
VIRTUAL SCHOOLING FOR ALL AGES – THE NEWS FROM VISCED

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Overview

In order to understand the objectives of VISCED one has first to understand the key definition that drives the VISCED project. A *virtual school* is a school where pupils learn mainly at a distance over the internet and any activity in a classroom takes no more than around 15% of study time (1 day per week in a full-time school). The pupils will normally be based at home.

In VISCED we were not primarily interested in schools for pupils of all ages – we focus on the age range 14-21 – in other words from the early teenage years, up to and beyond the age at which compulsory schooling ceases (typically 16 to 18). However, we increasingly picked up information that students of all ages were “attending” classes at virtual schools, in order to achieve school-level qualifications, including in some cases the exit qualifications from schools needed in many countries to get into universities.

We have found that *virtual schools are not common in Europe*. We believe currently that there are less than 100 across the EU and in many countries there are none, or believed by ministries to be none (not the same thing) – this is particularly the case in countries which prohibit or strongly discourage homeschooling. In contrast, virtual schools are quite common in the US – there are several hundred and some authorities estimate that 10% of school pupils are involved in virtual schooling.

The overarching objective for VISCED is to identify and understand virtual schools across the world, not ignoring the US but focussing mainly on Europe and to some extent on other countries in the world which are often seen as relevant to Europe, such as the more prosperous nations (e.g. OECD and BRIC nations) and/or those with linguistic, cultural or political links to countries in Europe. By doing this, and studying some virtual schools in great detail, we want to understand the reasons why some countries foster virtual schools, others discourage them and a third group (a large group including many countries in Europe) seem to ignore them. Since we focus on countries not dissimilar to many European countries, we finally aim to provide evidence to ministries and their policy advisors to help them analyse which of their educational challenges are susceptible of partial solution using virtual schools and in such cases, what type of virtual schools they should encourage and what type of virtual schooling within such schools would be most appropriate.

Some of these challenges are universal – such as children in hospital, children looked after by institutions (including custodial ones), travelling children and children with poor attendance records at school (for a variety of reasons). Others may be more specific to the country (poor mathematical or foreign language skills).

Project Approach

In theoretical terms, VISCED is a project in the domain of *comparative education*. Comparative education is not an easy discipline – governments of countries can always think of reasons why they are quite unlike other countries, even (or especially) nearby ones. Nevertheless, progress can be made, and various multinational agencies including the EU, OECD and UNESCO carry out much comparative work and quite a lot of it is on education. These agencies have very large budgets – in contrast, within the Lifelong Learning Programme, project budgets are quite small. Education is a complex topic – it covers all ages, all subjects, many different kinds of providers and many languages (over 200 languages are said to be in daily use in Europe). And there are so many countries! There are nearly 200 members of the United Nations, and somewhat over 200 countries regarded by most others as sovereign states. Adding in colonies, autonomous regions with their own internet codes, and a number of other effectively independent disputed territories, one comes close to 250 entities.

Thus any project carrying out comparative education has to *prioritise* and then *tier*. In other words, VISCED had to decide which countries were relevant to Europe and within the set of relevant countries decide which countries would be studied thoroughly and which in a less thorough way.

Before the project started, the team (specifically those who wrote the bid) came up with a list of relevant countries, based on their prior knowledge, and divided them into two tiers: those which would be studied in depth, and others which would be studied as part of a region. The ones to be studied in depth included those with project partners, ones where it was already known that there were virtual schools (such as US and Canada) and others which were seen as particularly relevant to Europe even though there was at the time no evidence whether there were virtual schools in them. By the end of 2011 over 100 country reports had been produced.

Complex though it is, this work is only a third of the research work to be done – though it was about two thirds of the research work done in 2011. The second part of the research work was to consider the *policy aspects* of the virtual schools found in the first part. This involves several related elements:

- Identification and discussion of the best way to classify virtual schools – they can be of various types.
- Understanding the complex and often hard to follow ways in which educational activities and policies in one country affect educational policy in another country.
- Formulation of some draft policies which ministries of education in various countries can consider, including recommendations as to which sorts of virtual teaching are appropriate and what steps need to be taken to train and retrain teachers to teach in virtual schools.

VISCED has an active newsletter, coming out every two months, a Twitter stream and a rapidly growing wiki.

VISCED has adopted one further approach, adapting it from the earlier project Re.ViCa (Review of Virtual Campuses – in higher education), and supporting new projects (such as POERUP – <http://poerup.referata.com>) who take it up. This is to have an *International Advisory Committee* of experts from outside the project. The IAC is expected first of all to listen to project outcomes (part of the dissemination role of the project) but also to ponder and discuss the outcomes with a view to improving them (so there is an exploitation and even an evaluation aspect).

Project Outcomes & Results

Country reports

It took some time to develop a viable country report template which drew on Re.ViCa yet took account of VISCED needs, but this was organised before summer 2011. All countries in the plan now have interim reports, and for the regions in the plan, only East Asia has as yet not been studied so far – most regions (Hispanic America is a good example) have interim reports on the region and for several of them (like Hispanic America) there are reports also on a few of their key countries. A particular feature has been the series of interim reports on many of the regions near to but outside the EU, including country reports right across North Africa and the Middle East and regional reports on Yugosphere, Eastern Europe and Central Asia. In terms of island regions influenced by Europe, both Oceania and Caribbean have interim reports on many of their island countries. Bacsich (2011b) introduces a large sample of country reports.

Exemplars

The interim list of exemplars has been growing on the wiki since summer 2011, some embedded in country reports, with an increasing set also having their own entries on the wiki. All this material and key definitions was consolidated into a Gazetteer (Phillips et al 2011). This has a chapter for each continental region (Europe, Africa, Asia, The Americas, Australasia and “Islands”). The current state of our research has identified around 450 virtual schools and colleges across the world. Over 300 of these are in the USA. Even outside the US we currently have identified over 100. Of these, 30 are in Canada and 59 are in Europe (4 new ones from Latvia were added recently). Australasia has at least 19. There are relatively few in Africa. Asia almost certainly has more than we have identified but China has not been one of our study countries. There appear to be surprisingly few in Oceania and the Caribbean and indeed across many multi-island nations where they might be expected as a way of overcoming distance and insufficient population to support a school. We have identified 53 notable examples worthy of consideration as case studies.

In addition to the list, a typology of virtual schools (Bacsich 2011a) has evolved over the last few months of 2011, and discussed at project meetings and the IAC meetings. Many useful ideas have been contributed, but not all can be instantiated as a typology has to be understandable and feasible to apply.

Case studies

As noted above, 53 potential case studies have been identified. Around 10 of these will be selected and the case studies undertaken, to be completed by November 2012. We intend to report on these in next year's EDEN.

Policy recommendations – including teacher training and innovative good practice

Policy recommendations are dealt with at two levels: the EU level and the national level. In view of the partners involved (covering UK, Finland and Estonia) it was further decided that energy would go into (a) an EU-wide policy recommendation and (b) one detailed national policy document, for England. England was chosen not only because Sero was the task leader and the lead author used to work for the Ministry on IT policy for education, but also because England was a feasible case where the new government elected in 2010 has changed some aspects of the former government's approach to school education and to ICT in education (in particular, closing Becta) but has begun to make statements again that ICT was relevant; and also (along with some but not all northern countries) its economy was bad but not catastrophic (catastrophic budget cuts tend to lead either to policy freeze or discontinuous

unevidenced change). Phillips (2011) considers and proposes an EU policy approach and then a policy approach for England consistent with that.

This deliverable is supported by Lössenko and Phillips (2011). This aims to document the influence that some countries (and other entities) have on other countries' education policies, as judged by documentary analysis. We found surprisingly, that *some countries do not have a coherent set of national documentation on ICT for education*. Some interesting conclusions came out. Altogether 21 influencers were identified in separate influence maps of 11 countries/regions provided by the partnership. On an average, about 5 influencers were highlighted per country/region, Finland demonstrating the widest range with 11 influencers. Interestingly PISA was mentioned 11 times but with relatively low influence whereas the EU and the UK were considered more important despite their less frequent appearances.

EU-wide and national policy also involves aspects of teacher training and, potentially, mandating some specific pedagogic approaches. Sorensen and Harlung (2011) argue that e-learning and distance learning initiatives have often been too concerned with technology and technological issues, and suggests that teacher training towards successful distance education offers must focus clearly on *IT pedagogy* and development of skills *different* from those suitable for teaching in class or lecture rooms. The report finally presents suggestions for focus areas for teacher training.

Further development of the project's thinking on pedagogy comes from Bristow (2011), an interim report on pedagogy, which provides a US-based contrast to the EU standpoint of Sorensen and Harlung. It points out that it is impossible to avoid a strong US influence on the literature – since the US has not only the largest number of virtual schools but also some of the largest and the longest-established and (thus) the best-researched. Among other conclusions it suggests that key components of pedagogy include careful content development, insightful instructional design, appropriate methods for student assessment and user-friendly relevant technology.

To increase traction among the scholarly and research community, VISCED has set up a number of active groups on the Mendeley shared reference system – see e.g. <http://www.mendeley.com/groups/1075201/virtual-schools-and-colleges/> with 193 papers listed (and there are over 10 other groups linked to VISCED work).

Plans for the Future

The *interim reports* on countries and regions will be consolidated, expanded and cross-checked with other information from inside and outside the project. Any gaps in planned coverage will be filled – for example the UK report needs a section on Wales and there are a few country reports in the East Asia region needing attention (e.g. Japan). The *list of exemplars* will be improved and updated – in 2012 increased attention will be paid to virtual colleges. We believe that the list of virtual schools (outside the US) is nearly complete – but this belief will be checked for Europe by doing systematic expert searches for relevant virtual institutions (using the correct terms in the local languages) across the continent. Some recent serendipitous finds of virtual schools (in Latvia, Poland and Netherlands) suggests that such checks are necessary. There is already a list of 10 *case studies* to be done. It is hoped that around half can be ready by summer 2012 so that some early information can be given at the EDEN conference

The main operational activity (as opposed to desk research) is the piloting of virtual schools approach in at least five institutions: Ross Tensta Gymnasium (the Swedish partner), Notre Dame High School and Sheffield College in Sheffield (both under the guidance of Sero) and several innovative schools in Greece (under the guidance of Lambrakis). The piloting reports will not be ready until late 2012.

Success Factors

It was never planned that much work would be done on Success Factors in 2011 – but a short report on Potential Success Factors (Bacsich 2011c) was produced in time for a summary be presented to the International Advisory Committee in late November 2011. In 2012 EFQUEL will add their effort into this work – via their member KU Leuven (who assisted the similar work in Re.ViCa). Due to changes in thinking in the benchmarking world, including the influence of US thinking on such matters, the approach being taken will develop a scheme for virtual schools integrated with the existing Re.ViCa scheme for virtual universities and colleges, and underpinned by a thorough bibliographic search.

Virtual schools event and the International Advisory Committee

The next partner meeting is planned for May 2012 in Sheffield and it is planned that the International Advisory Committee will meet around the same time, also in Sheffield. The focus of this IAC will be success factors and piloting in virtual schools; however, since there is a lack of virtual school *practitioners* on the IAC the IAC members will be extended to include a number of these from the 50 or more ongoing virtual schools in Europe and they will be invited to attend the meeting in Sheffield. It is hoped that we can present some highlights of this work at EDEN 2012.

Contribution to EU policies

In the university world, Europe has for some years been working towards a European Higher Education Area, based on the Bologna Declaration (updated at Bergen and Lisbon). The work of Re.ViCa on virtual universities showed that there was a degree of *global* consensus on higher education and appropriate governance of institutions – and even the beginnings of a global approach to quality in universities. There is also a thriving international market in higher education with millions of students across the world studying outside their home country – and hundreds of thousands studying at a distance from a provider not based in the country in which they live.

In school-level education in Europe, this is almost completely absent, except for provision for some expatriate children. Furthermore, the locus of control of schools is nearer to the school – but this can lead to a lack of policy coherence. Finally, unlike in the university sector in many countries (even now in Europe) there is little private sector provision and even less integration of that provision in policy terms. In at least two European countries the virtual schools exist in legal limbo, yet are funded by the state for certain kinds of teaching.

EU policies

Phillips (2011) discusses EU-level policy issues related to virtual schools and makes several key recommendations:

- 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 which might inhibit their development and sustainability. Virtual schools and colleges should be subject to the same degree of oversight as physical schools and receive the same level of support.
- 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.
- 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. This need not be overly bureaucratic but should simply ensure equivalence with the accountability frameworks which underpin "traditional" or "physical" schools.
- 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" censuses 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
- 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.

National policies

There is one further problem of recent origin. Since the recession, many European countries, some with much publicity, others more discreetly, have been cutting their educational budgets, not only in schools, but in ministries (fewer civil servants), in the agencies that ministries used to rely on for advice, and in terms of the number and scale of projects contracted to university research teams to study specific aspects of schooling. The closure of Becta in the UK was just the tip of the iceberg. In more than one country head teachers regularly say "Where on earth did that idea come from!?" Thus those of our colleagues tasked with writing policy papers in VISCED have a much more challenging task than they would have had a few years ago.

However, the discussion in Phillips (2011) on national policy for England shows, we hope, that there is still scope in these challenging times for within-nation policy development taking account of the EU context.

Virtual schooling for all ages

Virtual schools have value for adults also. We present pen-pictures of three very different countries as an introduction to this topic.

The United States

Although technically out of scope for the VISCED project, our research uncovered evidence that online learning is used in the US to enable mature adults to obtain high school diplomas (or prepare for equivalency exams) and thereby meet university eligibility requirements. As is customary in the US, there is no federal governance over this process, but select state and city governments – as well as numerous private companies – offer programmes allowing drop-outs, adult immigrants and others who have not completed a formal high school education to engage with the educational system.

One relevant institution is the “adult high school” or “adult education school”, which enables adults to complete high school certificates or diplomas – often in a fully online setting. These state- or city-funded programmes may make use of local Community Colleges for course provision, or even offer their services at no cost. Other diploma programmes are offered by fee-based private companies (some of which purchase content modules from major virtual schools vendors like K12 Inc.)

A common route to higher education for American students who have “aged out” of the secondary school system is the successful passage of a series of GED (General Educational Development) tests. Also referred to as the General Education Diploma, General Equivalency Diploma or Graduate Equivalency Degree, the GED is a nationally recognised set of examinations which provide adults the opportunity to certify attainment of high school-level academic knowledge and skills. Nearly all universities that require a high school diploma accept the GED credential. Although the exam itself must be taken online, a plethora of GED test preparatory courses are web-based – and many are free. It is common for “adult high schools” to offer GED test preparation as well. In 2009, the average GED examinee was 26 years old.

Although they target the traditional secondary school demographic (i.e. within the VISCED age range), it is worth noting here the extensive online “credit recovery” system used in many US high schools to prevent drop-outs and ensure on-time graduation. Participating schools offer custom “second chance”, competency-based courses to currently enrolled students, often through a third party, which may be taken at home or in on-site computer labs. Credit recovery programmes help public schools meet federal graduation mandates while precluding the cost of having students repeat entire courses. As of June 2008, 20% of students in Florida Virtual School (FLVS, <http://www.flvs.net>) – the largest and by some measures most successful virtual school in the world – were seeking credit recovery.

Finland

VISCED researchers found that several of the key Finnish virtual schools do reach out to adults – stating explicitly for example, that “...adults (and) young people who no longer belong to the compulsory age group and ...people that cannot study full-time” are eligible (thus suggesting that the constituency is beyond the 21 year old limit typical of the Finnish Upper Secondary system).

Verkkoperuskoulu (<http://virtualcampuses.eu/index.php/Verkkoperuskoulu>) is one such – although the numbers are small (40% of its annual student intake – approximately 15 out of 40). The Verkkoperuskoulu curriculum offer comprises: mother tongue and literature, English, Swedish, history, social studies, mathematics, physics, chemistry, biology, geography and religion. Each course contains 1.5 hours of contact training and 22 hours of independent distance learning. In addition each course contains an examination or other “accomplishment”.

Similarly, Nettiperuskoulu (<http://virtualcampuses.eu/index.php/Nettiperuskoulu>), a distance learning school maintained by Otava Folk High School, offers adults and young people 44 courses at various levels across the following subjects; mother tongue (usually Finnish) Swedish, English, History and Civics, Math, Physics, Chemistry, Biology, Geography, Religion or Ethics, Student Counselling.

The VISCED wiki entry for Nettiperuskoulu notes its purpose is to offer a possibility to accomplish basic education curriculum that for some reason has not yet been completed. Main target group are adults and younger people, who are beyond compulsory education age group and do not have a graduation certificate from basic education.”

We found no evidence of the Free Education institutions (an important component in Finland's adult education system) establishing virtual schooling strategies. This was, though, technically beyond the scope of the VISCED project – evidence discovered would have been “by chance” and supplementary to the project.

United Kingdom

There is very little analytic information on virtual schooling in the UK and even less on virtual schooling for adults. The following material is extracted from a forthcoming report by George Watley commissioned by Sero (to appear).

Although numbers of students currently engaging with e-learning to earn formal pre-university qualifications in the UK is extremely difficult to estimate, costs are publicly available. Furthermore, estimated funding given to traditional schools is also publicly available. The two main secondary school qualifications in Britain are GCSE examinations normally taken at 16 years old in England and Wales and A-level examinations usually completed at 18 years of age in these countries. In terms of price for the overwhelming majority of e-learning providers, the cost for GCSEs is £236-375 per GCSE and £280-540 for A-levels.

Funding figures for English schools help to provide a contextual background for potential e-learning cost savings. To do so, three quoted figures for the 2009-2010 academic year will be used, the latest figures available. These figures are £7207/pupil for a secondary school in Lambeth (Borough in London), £6199/pupil which is the average for England, as well as £5021/pupil which is the average for a school with low levels of deprivation outside of London (BBC 2011). For the purposes of comparing funding for traditional schools in comparison to distance learning provision, the mentioned figures will be multiplied by four to reflect two years normally taken to complete GCSEs and A-levels each. Comparing the costs of distance learning to traditional schools as currently funded, using the costs of £2706-7620 for hypothetical young distance learners with the £20084-28828 figures for funding given to different types of English schools, hypothetical young people earning qualification exclusively through e-learning could do so at a cost between 9 and 38 percent of school-based learning, a potential savings of 62 to 91 percent in comparison to current funding given to traditional schools!

There are three distance learning providers that are potential exemplars: Wolsey Hall, Mathematics for Education and Industry (MEI) and SCHOLAR in Scotland. Wolsey Hall is on the high end of the commercial pricing spectrum, but clearly mentions its aim to have all assignments marked and returned within 48 hours, an aspiration very few bricks and mortar schools could realistically achieve. Also, no other distance learning provider explicitly makes such a claim. If this 48-hour claim is achieved most or all of the time, Wolsey Hall could prove to be an exemplar for broader distance learning provision. Furthermore, offering this rapid feedback (if proven) at a cost of £375 for GCSEs and £495 for A-levels indicates that it is at least possible that lower cost provision vis-à-vis traditional schools does not equate with sacrificing quality.

MEI (<http://www.mei.org.uk/index.php?page=liveonlinemaths>) provides another reasonably priced (£350) A-level studying possibility that provides potential exemplars for online learning generally. Students have access to online 60-90 minute lessons usually held on evenings. These lessons are interactive and recorded for future use by students, offering opportunities to revisit them afterwards. This is offered in addition to a plethora of resources and interactive resources expected of an e-learning provider.

The SCHOLAR programme is another example of distance learning provision albeit blended with face-to-face teaching in schools. It was developed on the initiative of Heriot Watt University working with Education Authorities and schools in Scotland. It has learning platforms and resources for students and teachers in the sciences, mathematics and foreign languages in preparation for Scottish Higher and Advanced Higher examinations. Exact funding per pupil is difficult to determine, but SCHOLAR claims that 25 percent savings have been achieved whilst students obtain 10-15 percent higher marks and reduced failure rates of up to 50 percent (Leitch 2011). Around 100,000 students are engaging with SCHOLAR. Furthermore, its aim to increase the numbers of people applying for science and engineering degrees in Scotland was achieved, going up by 30 percent. Its claims are impressive in terms of offering blended learning opportunities that simultaneously reduce costs but improve attainment and future aspirations.

Most GCSE and A-level e-learning provision offered in the UK is offered within a relatively narrow cost spectrum. Higher cost providers offer more and/or higher quality service with Wolsey Hall a prime example. Quality, or more correctly perceptions of quality, involving e-learning providers could provide greater barriers to determining the full benefits and/or drawbacks of e-learning in comparison to traditional schools. No service provider was willing to divulge information about numbers of students taking their courses, making it difficult to genuinely understand the scope of distance learning in the UK in terms of the quality of provision, as well as student satisfaction. As such, future research should attempt to simultaneously unearth statistical evidence of distance learning students as well as their experiences undertaking such learning.

MEI and SCHOLAR, along with Wolsey Hall, potentially offer some insight into the possibilities of distance learning in terms of reduced costs and increased attainment. A greater understanding of their provision, particularly but not exclusively from student perspectives, would be extremely useful in determining how successful distance learning provision could be offered more broadly.

In terms of international implications the potential cost savings could be greater, particularly because governmental educational authorities are usually responsible for marking examinations in most countries as opposed to the quasi-commercial organisations that currently are responsible for assessing GCSE and A-level exams in England and Wales. If examination costs were eliminated or reduced in comparison to the England and Wales model, the savings mentioned could be even greater in favour of e-learning than funding currently given to traditional schools.

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