The Digital Education Challenge for Wales

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Cardiff Metropolitan University

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Terminological Diversions

"Learning technology is the broad range of communication, information and related technologies that can be used to support learning, teaching, and assessment."

FELTAG Recommendations (October 2013)



An Educational Challenge

What does being "digitally competent" mean for a 4/8/12/16 year old?





Press release

Government plans to make the UK one of the most digitally-skilled nations

From: Department for Culture, Media & Sport, The Rt Hon Karen Bradley MP,

The Rt Hon Robert Halfon MP and Department for Education

First published: 1 October 2016

Part of: Further education and training

Government has announced plans to make training in basic digital skills free for adults lacking relevant qualifications.

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Publications

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Committee hears from some of the UK's leading technology specialists Lords ask whether a digital skills deficit is harming UK plc

Committee to question Microsoft, Google and technology experts



Watch Baroness Morgan of Huyton, Chair, talk about the role of the Committee



We've published a report calling on the Govt to improve training in #DigitalSkills goo.gl/CrnKZH

"The evidence is clear that the UK faces a digital skills crisis." - page 3





HOUSE OF COMMONS





READ

OUR

REPORT

@CommonsSTC



We want everyone to be able to enjoy the benefits of digital technologies.

Digital technologies and online services have changed how we live and play a big part in our lives. By ensuring that everyone in Wales has access to digital technologies, we are working to achieve a smarter, better connected society and economy.

This is not just about improving physical access to the internet. It is also about:

- ensuring everyone has the skills to use digital technology
- improving online public services
- providing faster internet connectivity
- · improving mobile coverage









Skills for the Jobs of Today and Tomorrow

Posted: 24/04/2016 15:50 BST Updated: 24/04/2016 15:50 BST

Technology is changing what we think of the world around us, the promise of self-driving capability means that a car will become a computer on wheels, and you could define a drone as a computer that flies.

We are in the midst of a revolution and rapidly changing technology provides both an opportunity and a challenge for those in education. But it is difficult trying to work out what skills and understanding our children need to acquire so they can thrive in the world and the labour market of the future.

This is why we are, today, launching a five-point plan to support coding and digital literacy skills. We want Wales to meet the aspiration set for us by a group of industry experts to become 'an Agile-Digital Nation'. I want Wales to be renowned for producing talented tech innovators, world class software engineers and successful entrepreneurs capable of fuelling high skilled digital industry growth.

Of course, not everyone will become a coder when they leave school, but everyone will need basic digital skills in the same way they need literacy and numeracy. This means exposing young people to skills such as coding at an early age in school because that knowledge is going to play a critical role in their lives - whatever career they go into.

But Not Just About Jobs

"...the inability to access or use ICT has effectively become a barrier to social integration and personal development."

DG Information Society & Media Group, European Commission (2008)



Thus: the Societal Challenge

What does being "digitally competent" mean for a 5/25/45/65/85 year old?







home > science

Mathematics

How algorithms rule the world

The NSA revelations highlight the role sophisticated algorithms play in sifting through masses of data. But more surprising is their widespread use in our everyday lives. So should we be more wary of their power?

Leo Hickman

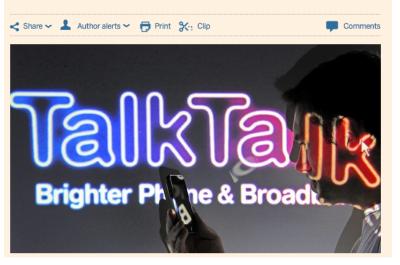
Monday 1 July 2013 18.32 BST





TalkTalk warns cyber attack costs could rise to £35m

Daniel Thomas, Telecoms Correspondent



Are your medical records in danger?



③ 28 January 2014 | Health | ■



Householders across England have started receiving leaflets about a new NHS scheme called Care.data.

More from Nick

Netizen Report: Bangladesh Bans Facebook and Chat Apps on 'Security Grounds'

Posted 20 November 2015 4:43 GMT







Surveillance

'Extreme surveillance' becomes UK law with barely a whimper

Investigatory Powers Act legalises range of tools for snooping and hacking by the security services

Ewen MacAskill

Saturday 19 November 2016 07.00 GMT









The Investigatory Powers Act was passed on Thursday. Photograph: Philip Toscano/PA

Internet

UK to censor online videos of 'non-conventional' sex acts

Campaigners label bill targeted at online pornography a 'prurient' intervention that will take Britain's censorship regime back to pre-internet era









□ The proposal would force internet service providers to block sites hosting content that would not be certified for commercial DVD sale by the British Board of Film Classification. Photograph: Dominic Lipinski/PA

Web users in the UK will be banned from accessing websites portraying a range of non-conventional sexual acts, under a little discussed clause to a government bill currently going through parliament.

Digital media

Fake news clampdown: Google gives €150,000 to fact-checking projects

Funding comes amid debate about role of the search engine in spreading bogus content some say influenced US election





Google has come under criticism along with Facebook for their part in the spread of fake news. Photograph: Josh Edelson/AFP/Getty Images

Google has given €150,000 to three UK organisations working on fact-checking projects to help journalists and the public avoid falling for fake stories and bogus claims.



Speaker's Commission on Digital Democracy



Speaker's Commission on Digital Democracy

Set up by the Speaker, the Commission investigated the opportunities digital technology can bring for parliamentary democracy in the UK. It reported on 26 January 2015.

Progress update: anniversary meeting

Read our report

Digital Democracy Debate in Parliament





digidemocracyuk Digital Democracy RT @AMWeerasinghe: 2016 World #EParliament report is out with praise for @digidemocracyuk ht @IPUparliament https://t.co/5k5iTP9nnd https...

25 days ago

digidemocracyuk Digital Democracy @EeHRN Good afternoon, @estrangeirada did the twitter conversation analysis -is this what you are referring to? 25 days ago in reply to EeHRN

View all tweets »



Welsh Government Open Data Plan



Redesigning public services: The strategic importance of digital

13 Sep 2016 - 9:00am - 29 Sep 2016 - 1:30pm

This seminar will examine how public services develop the right skills and culture to move from analogue to digital services.

The seminar will be run in partnership with Good Practice Wales, Welsh Local Government Association, Welsh Government, Wales Council for Voluntary Action and Y Lab.



Key Stages 2–3

Information and communication technology

in the National Curriculum for Wales



Co-Chairs: Stuart Arthur
Dr Tom Crick

Dr Tom Crick Janet Hayward

Successful Futures

Independent Review of Curriculum and Assessment Arrangements in Wales

Professor Graham Donaldson CB February 2015

Education Technology Action Group

Our Reflections

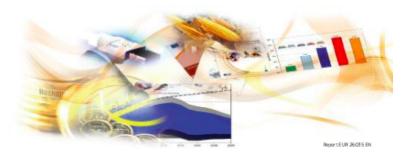
FURTHER EDUCATION LEARNING TECHNOLOGY ACTION GROUP

FELTAG

DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe.

Author: Anusca Ferrari Editors: Yves Punie and Barbara N. Brečko

2013





Literature Review on the Impact of Digital Technology on Learning and Teaching



CHILDREN, EDUCATION AND SKILLS





Beyond the Classroom:

A New Digital Education for Young Australians in the 21st Century

New plans to embed digital competence into curriculum

This press release was published under the 2011 - 2016 Welsh government

A new framework that will introduce digital competence across the curriculum to help pupils of all ages widen and develop their digital skills will be available to schools by September 2016, Education Minister, Huw Lewis has announced.

Context of the DCF

- Identifying the core digital skills that all learners need to have, now and in the future;
- Clear adaptable framework for learning and progression, supporting flexibility and creativity;
- Driven by pedagogy, based on enduring principles, rather than specific/transient tools and technologies;
- Promoting why digital competencies matters: educationally, societally, economically.
- Clear alignment to the four purposes of the new Curriculum for Wales



Digital Competence Framework

Citizenship

- Identify, Image & Reputation
- Health & Wellbeing
- Digital Rights, Licensing & Ownership
- Online Behaviour & Cyberbulling

Interacting & Collaborating

- Communication
- Collaboration
- Storing & Sharing

Producing

- Planning, Sourcing & Searching
- Creating
- Evaluating & Improving

Data & Computational Thinking

- Problem Solving & Modelling
- Data & Information Literacy



3 January 2017

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- Government cannot, and should not, provide all the answers;
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- Horizon scanning to stay current;
- Funding: investment in infrastructure is crucial;
- Workforce capability: CPD and upskilling;
- Changing wider perceptions of "digital" and "tech" ...
- ...and fostering a digital culture.

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- ...and fostering a digital culture.
- Not being risk-averse (innovate, fail early/often);
- Develop new communities of practice;
- What does excellent/outstanding practice look like (and how best to share/embed it)?

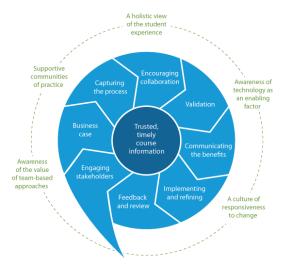
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- Student-centered: what is the digital learning experience going to look like?



Digital Student: Further education and skills project

Final Report

e.g. Curriculum design



https://www.jisc.ac.uk/guides/using-technology-to-improve-curriculum-design

Share and Enjoy

For more information about the DCF:

learning.gov.wales/resources/browse-all/
digital-competence-framework/?lang=en



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