Interim Policy Recommendations (Europe and England)

VISCED
A Transnational Appraisal of
Virtual School and College Provision

Deliverable: D3.5

Education and Culture DG
Lifelong Learning Programme

Project Agreement Number:
511578–LLP–1–2010–1–GR-KA3-KA3MP
Project funded by the European Commission

Document Title	**VISCED –Policy Recommendations – Interim (Europe and England)**
Deliverable no.	D.3.5
Date of issue	23/12/2011
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Contractual date of delivery	31/01/2012
Actual date of delivery	23/12/2011
Approval status	Reviewed internally – approval pending
Abstract	This document is intended to inform and advise the policies of the European Commission and individual member states with regards to the potential development, expansion and sustainability of virtual schools and colleges in individual districts, regions, nations and across the continent. The first section of this paper focuses on recommendations for the Commission and for consideration by all member states. The second section of this paper focuses on a single country (in this case England) and illustrates how the VISCED project is contextualising, for individual member states, the lessons identified.
Keyword list	Work Package; Europe; England virtual schools; virtual colleges; field research; analysis; policy; policy recommendations; inclusion; curriculum; early school leaving; migrant children; teachers; teaching support; inspection frameworks; data; common standards for online teaching; commons standards for online courses; OER; transition to HE
Distribution list	EU Commission [DG3]; VISCED partners
Method of distribution	Email
Electronic copy filed	"VISCED files" in VISCED Dropbox
Confidentiality status	PP

History			
Version number	Date	Revised by	Revision date
1.0	23/12/2011	Barry Phillips	23/12/2011

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1. Executive Summary: The Aims and Objectives of this document

This document is intended to inform and advise the policies of the European Commission and individual member states with regards to the potential development, expansion and sustainability of virtual schools and colleges in individual districts, regions, nations and across the continent. The intention is not to *promote* virtual schooling but simply - *where it is identified as helping meet the education aims and objectives of the Commission and member states* – 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 predict and pre-empt possible problems which may inhibit and disadvantage virtual schools and colleges.

Where virtual schooling is identified as a potential valuable ingredient in a vigorous educational system it should be offered support equivalent to that received by 'traditional' schools and be subject to equivalent rigour in its accountability.

The first section of this paper focuses on recommendations for the Commission and for consideration by all member states. The second section of this paper focuses on a single country (in this case England) and illustrates how the VISCED project is contextualising, for individual member states, the lessons identified. Many of the lessons are relevant both Europe-wide and in individual countries and, as such, will be repeated across the two sections – with some tailoring for the circumstances.

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).

2. Europe: Background

2.1. The ICT in education landscape

The recent Eurydice Report *Key Data on Learning and Innovation through ICT at School in Europe 2011* points to a generally positive (and improving) position with regards young peoples' access to technology both at home and at school or college. In summary:

- Access to computers at school and at home is improving (in some countries rapidly) although the picture across Europe remains uneven.
- National disparities are, however, levelling out.

- At least 75% of students were studying in schools with a Computer:Pupil ratio of up to 1:4.
- A lack of educational software and support staff still affect the instruction.
- As of 2009, in most countries, the percentage of households with dependent children that had a computer is approaching 90 %.
- The number of households with dependent children that have home Internet access is growing in all countries – in several countries it is almost comprehensive whilst in countries with comparatively low levels (such as Greece and Romania where some 60% have access to the Internet) "the increase since 2006 has been extraordinary".
- A recent study of 16 to 24 year-olds showed that practically all young European citizens use computers (often on a daily basis).
- However, "use of computers at home for school related learning activities is much lower with a difference of about 30 percentage points".

2.2. The Policy Context

The historical and enduring broad-stroke Commission policy priorities of infrastructure, content, ICT skills and competencies are clearly all interwoven with the potential success or otherwise of virtual schooling. However, since virtual schooling is rarely intended to *directly* address any of these, this paper focuses on more specific policy priorities - those where there might be a tangible match between priority-policy development-virtual schooling. Specifically:

2.2.1 Curriculum imperatives

"One-quarter of young people under the age of 15 only attain the lowest level of proficiency in reading... the level of interest in some subjects, such as science and mathematics, is low."

The Commission has repeatedly identifies low levels of literacy and numeracy as disadvantaging millions of young Europeans. Similarly, there is concern that our education systems are not producing enough young people with mathematics and science skills at all levels. Language learning also remains a priority as the Union expands and as new economic opportunities open up within and outside of the European Union.

2.2.2 Tackling Early School Leaving

"15% of young people aged 18-24 leave school prematurely; only 78% of 22-year-olds have completed their upper secondary education"
The EC is committed to developing;

- Strategies to prevent young people dropping out of education.
- Strategies to offer a re-entry or second chance which meets the individual circumstances of those who have dropped out – "...learning environments which respond to the specific needs of early school leavers, recognise their prior learning and support their well-being."
- Strategies to improve the transition from primary to secondary education.

2.2.3 Supporting Migrant Children

Students with a migrant background are generally more likely to leave school early – often disadvantaged by a lack of competence in the official, or host-country, language (often a pre-requisite for success educationally, socially and professionally). The Council has suggested;

- "... increasing the permeability of pathways within school systems and removing barriers to individual progression through the system can help to combat segregation and contribute to higher achievement levels for migrant learners."
- "Offering more personalised learning and individual support" – something which the Council acknowledges "...can benefit all pupils in the system and lead to higher quality for all."
- "Raising the quality of provision in underperforming schools" – which can "... improve opportunities for all pupils, including migrants."
- "...intensive language tuition for newly arrived pupils with a migrant background, additional support for those experiencing difficulties..."
- Encouraging and supporting the involvement and engagement of parents in their children's' learning.

Other key considerations also include the implications for the mobility of labour, mobility of learners and a *vibrant digital single market* (as stated in the Commission's Digital Agenda for Europe).

3. Interim Policy Recommendations (Europe)

3.1 Regulatory

3.1.1 Existing regulatory frameworks (1)

With oversight and co-ordination from the Commission, individual countries' Education Departments 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 impediments[1] which might inhibit their development and sustainability. Virtual schools and colleges should be subject to the same degrees of intellectual rigour as physical schools and receive the same levels of support.

3.1.2 Existing regulatory frameworks (2)

The Commission should review *its own* frameworks, policies, and procedures to ensure that where virtual schools and colleges contribute to the achievement of its educational, economic and social goals there are no unnecessary bureaucratic impediments.

3.1.3 Accountability frameworks

The Commission and individual Education Departments should consider how they might bring virtual schools and colleges within a regulatory and accountability framework which protects but does not disadvantage learners - or the schools[2]. This need not be overly bureaucratic but should simply ensure equivalence with the accountability frameworks which underpin 'traditional' or 'physical' schools.

3.1.4 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

[1] 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.

[2] 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

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. VISCED already has evidence of several thousand European students studying online across borders (outside of their home country). The Commission and individual Education Departments should clarify their positions in order to preserve the integrity of qualifications data

3.1.5 Inspection frameworks

Individual Education Departments should review, and consider revising, current school inspection/assessment paradigms – specifically to 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

3.2 Teachers and teaching support

3.2.1 Common standards for online teaching

The Commission should consider introducing a common set of standards for online teaching and individual nations urged to integrate these into their teacher training programmes and teacher assessment regimes. As stated in 2.14 several thousand European students are already studying online across borders (outside of their home country) – a common set of standards would help ensure quality and consistency. The iNACOL National Standards for Quality Online Teaching form a valuable foundation.

3.2.2 Common standards for online courses

Similarly, the Commission should consider introducing a common set of standards for courses.

3.2.3 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 view to establishing Europe and European schools as global leaders. The Commission and individual Departments of Education should proactively support schools and teachers in exploiting the potential this presents.

3.2.4 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 broaden their life-chances.

3.3 Value for money

3.3.1 Best Value: Open Educational Resources (OER)

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.

3.3.2 Best Value: Collaborative purchasing

Similarly, schools directly or indirectly funded from the public purse should be encouraged to collaborate where possible in order that they seek out economies of scale in terms of hardware, software and support. Impediments whether cultural or technical (firewalls etc) should be identified and remedied where possible

3.4 Enhancing and embedding within existing inclusion strategies – addressing priorities

3.4.1 Virtual matches with policy priorities

Individual nations should look to their education inclusion strategies and seek to identify areas where virtual schooling may provide a valuable component. Europe should look to the Council's Recommendations for ***Tackling early school leaving*** and ***The education of children from a migrant background*** and make sure that where appropriate virtual schooling is considered.

Potential target beneficiaries in both of these priority areas include:

- 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.
- 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 or sexual orientation).
- Young offenders – particularly those in custody who can then continue education on release

- Students with common language/cultural needs/connections.
- Young women wishing to continue or return to education but who currently have childcare responsibilities.

3.4.2 Roll-on-roll-off provision

Individual Education Departments should be encouraged to develop policies to offer *roll-on-roll-off* provision for students struggling with the pace and content of their current curriculum - rather than waiting for them to fail and then hoping that they remain in education to recover credits[3].

3.4.3 Transition to Further and Higher Education

Individual Education Departments should be encouraged to develop policies which might improve the chances (particularly of those where there is no history or tradition of continuing education) of transition to Further and/or Higher Education (reducing early school- leaving).

3.4.4 Strategies for (non-home) off-campus access

Where domestic internet access is limited and libraries, telecentres etc are the main resource for off-campus learning, individual Education Departments should be encouraged to develop strategies to ensure that neither existing community users, nor virtual school students, are disadvantaged.

3.4.5 Digital exclusion

The Commission and individual Education Departments should develop strategies which ensure that the growth of virtual schools and colleges does not further disadvantage the digitally excluded or other groups.

[3] One of Kentucky's top initiatives focused on re-engaging students at risk of failing, but Jefferson County students had to wait until the end of the grading period to begin credit recovery. "Telling a student to wait until a new grading period to re-take a class was a missed opportunity. We started an online, open entry/open exit, competency-based model that allowed students to go through the material at their pace and on their schedule," explained Jana Hickey, Jefferson County Public Schools in Kentucky.

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. The VISCED wiki lists eleven virtual schools and colleges in the UK. However, some notable initiatives such as Notschool have their roots in the UK as does of course, in HE, the Open University – suggesting 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 one million children in the UK with no home access.

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 lists 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."

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."

Particular priorities for this Government include improving the provision for excluded pupils, addressing the large numbers of students leaving school with poor standards of literacy and numeracy and also 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, January 1st 2012 there are now over 1,500 Academies with an estimated 120 plus new, Free Schools to be open by 2012-2013. 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.

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.

5. Interim Policy Recommendations (England)

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 impediments[4] 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 which protects but does not disadvantage learners - or the schools[5]. This need not be overly bureaucratic but should simply mirror the accountability frameworks which underpin 'traditional' or 'physical' schools.

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[4] 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.

[5] 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
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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 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 Best Value: Open Educational Resources (OER)

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 Best Value: 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 - virtual initiative matches with policy priorities

The Departments'agencies 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.
- 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

6. References and speeches

6.1 References for Policy Recommendations: Europe

Council Of The European Union (2009) Council conclusions on the education of children with a migrant background
Retrieved from
http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/111482.pdf

European Commission (2010). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A Digital Agenda for Europe.
Retrieved from
http://ec.europa.eu/information_society/digital-agenda/documents/digital-agenda-communication-en.pdf

European Commission Education & Culture DG (2011) School education: equipping a new generation
Retrieved from
http://ec.europa.eu/education/lifelong-learning-policy/doc64_en.htm

Eurydice Network (2011) Key Data on Learning and Innovation through ICT at School in Europe 2011
Retrieved from
http://eacea.ec.europa.eu/education/eurydice/documents/key_data_series/129EN.pdf

iNACOL (2011) National Standards for Quality Online Teaching
Retrieved from
http://www.inacol.org/research/nationalstandards/NACOL%20Standards%20Quality%20Online%20Teaching.pdf

6.2 References for Policy Recommendations: England

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)

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

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

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

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' Askes 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