3. Time-saving (30.6%)
4. Reviewing, replaying and revising (27.9%)
5. **Researching information (27.9%)**
6. Supporting basic tasks (26.4%)
7. Communicating and collaborating (16.8%)
8. Augmenting university materials (14.6.%)
9. Seeing information in different ways (11.7%)
10. Cost saving (4.4%)

All the questions relate to time spent in activities as part of your academic studies.

How many hours did you spend working on the following activities?

Description of activities

Using technology to collaborate with others or engage with online communities e.g. wikis, online forums, discussion boards, social media.

Please give us more details on any activities you participated in on this day that relate to:

- using technology to collaborate with others or engage with online communities;
- using technology to reflect on and record your learning;

Which modules were these activities related to?

Where possible give module codes.

Your answer

Using technology to reflect on and record your learning e.g. blogs, e-portfolios, mindmaps, learning diaries

Please give a description of these activities.

What were you doing? Who else was there? How did you feel about it?

Your answer

54 log entries collected from 7 students over 2 weeks.

- discussing essays with friends on Facebook
- browsing forums
- editing a group essay with Google docs
- participating in group work remotely
- discussing groupwork on WhatsApp,
- writing reflective assignment in Word
- audio recording a lecture
- making a presentation in google slides
- using Word as a planning tool to draft an essay
- using Pinterest to see how to present work



@LearningGains

“Used Google Docs to finish up a conference position paper with the coursework group. I was able to do it from home, which was great because I didn't have to go and meet the group for it.

“I spent a lot of time on different forums learning about things that aren't related to my studies.

“I used Pinterest to look at architectural work to see how I could lay out my work. I used online communication to talk to my friend about what we have to do for the crit coming up friday.” (Beta)

“For our research studies module we have to design a questionnaire on google forms. We made a WhatsApp group to talk about it.” (Alpha)

What do we know so far?

Digital literacy as a graduate attribute

“The functional access, skills and practices necessary to become a confident, agile adopter of a range of technologies for personal, academic and professional use.”

Oxford Brookes University Strategy for Enhancing the Student Experience, 2010

Digital literacy frameworks

EIGHT ESSENTIAL ELEMENTS OF DIGITAL LITERACIES



Importance of this at university?

Using digital technologies in innovative or creative ways

Not at all	193 (16.2%)
A little	359 (30.2%)
Quite	362 (30.5%)
Very	274 (23.1%)

Gaining knowledge, skills and qualification that will help me have a fulfilling car

Not at all	6 (0.5%)
A little	14 (1.2%)
Quite	117 (9.8%)
Very	1,055 (88.5%)

Digital practices

54 log entries collected from 7 students over 2 weeks.

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Learning Gains is a growth or change in knowledge, skills and abilities over time that can be linked to the desired learning outcomes or goals of the course.



Learning gain in Active Citizenship
Strategic Excellence project, led by
Mary Deane



@LearningGains



Research questions

1. How do students and alumni understand and interpret the learning gains they experience?
2. How do students understand and interpret measures of learning gain currently in use?
3. To what extent can these two be reconciled?
4. What is the contribution of learning gains to employability/work readiness?



@LearningGains

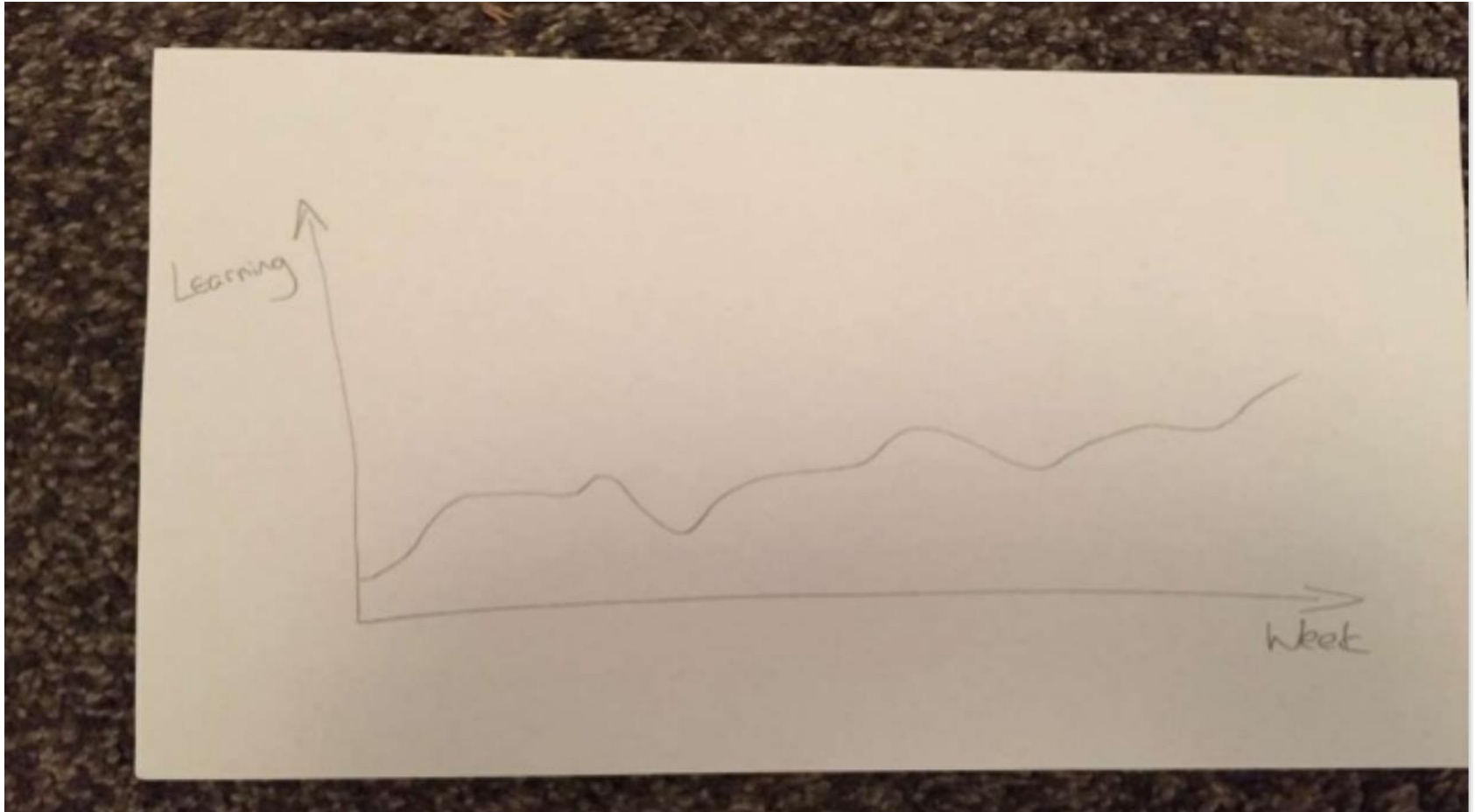


Methodology and participants

Semi-structured interviews with 19 OU learners
12 Surrey students and 12 Brookes alumni.

- Student perception of gain and progress
- Cognitive, behavioural and affective change
- Relationship between grades and progress
- Study expectations
- **Graduate attributes and employability**
- Work relevancy and readiness

Turning Points



Turning points / Pivot moments

What

Goal setting

Critical self-awareness

Formative feedback

Independence

Where

Level of study

Learning design and sequence

Ownership of Learning

Work-Life

No gain

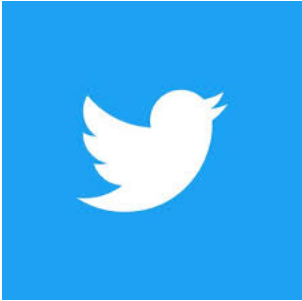
IT – didn't use it too much. Did essays. One sociology module had a lot of statistics but I couldn't really grasp it. (A3)



Digital and information literacy, kind of and kind of not, because I've always been quite good in that sort of area. So I wouldn't say it's something that Uni particularly helped me build upon, because I think I was already at a decent level with it anyway. (A10)

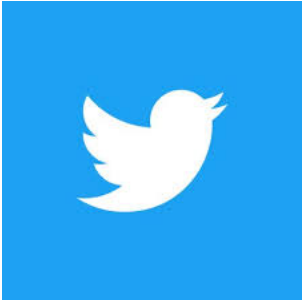


Some gain

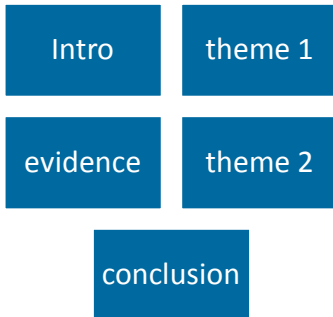


But it sort of made me go out of my way to actually look things up that I probably wouldn't have otherwise. (A4)

Some gain

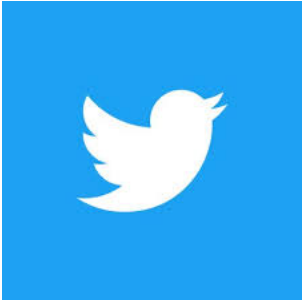


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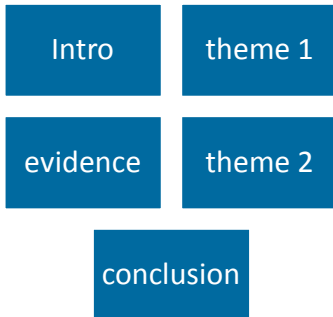


I don't think I ever really used the internet to what it was capable of prior to education (A6)

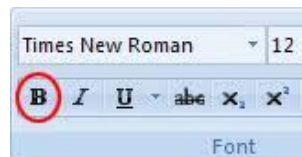
Some gain



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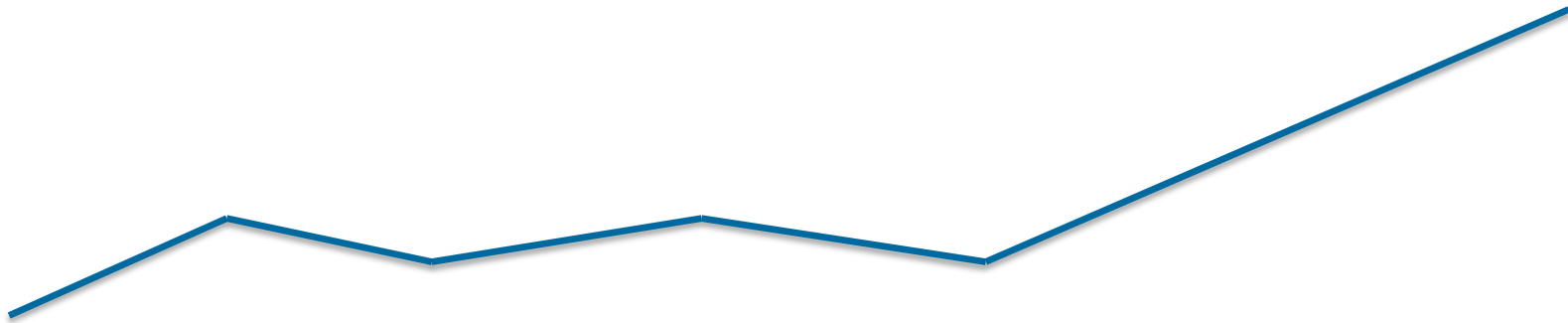


previously I don't really know how to use Microsoft Word to actually make something, actually pick out the format or something (A9)

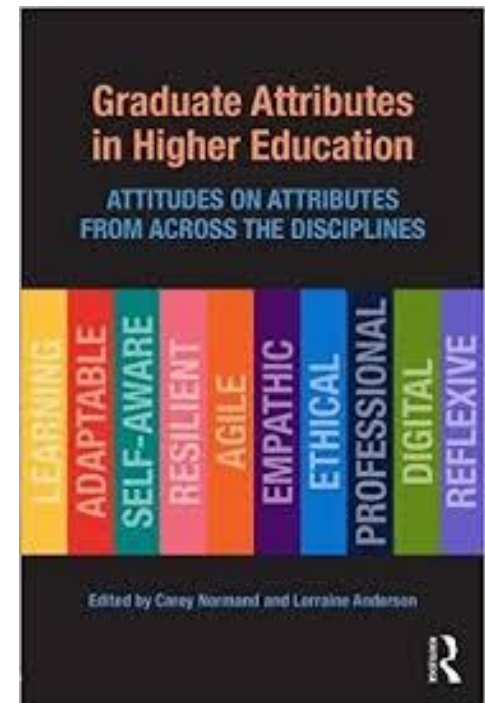
they said that we need a business plan and they didn't care how you presented it or anything like that so long as it convinced them to invest.

that was so helpful being able to express my coursework in the way that I want to and the way that I think a real live situation would want to see it.

And in the end I used a design software programme to create the PB and I use that now every single day in my job. I've got the whole company using this design tool (A5)



“Working with students to develop and take ownership of their attributes is the way to underpin an effective learning experience that travel beyond simple acknowledgement of a listed attribute.” (p. 15)



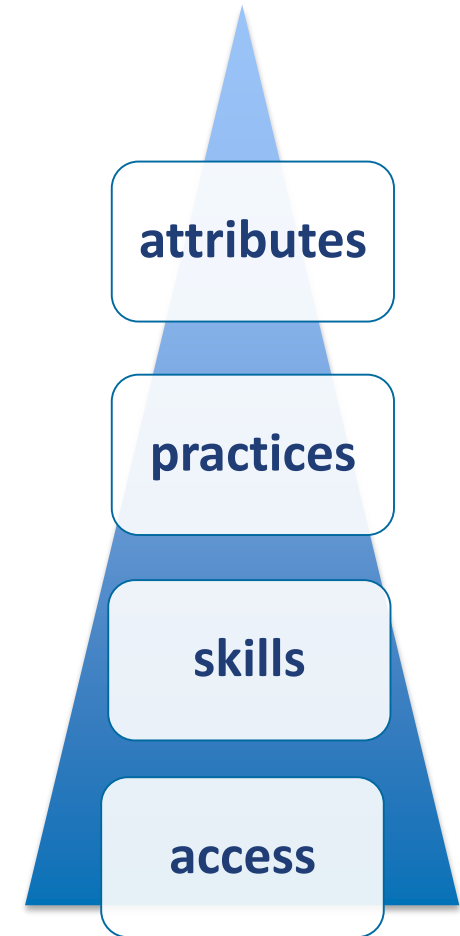
Carey Normand &
Lorraine Anderson
(eds), 2017

1. Set expectations of what digital literacies learners need to develop and why.
2. Check with students what they are actually doing and provide feedback
3. Give students space to develop personalised uses of technology in innovative and creative ways
4. Share ideas for developing digital practices and attributes through curricular **and** co-curricular activities.



What might this look like?

- Tackle an issue of professional relevance through a live project
- Produce and publish a digital artefact
- Audit and map the development of context specific discipline practices
- An accessible, inclusive curriculum with ongoing assessment of skills.



ABC Learning Gains project at <https://abclearninggains.com/>

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<http://digitalstudent.jiscinvolve.org>