

Policy Recommendations – England



A Transnational Appraisal of
Virtual School and College Provision

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Abstract	This document reviews the policy opportunities and challenges raised by virtual education for the 14-21 age range and presents policy recommendations to policymakers, leaders and industry in England. This should be considered in the context of the overall Europe Policy Recommendations Report D3.9. Separate supplementary reports will provide policy recommendations for Estonia, Finland and Portugal.
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1. Executive Summary

With regards to the findings of the VISCED Research Project, this paper suggests that policymakers and leaders in the English education system should look to the following areas:

- Ensuring that existing regulatory, accountability and support frameworks do not disadvantage virtual schools or colleges but at the same time should subject them to the same levels of inspection and accountability as traditional schools.
- Clarifying the position with regards to the ownership of qualifications achieved by students through virtual schooling.
- Supporting teachers in the use of the rich data generated through online and virtual schooling.
- Developing parents, carers, guardians and family as home-educator support for online Learners and developing appropriate recognition and pathways for mentors.
- Securing value for money through exploring the use of Open Educational Resources and encouraging collaborative purchasing between virtual institutions.
- Enhancing existing education strategies through exploiting the potential of virtual schooling to reach out to the excluded and marginalised, improve the quality of specialist curriculum areas such as Science, Technology, Engineering and Mathematics (STEM) and Modern Foreign Languages (MFL), extend the curriculum offer through creating viable cohorts for niche subjects.

2. The brief

This is Deliverable 3.9.A of Work Package 3. The Deliverable Title is: *Policy Recommendations - Final: England*.

The Work Package Title is: *Analysis and Recommendations*.

Deliverable 3.9 is summarised in the work plan as follows:

This report is the final Deliverable from subtask 3.4. It again has P2 Sero as lead author, with help from P10 TIEKE and P7 EITF . The lead author person will again be Barry Phillips,, formerly at the Ministry (DfES) in the UK. It is based on updating the earlier Deliverable (D.3.5) in the light of new input and discussion with stakeholders.

Partners discussed the format of this final report and it was decided that it would be clearest if the over-arching report on Europe to the Commission was presented as a single document, with separate reports for England, Estonia and Finland, the three countries specified for individual recommendations in the work plan. Following the first year of research, it was also decided to produce an additional report for Portugal, which has had input from MENON, the overall Work Package leader.

The four supplementary reports, of which this is one, are numbered D.3.9.A (England), D.3.9.B (Estonia), D.3.9.C (Finland) and D.3.9.D (Portugal).

3. The Aims and objectives of this document

This document is intended to inform and advise the policies of the Department For Education, policy makers and influencers, industry, leaders and practitioners with regards to the potential development, expansion and sustainability of virtual schools and colleges in the English education system. The intention is not to *promote* virtual schooling but simply - *where it is identified as helping meet the education aims and objectives of the Department for Education* – to help construct the conditions where virtual schooling can develop and flourish. In order to do this we have drawn on lessons from around the world to identify ways in which virtual schooling has the potential to enhance or damage current education provision and to predict and pre-empt possible problems which may inhibit and disadvantage virtual schools and colleges.

Teacher training is dealt with as a discrete subject elsewhere in the VISCED project and a separate set of policy recommendations are published under this Work Package (WP3). There are, however, some underlying policy principles which we consider to be key considerations and have thus recorded them in this section.

4. England: Background

4.1 The Landscape of ICT in Education

The period 2010-2012, in the wake of a change of government in the UK, has seen significant reshaping of the education landscape in England. Explicit policy with regards to technology in education has been rare with the new administration focusing instead on its stated priorities of behaviour, autonomy, reducing bureaucracy, raising teaching standards and comprehensive reviews of the curriculum and the assessment regime. Given, these ongoing curriculum and assessment reviews, and uncertainty about the subsequent findings, we have chosen not to address (explicitly) curriculum and assessment in the following policy recommendations.

Secondary schools and Further Education Colleges in England are generally considered to have good ICT infrastructures after a long period of centrally driven (and often mandated) investment. In 2008 Computer:Pupil ratios were said to be roughly 4:1 in Secondary Schools and the 2009 Harnessing Technology Schools Survey suggested that this was still improving

at that point in time. Schools were also beginning to wrestle with the difficulties of allowing user-owned devices onto their networks and to exploit the potential benefits (particularly in terms of addressing the ‘refresh’ funding burden). In 2009 approximately three quarters of secondary schools had learning platforms and over 70% of staff reported that they were able to access their school learning platform remotely. Again, the trend was that this was improving with higher levels predicted.

The investment in colleges was not as high as in schools but it had still been significant and in 2008 approximately 90% of colleges reported having a ‘virtual learning environment’. The 2008-09 Harnessing Technology FE College Survey reported that almost 70% of users could access “most college systems/ support externally”.

“In colleges, infrastructure, the supply of hardware and software, access to technology for both staff and learners, and access to support for technology use has improved considerably in the past few years.”

All schools and colleges (with a very few exceptions) have high speed connection to the Internet.

In spite of the high levels of access to ICT at school, college and at home, virtual schools and colleges are still relatively uncommon – although the VISCED wiki now lists over twenty virtual school and college *entities* in the UK. Some are not *pure* virtual schools or colleges but this may be balanced by the possibility that, despite rigorous VISCED research, some may yet to be identified. The difficulty finding these schools throws up a number of very disparate policy issues. However, the fact that some notable initiatives such as Notschool have their roots in the UK as does of course, in HE, the Open University – suggests that there is not necessarily an inherent aversion.

One note of caution concerns the levels of home access in the UK and (thus, by implication) England. The e-Learning Foundation estimates that there are still approximately 800,000 “of the most disadvantaged” children in the UK with no home access. This represents some 10% of the entire school population.

A second note of caution concerns fears that despite the current Government’s stated protection of revenue funding for schools there is likely to be a reduction in capital which some have estimated at being as much as 80%. Many predict that spending on ICT will be one of the first casualties when leaders prioritise capital spending plans. Others suggest that the increased autonomy will allow schools and colleges to reshape existing ICT commitments and may well drive both savings and innovation.

4.2 The Policy Context

The 2010 White Paper, *The Importance Of Teaching* “outlines the steps necessary to enact such whole-system reform in England”. The Secretary Of State confirms the imperative for “radical” change:

“It is only through reforming education that we can allow every child the chance to take their full and equal share in citizenship, shaping their own destiny, and becoming masters of their own fate.”

There is considerable importance put upon, and concern about, England’s performance in the PISA tests. In their foreword to the White Paper the Prime Minister and Deputy Prime Minister state the Government’s intention to learn the lessons of other countries’ success. The Secretary Of State listed a number of countries and regions from which he and his Department have drawn inspiration including Alberta, Singapore, Finland, Hong Kong, South Korea and the US - both nationally and at state/district level.

“The only way we can catch up, and have the world-class schools our children deserve, is by learning the lessons of other countries’ success.”

As recently as December 2012, speaking at Microsoft’s UK base, the junior Education Minister Elizabeth Truss responded to the publication of the 2011, quadrennial Trends in International Maths and Science Study (TIMSS) study (in which Hong-Kong, Singapore and South Korea were amongst the leaders) by saying that England was following the lead of “the world’s most successful education states”.

The White Paper repeatedly stresses the importance of devolving power to school level and also of addressing the “ yawning gap ” between the educational achievement (and subsequent life-chances) of rich and poor students.

Whilst, as noted above, there has been relatively little explicit advice or overt policy with regards to technology in education the Secretary of State and Ministers have publicly acknowledged the need not only for the curriculum to evolve to meet the demands of the 21st century but also the potential of technology to support the transformation of the education system. In June 2011 speaking to the Royal Society the Secretary of State said

“In addition to the debate over what is taught, and the issue of who does the teaching, we also need to think about how the teaching takes place. So as well as reviewing our

curriculum and strengthening our workforce, we need to look at the way the very technological innovations we are racing to keep up with can help us along the way. We need to change curricula, tests and teaching to keep up with technology, and technology itself is changing curricula, tests, and teaching.”

“ItunesU now gives everybody with an internet connection access to the world’s best educational content. Innovations such as the Khan Academy are putting high quality lessons on the web.”

“The Department for Education is working with the Li Ka Shing Foundation and the highly respected Stanford Research Institute on a pilot programme to use computer programmes to teach maths. We have not developed the programme - we are just helping them run a pilot. Stanford say it is one of the most successful educational projects they have seen.”

“These developments are only beginning. They must develop on the ground - Whitehall must enable these innovations but not seek to micromanage them. The new environment of teaching schools will be a fertile ecosystem for experimenting and spreading successful ideas rapidly through the system.”

In 2012 the Government focused on what has widely been viewed as an unsatisfactory and unsustainable ICT curriculum, announcing plans to drop the prescribed curriculum in favour of new courses of Computer Science developed by a range of partners from industry, industry bodies, Universities and other educationalists. It was then announced that this would be supported by the offer of so called ‘golden-handshakes’ intended to attract the very best candidates to teach the new courses. This may not initially appear to be of particular relevance to virtual schooling but a later statement by the Secretary of State suggesting that Computer Sciences “...could be added to the English Baccalaureate (EBacc) list of key academic subjects that teenagers are encouraged to study at GCSE” may have implications if virtual schools adopt this qualification. Some practitioners and commentators have also expressed a fear that the move from ‘ICT’ to ‘Computer Studies’ may herald a focus on ‘programming’ over general digital skills and more acutely those critical analytical skills for ICT required for the safe and effective selection, and use, of appropriate technologies.

In parallel with the announcement concerning the review of ICT as a curriculum subject, the Government also announced funding for Teaching Schools to create collaborative networks to further their use of technology, support for the use of technologies to create new and

more engaging curriculum materials, and a focus on improving Initial Teacher Training and Continuing Professional Development for the use of educational technology.

Particular priorities for this Government remain:

- improving the provision for excluded pupils;
- addressing the large numbers of students leaving school with poor standards of literacy and numeracy;
- increasing the numbers of students gaining high-level mathematics, science and engineering qualifications.

4.3 Increasing autonomy, devolving power, expanding choice

A bold theme which permeates all of the current Governments education policies is the acceleration and expansion of the devolution of power to individual schools and communities. The Free Schools and Academy programmes have grown rapidly and, as of, December 2012 there are now over 2,500 Academies and approximately 80 Free Schools. Virtual Schools and Colleges present the potential to introduce another element which might further enrich the education landscape and increase parental and student choice. However, they should be greeted with neither favour nor fear, being judged solely on their ability to contribute to the country's educational aims and objectives - particularly where they offer potential solutions to *specific* problems which trouble 'physical' schools – and improved learning experiences and outcomes for students. The likelihood of **virtual** free schools and academies appearing on the English educational landscape would appear to be confirmed by the interest shown by a number of major education providers with a background in this area – or at the very least, links to others with backgrounds in the area. Whilst we still await the first of these it is particularly notable that K12 are heavily involved in an educational trust¹ which now runs two English schools.

It is noteworthy that almost all of the countries and regions identified by the Government as being leaders in education have supported the development of virtual schools or colleges as important ingredients in their broader education systems. These vary hugely from the national Cyber Home Learning System in South Korea to Cyber Charter Schools in the US.

¹ The Erudition Trust (<http://www.eruditionschoolstrust.co.uk/who-we-are/>)
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Finally, it now appears that there *may* be some support at senior levels of the Government for expanding the provision of, and access to, Open Educational Resources (OER). As yet, however, there is little tangible beyond a commitment to Open Access for publicly funded academic research and expressions of admiration for initiatives such as the Khan Academy.

5. Policy Recommendations

5.1 Regulatory

5.1.1 Existing regulatory frameworks

The Departments of Education and Business Innovation and Skills should review the interface between the virtual schools' and colleges modes of operation and their own existing regulatory frameworks to ensure that *where virtual schools and colleges help the nation achieve its educational, economic and social goals* there are no unnecessary bureaucratic impediments² which might inhibit their development and sustainability. Virtual schools and colleges should be subject to the same degrees of rigour as physical schools and receive the same levels of support.

5.1.2 Support frameworks

The Departments' position with regards to virtual initiatives and the responsibilities for supporting their development should be clarified. Virtual Free Schools and Academies would presumably be supported directly by the Department of Education (and the New Schools Network, Young Peoples Learning Agency etc) and maintained virtual schools should expect to receive the same support from their Local Authorities as do 'physical' schools. The Education Endowment Fund should also be accessible to virtual schooling initiatives where they meet the stated objectives and criteria.

5.1.3 Accountability frameworks

The Departments of Education and Business Innovation and Skills should consider how they might bring virtual schools and colleges within a regulatory and accountability framework

² In the U.S. we have recently seen the likely unintended consequences of the "state authorization" rules, which require schools to gain approval from every state in which they have even one online student.

which protects but does not disadvantage learners - or the schools³. This need not be overly bureaucratic but should simply mirror the accountability frameworks which underpin ‘traditional’ or ‘physical’ schools.

5.1.4 Ownership of qualifications

There is a need for clarity with regards to the ‘ownership’ of qualifications achieved by students who have a physical host-school but who undertake supplementary studies at a virtual institution. The first ‘owner’ of any qualification is the student. However, virtual schools often struggle to justify their value and their funding because they are not counted in ‘official’ census of qualifications. Equally, host schools have been known to claim credit for qualifications achieved by their students at these ‘invisible’ virtual schools. The Department of Education should clarify its stance in order to preserve the integrity of qualifications data.

5.1.5 Inspection Frameworks

The Departments and Ofsted should review the current inspection paradigms to consider their appropriateness for virtual initiatives and consider the development and recognition/adoption of Success Metrics for Virtual Schools and Colleges. Some basic criteria should be applied as to legality and governance, funding and sustainability, validity of qualifications, equality of student access and experience and, of course, the quality of the teaching and learning.

5.2 Teachers and teaching support

5.2.1 Enhanced use of data

Online and virtual schooling presents teachers and institutions with the potential to harvest and analyse pupil data at a level, and of a quality, previously uncommon if not unknown. Tools and models for collation, analysis and use of this data should be developed with a

³ We have already seen legal challenges and court actions taken against some institutions, accusations of fraud by students and criticisms of the lack of regulation

“Moreover, the rapid growth of virtual schooling raises several immediate, critical questions for legislators regarding matters such as cost, funding, and quality.”

“Virtual education presents policy challenges to governments at all levels, from local school boards to the federal government. However, the challenges are particularly acute for states, because states bear responsibility for sanctioning and chartering online providers.”

<http://nepc.colorado.edu/files/NEPC-VirtSchool-1-PB-Glass-Welner.pdf>

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view to establishing English schools as global leaders. The Department of Education and its agencies should proactively support schools and teachers in exploiting the potential this presents.

5.2.2 Parents, carers, guardians and family as home-educator support

Efforts to engage parents, carers, guardians and family members should be extended to embrace the model applied by some Australian virtual schools whereby these individuals are supported to provide high-quality, home-teaching support and to achieve a recognised vocational qualification which can then improve their own employment prospects and broader life-chances.

5.3 Value for money

5.3.1 Open Educational Resources

Virtual schools and colleges, directly or indirectly (where individual student places may be purchased by the state), funded from the public purse should be encouraged and supported to seek best value for money through exploiting Open Educational Resources (OERs) and allowing any teacher/institution created content to be published under Creative Commons licences.

5.3.2 Collaborative purchasing

Similarly, schools directly or indirectly funded from the public purse should be encouraged to collaborate where possible in order that they might identify and secure economies of scale in terms of hardware, software and support.

5.4 Enhancing and embedding within existing strategies – addressing priorities

5.4.1 Inclusion: matches with policy priorities

The Department's agencies and partners should be encouraged to develop their understanding of the specific priority policy areas where virtual initiatives have demonstrated proven potential and the external sources of expertise and exemplars in the UK and abroad. These policy priorities might include the following:

- Students who are school-phobic.
- Students who are excluded/at risk of exclusion.

- Students who are geographically isolated.
- Students who are sick.
- Students who are travelling or transient.
- Students who, for any reason, are affected by curriculum gaps.
- Migrant students with English language needs.
- Students requiring credit recovery.
- Students requiring revision/acceleration.
- Students requiring support and encouragement for entrance and transition to Higher Education (particularly those from backgrounds with little history of Higher Education).
- Special curriculum groups (e.g. based on religious beliefs).
- Young offenders – particularly those in custody who can then continue education on release

5.4.2 Science, technology, Engineering and Mathematics (STEM)

It is not only in the field of inclusion where virtual schooling can support core DfE priorities. Science, Technology, Engineering and Mathematics (STEM) are widely held as drivers of economic growth and have received funding from successive Governments in efforts to spur innovation. The Department should encourage and support Policymakers and leaders to explore how virtual schooling can expand, accelerate and enhance the high-quality provision of the STEM curriculum. Higher is a source of both lessons learned and potential partners in this sphere.

5.4.3 Inclusion: matches with policy priorities

Virtual schooling can support the teaching and learning of Modern Foreign Languages at a time when this is recognised as a key priority area for England and most of its economic competitors. By bringing together geographically dispersed learners it is possible to form viable curriculum cohorts for specific levels of student and/or specific niche languages. The Department should encourage and support Policymakers and leaders to explore how virtual schooling can expand, accelerate and enhance the high-quality provision of modern foreign languages.

5.4.4 Inclusion: matches with policy priorities

As stated above (5.4.3) virtual schooling can support the formation of viable curriculum cohorts Schools are increasingly finding it difficult to offer the breadth of curriculum demanded by learners and often employers. The Department should encourage and support

Policymakers and leaders to explore how virtual schooling can expand, accelerate and enhance the high-quality provision of a broad, flexible and relevant curriculum which meets the demands of learners and employers.

6. References for Policy Recommendations

6.1 References

BBC (2012) Computer science teachers offered cash incentive

Retrieved from

<http://www.bbc.co.uk/news/education-20003327>

Becta (2009) Harnessing Technology: Annual sector survey of FE colleges 2008-09 - Final report

Retrieved from

http://dera.ioe.ac.uk/1668/2/becta_2009_fecollegesurvey_report.pdf

Cho, Yong-Sang, Kim, Jung-Won, Bae, Woo-In, Choi, Sung-Ki (Date unknown) The National Innovation Model: Korea's Cyber Home Learning System

Retrieved from

<http://english.keris.or.kr/ICSFiles/afieldfile/2009/01/09/CHLSofKorea.pdf>

DfE (2010) The Importance Of Teaching (White Paper)

Retrieved from

<https://www.education.gov.uk/publications/eOrderingDownload/CM-7980.pdf> Nov 2010

DfE (2011) Review of the National Curriculum in England

Retrieved from

<http://www.education.gov.uk/schools/teachingandlearning/curriculum/nationalcurriculum/a00201093/review-of-the-national-curriculum-in-england>

DfE (2012) Open academies and academy project in development

Retrieved from

<http://www.education.gov.uk/schools/leadership/typesofschools/academies/b00208569/open-academies>

DfE (2012) Open Free Schools

Retrieved from

<http://www.education.gov.uk/schools/leadership/typesofschools/freeschools/b0066077/open-free-schools>

DfE (2012) 'Harmful' ICT curriculum to be dropped this September to be replaced by rigorous Computer Science

Retrieved from

<http://www.education.gov.uk/inthenews/inthenews/a00201864/harmful-ict-curriculum-set-to-be-dropped-this-september-to-make-way-for-rigorous-computer-science>

e-Learning Foundation

Retrieved from

<http://www.e-learningfoundation.com/>

James, Sebastian. (2011) Review of Education Capital (DfE)

Retrieved from

<http://media.education.gov.uk/assets/files/pdf/c/review%20of%20education%20capital.pdf>

John, Merlin (2012) Computational thinkers use Gove back door for ICT

Retrieved from

<http://www.agent4change.net/policy/curriculum/1904-computational-thinkers-use-gove-back-door-for-ict.html>

Rudd, Peter, Teeman, David, Marshall Helen, Mundy, Ellie White, Karen, Yin Lin, Morrison, Jo Yeshanew, Tilaye and Cardozo, Vani (2009). Harnessing Technology Schools Survey 2009 Analysis report July 2009

Retrieved from

<http://www.teachfind.com/becta/becta-research-research-becta-research-harnessing-technology-schools-survey-2009>

The Guardian (2012) Global survey sees English schools rise in reading but slip in science

Retrieved from <http://www.guardian.co.uk/education/2012/dec/11/english-schools-reading-science-survey>

The Guardian (2012) Free access to British scientific research within two years

Retrieved from

<http://www.guardian.co.uk/science/2012/jul/15/free-access-british-scientific-research?CMP=>

Watson, John, Murin, Amy, Vashaw, Lauren, Gemin, Butch, Rapp, Chris (2011) Keeping Pace with K12 OnLine Learning and Practice: An Annual Review

Retrieved from

<http://kpk12.com/cms/wp-content/uploads/KeepingPace2011.pdf>

6.2 Speeches

Michael Gove to the Durand Academy (September 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a00197684/michael-gove-to-the-durand-academy>

Michael Gove to Haberdashers' Aske's Hatcham College (Jan 2012)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a00201425/michael-gove-speech-on-academies>

Michael Gove to the Policy Exchange (June 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a0077948/michael-goves-speech-to-the-policy-exchange-on-free-schools>

Michael Gove to the Royal Society (June 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a00191729/michael-gove-speaks-to-the-royal-society-on-maths-and-science>

Michael Gove to Twyford Church of England High School (January 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a0073212/michael-gove-to-twyford-church-of-england-high-school>

Nick Gibb to The AQA (June 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a00191704/nick-gibbs-speech-to-reform-aqa-conference>

Nick Gibb to the NEEC (January 2012)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a00201655/nick-gibb-speech-on-school-improvement>

Nick Gibb to 100 Group (February 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a0074394/nick-gibb-to-the-100-group>

Nick Gibb to the SSAT (May 2011)

Retrieved from

<http://www.education.gov.uk/inthenews/speeches/a0077262/nick-gibb-to-the-specialist-schools-and-academies-trust>

Michael Willets to the Publishers Association annual general meeting, London (May 2012)

Retrieved from

<https://www.gov.uk/government/speeches/public-access-to-publicly-funded-research>