

Universal design for learning: the importance of offline options for online learners

Rebecca Ferguson, The Open University



**FUTURELEARN ACADEMIC NETWORK
UNIVERSITY OF BATH
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Arguments for online only

- Printable versions of course materials are time-consuming and expensive to produce – FutureLearn does not have an automatic download option.
- Presenting courses on FutureLearn opens them up to students around the world, making them far more accessible than VLE courses.
- Printable versions must include the same information as online materials. This limits opportunities to update course materials because printable versions must be updated too. Students and staff benefit from flexibility.
- In today's world (especially in the wake of the pandemic), work and study have moved online, so the ability to work and learn online is not only an important study skill but also an important employability skill.
- We are an online university and students expect to study online.
- We have to be prepared to leave outdated technologies behind, just as we left cassettes, videos, and CDs behind.

Digital first

Delivering a digital education

25 November 2019

Sunderland University has an ambition to become a true digital first university. They're taking staff and students on a

Digital First at Ohio State

New teaching tools for high-tech times



Close the digital divide to enable a 'digital first' FE sector post-Covid – argues new eBook

Pearson's Digital-First Strategy Will Change How Students Get Textbooks



Bill Rosenblatt Contributor

Media

President, GiantSteps Media Technology Strategies



GETTY

Pearson, the world's largest textbook publisher, announced last week that it is moving from a traditional to a "digital first" publishing model. This development upends several traditions that are more than a century old. It will bring about a digital transformation in textbook publishing that has been in the works for a long time and will fundamentally change the way college students get their educational materials.

Digital by default

Vietnam university to be first in region to go digital-only

British University Vietnam (BUV) is soon to become the first higher education institution in Vietnam to provide its students with only digital learning materials



Our **Digital Strategy** and **Digital Service Standards** are updated annually to reflect our strategic vision and pledge to our customers. We strive to put the user first in the design and delivery of high quality products and services that are digital by default.

Our ambitions at the beginning of our second hundred years are expressed in our family of 'discovery-led and discovery-enabled' strategies – of which our new digital strategy, importantly, is one. I started in this role, a new one for the university, at the beginning of 2017, leading the work to help the organisation become 'digital by default', something that would be transformative for learning, teaching and research.

Dr Ross Parry, University of Leicester, 2018

Digital by design



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Making 'Digital by Design' work
Report on an interactive workshop at the Open University in 2018
Grahame Danby, Diane Butler and Clem Herman

Universal design for learning

Universal Design for Learning Guidelines

Visit the UDL Guidelines 

AFFECTIVE NETWORKS:
THE **WHY** OF LEARNING



Engagement

For purposeful, motivated learners, stimulate interest and motivation for learning.

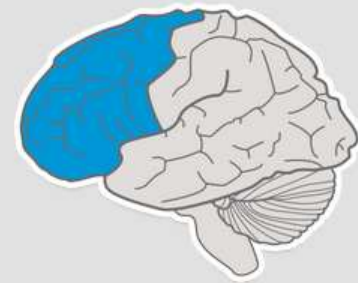
RECOGNITION NETWORKS:
THE **WHAT** OF LEARNING



Representation

For resourceful, knowledgeable learners, present information and content in different ways.

STRATEGIC NETWORKS:
THE **HOW** OF LEARNING



Action & Expression

For strategic, goal-directed learners, differentiate the ways that students can express what they know.

Options for perception

GUIDELINE 1

Provide options for

Perception

Learning is impossible if information is imperceptible to the learner, and difficult when information is presented in formats that require extraordinary effort or assistance. To reduce barriers to learning, **it is important to ensure that key information is equally perceptible to all learners** by: **1) providing the same information through different modalities** (e.g., through vision, hearing, or touch); **2) providing information in a format that will allow for adjustability by the user** (e.g., text that can be enlarged, sounds that can be amplified). Such multiple representations not only ensure that information is accessible to learners with particular sensory and perceptual disabilities, but also easier to access and comprehend for many others.

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Research design

RQ: What are the benefits to students of offering downloadable versions of online study materials and supporting offline study?

Datasets

Student postings in course discussion
(N=17,158)

Post-course student survey
(respondents = 30)

Experience of 100 postgraduate learners on an online course run by The Open University on the FutureLearn platform.
46 new to OU – ten started OU study in 1998 or earlier.

Limited access to online materials

6 students planned to study while travelling / on holiday but lacked Internet in taxis, trains, planes and holiday homes.

4 students planned to study at work but Internet access was limited or restricted by firewalls and security regulations.

Some locations – for example, parts of **Wales** and **Cornwall** – receive no Internet signal.

Some buildings and rooms receive no Internet – particularly those with thick walls.

Online is **expensive** on mobile devices and may be limited for those on contracts, particularly pay-as-you-go contracts.

Students encountered technical problems, inconsistent coverage from providers, and being bumped off the Internet when others in the building went online.

Need for offline materials

Some students found long files and papers easier to read on an ebook reader.

Offline files can be converted into audio files so it is possible to study in different locations.

Offline files can be highlighted, annotated or integrated with comments to create a learning journal.

Offline materials are searchable. FutureLearn's lack of a search facility is a problem on an eight-month course.

Some students want to make a clear distinction between working online and studying offline.

Need for printable materials

Some students favour offline reading or simply prefer to learn from print materials.

Text on a mobile device may be too small to read, and some students struggle to read text on a screen.

Limited range of devices – printed materials are accessible when away from a desktop computer.

Printable materials offer flexibility. They can be accessed before the course goes live (there is no early access on FutureLearn courses). Self-regulating students may need to start work early or move ahead of the cohort.

Some students simply want to take a break from technology.

Use of transcripts

14 students described ways in which they had combined transcripts and videos – using transcripts as an additional resource rather than a replacement for video.

Transcripts provide a map of the video resource, enabling students to return to relevant or important sections.

Transcripts support understanding. Unfamiliar words can be identified and checked or the whole presentation can be run through Google Translate.

Transcripts can be used in contexts when sound cannot be turned up, for example on a bus or train.

Transcripts can be accessed when online access is not possible due to patchy Internet coverage, bandwidth or data cost.

Context

Need for and use of different formats varies according to context.

Daily changes such as commuting.

Periodic changes such as holidays and work trips.

Planned changes such as a house move or change of Internet provider.

Unexpected changes such as broken technology and hospital stays.

Context changes many times during an eight-month course.

Affordances

Different formats have different affordances for learning.

Learning design Students approached assimilative and creative tasks in different ways, so their need for offline and print varied.

Cognitive opportunities Students associated physical and digital resources with different ways of thinking and studying.

Emotional response Students had different emotional responses to online and print materials, which influenced study.

Researchers



slideshare.net/R3beccaF

twitter.com/laperryman

twitter.com/R3beccaF

twitter.com/simonjball

