Final List of Exemplars

VISCED
A Transnational Appraisal of
Virtual School and College Provision

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Authors	Giles Pepler; Barry Phillips; Sara Frank Bristow; Paul Bacsich; Daniela Proli; Sally Reynolds
Contact name	Giles Pepler
Organisation	Sero Consulting Ltd
Address	Sheffield Technology Parks, Arundel Street, Sheffield S1 2NS, United Kingdom
Telephone	+44 114 221 6006
Email	giles@sero.co.uk
Contributors to document	In addition to the authors, staff at other partners and independent researchers joining the wiki have contributed exemplars
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Abstract	This report gives summary details of the virtual schools and colleges identified by the project, with particular attention to Europe. It provides overviews and brief analysis of the findings with some notable examples to illustrate these.
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Executive summary

1. The target for this Deliverable is to have entries on 200 exemplars. They are described in narrative format, with detailed accounts of case study schools and briefer text on other exemplars. [Note that "Exemplar" is the VISCED equivalent to "Programme" or "Notable E-Learning Initiative" in other projects.] Exemplars are institutions making strong effective widespread use of ICT in teaching – virtual schools, notschools, homeschooling support frameworks, e-mature schools, virtual colleges, hybrid colleges etc. – and notable initiatives within countries at local, regional or national levels.

2. Wikipedia defines a *virtual school* as *'an institution that teaches courses entirely or primarily through online methods'.* A *virtual college* is a post-secondary non-HE provider where there is a rather large amount of distance teaching, usually nowadays carried out with a significant amount of e-learning and existing alongside conventional provision in most cases.

3. Our exemplars fall broadly into four categories: virtual schools and colleges operating in a single country or region; virtual schools and colleges operating across more than one country, including global organisations; organisations which are provisionally listed on the wiki[1], but which require further investigation to establish whether they are currently active and fit the project definitions; and notable initiatives within individual countries.

4. At the outset a target of 100 exemplars seemed reasonable and we expected that the vast majority of these would come from the USA, with a smaller number from Canada and some in Australasia. We did not expect to find more than a handful in Europe.

5. The 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. In this report the material and key definitions are consolidated into nine chapters, with one for each continental region (Europe, Africa, Asia, The Americas, Australasia and 'Islands').

6. The current state of our research has identified around 500 virtual schools, colleges and notable initiatives across the world. Over 250 of these are in the USA. Even outside the US we currently have identified a further 240, with, 21 in Canada and 125 in Europe. Australasia has at least 35. 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.

7. In order to construct an initial inventory VISCED researchers took a broader definition of virtual schools and virtual colleges in Europe than elsewhere. The 124 schools, colleges and initiatives described in Europe demonstrate a broad spectrum in terms of the target cohorts they aim to support and full-time, part-time, full curriculum and supplemental offers. Schools have been established to serve: sick students in hospital and home; excluded or at risk of exclusion; children of travelling families; students wishing to study subjects not offered by their host-schools; rurally

[1] http://virtualschoolsandcolleges.eu

isolated students; children of expatriate families; students seeking credit recovery, catch-up or revision; and students who prefer self-directed learning.

8. The four UK home nations have different education systems and governments and are treated separately in this report. Whilst England, Scotland and Spain have the greatest number of exemplar schools and colleges, no single country dominates the findings with all of the larger Western and Scandinavian European nations represented. To the South, Spain, Portugal and Italy are also represented. This is in contrast to Central, and Eastern Europe where VISCED has identified very few virtual schools or colleges.

9. Eight notable exemplars in Europe were further developed as detailed case studies: Bednet [Flanders, Belgium]; Ensino a Distância para a Itinerância [Portugal]; InterHigh School [Wales]; iScoil [Ireland]; Nettilukio (Otava Folk High School) [Finland]; Rīgas Tālmācibas Vidusskola [Latvia]; Sofia Distansundervisning [Sweden]; and Wereldschool [Netherlands].

10. Four mini-case studies were developed from countries outside Europe: Brisbane School of Distance Education and Open High School, Sydney [both from Australia]; Credenda High School [Canada]; and Open Polytechnic of New Zealand (OPNZ) – a virtual college. It was decided not to include any case studies from the USA, as there are numerous examples in the literature.

11.The most notable exemplar in Africa is the Africa Virtual School [AVS].

12. In Asia, including the Middle East VISCED researchers have so far identified only seventeen indigenous institutions which meet the 'virtual school / college' criteria applied within the project, although there are also 24 international schools in the NESA group, often associated with US embassies, at least 3 Calvert International Schools and at least one school of the Association of Classical and Christian Schools.

13. The 263 USA virtual schools have been categorised as follows: State-wide Public Schools [2 notable exemplars]; State-wide & Multi-district Charter schools [3]; Single District Public Schools [2]; Single District Charter Schools [1]; Consortia [3]; Private Provision of Public Schools [1]; Post-secondary Schools Provided by Higher Education Institutes [2]; Inclusion [6].

14. In Canada eight exemplars are described, with one each of: Province-wide public school; Province-wide First Nation Public School; First Nation Public School; Province-wide multi-school board public school; Multi School-Board public schools consortium; Public School Board [for Catholic schools]; Province-wide national and international private school; and Province-wide public school.

15. Latin America has yielded 15 virtual schools and at least 13 colleges. Exemplars of virtual schools are described in Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Peru and Uruguay and exemplars of virtual colleges in Brazil, Chile and Colombia. In addition to indigenous virtual schools, there is substantial evidence of former colonial influence, with international schools linked with the USA, Portugal and Spain.

16. Nineteen exemplars are described in Australasia: Australia [12], New Zealand [4] and Papua New Guinea [3].

17. In 'Islands' we have identified 4 virtual schools and 3 virtual colleges, with notable exemplars in the Caribbean [Cayman Islands, Trinidad & Tobago, Barbados and the Dominican Republic] and the Indian Ocean [Madagascar and Mauritius].

18. Seventeen of the exemplars listed in the report that are not detailed or mini- case studies are described in sufficient detail to be classified as micro-case studies.

19. Following the end of the project we will continue to fill gaps on the wiki, both within and beyond Europe. We suspect that there may be numbers of virtual schools that we have not yet identified in Europe, especially in eastern Europe and former Soviet bloc countries and Turkey. We will encourage other researchers to identify gaps and populate the wiki where appropriate.

20. An Annex at the end of this report lists all the schools, colleges and initiatives described in the main text, together with a list of all the other virtual schools, colleges and initiatives in scope for VISCED with entries on the project wiki by December 2012.

1 The brief

This is Deliverable 2.5 of Work Package 2. The Deliverable Title is:

Final List of Exemplars

The Work Package Title is:

Field Research

It runs from month 1 [January 2011] until the end of the project [December 2012].

Deliverable 2.5 is summarised in the work plan as follows:

> *This Deliverable is required by the beginning of June 2012 in order that the conference season can open with public displays of many completed country and region reports on the wiki. (Of course it is in the nature of a wiki that reports are never complete – updating is expected throughout the life of the project, and indeed, beyond). This early due date also allows the teams to focus in the final months on reporting and other work packages such as Success Factors (WP4) and Piloting (WP6).The target for this Deliverable is to have entries on at least 200 Exemplars. These will be done in a "mini case study" template.(Exemplars are institutions making strong effective widespread use if ICT in teaching – virtual schools, notschools, homeschooling support frameworks, e-mature schools, virtual colleges, hybrid colleges etc.). Again, in the nature of a wiki, no list is ever final. Partners are expected to devote some time to updating their wiki pages each month of the project.*

Following a reorganisation of the project timetable, it was decided to reschedule the completion of this deliverable until the end of the project. Throughout 2012 we have identified an ever growing number of virtual schools.

The current state of our research has identified around 500 virtual schools and colleges across the world. More than 300 of these are in the USA and around 30 are in Canada. Even outside north America we currently have identified around 150.

Of these 86 are in Europe. Australasia has at least 20. 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.

The workplan required 200 exemplars. We have included 272 in this deliverable, in narrative form, ranging from brief notes to more detailed entries. We should stress that this list is representative and not comprehensive (except in the EU). A number of the exemplars are case studies or mini-case studies in Deliverable 3.7. However the work to create Deliverable 2.5 has led us to identify 18 more entries which are thorough enough to quality as micro-studies.

The table below summarises the case studies, mini-case studies and micro-case studies described in this report:

Case studies		
Organisation	**Country**	**School(S), College (C), Initiative(IN)**
Bednet	Belgium	S
Ensino a Distância para a Itinerância	Portugal	S
InterHigh School	Wales	S
iScoil	Ireland	S
Nettilukio	Finland	S
Rīgas Tālmacibās Vidusskola	Latvia	S
Sofia Distans	Sweden	S
Wereldschool	Netherlands	S
Mini-case studies		
Brisbane School of Distance Education	Australia	S
Credenda Virtual High School	Canada	S
Open High School, Sydney	Australia	S
Open Polytechnic	New Zealand	C
Micro-case studies		
Africa Virtual School	Africa	S
Argyll Centre	Canada	S
CESDE	Colombia	C
Cyber Home Learning System	South Korea	S
Florida Virtual High School	USA	S
GLOW	Scotland	IN

Morning Star Academy	Indonesia	S
NHK Academy of Distance Learning	Japan	S
Northern Territory Open Education Centre	Australia	S
Open High School	Turkey	S
SCHOLAR	Scotland	IN
Super English Language Virtual School	Japan	S
TAFE Open Learning, Queensland	Australia	C
Te Kura	New Zealand	S
Telesecundaria	Mexico	IN
University of the Highlands and Islands	Scotland	C
Virtual High School Global Consortium	USA	S
xsel	Australia	S

2 Introduction

In this section we address:

- the project definitions of **virtual school** and **virtual college**;
- our treatment of **exemplars**;
- our treatment of geographical regions.

During this first year of the VISCED project (2011) we concentrated most of our energies on investigating virtual schools, rather than colleges and that was reflected in the interim report. During the second year (2012) we have attempted to redress this balance, but outside the UK and Latin America virtual college activity has proved much more elusive to identify; this is partly because of the wide variety of different organisations and systems for the provision of vocational education and training (VET) in different countries. However, a significant number were found, often as a result of serendipitous meetings at conferences and while searching for completely different things!

2.1 Definitions

Virtual School

Wikipedia defines a *virtual school* as *an institution that teaches courses entirely or primarily through online methods.*

We impose the further restriction that the courses are similar [in purpose and outcome] to those normally taken by school-age children – but there may be a few students in the virtual school who are beyond their national school leaving age.

Readers are reminded that we have identified five different 'levels' of virtual schooling, which are discussed in Deliverable 3.1 *Typology of Virtual Schools and Colleges*, which is a public deliverable and so available on the project website.

Listed exemplars of virtual schools are identified in **bold underlined type**, with links to the relevant wiki entry. Where there is currently (December 2012) no separate wiki entry, the link is to the organisation's website.

Virtual College

A *virtual college* is a college [post-secondary non-HE provider] where there is a rather small core of physical organisation and people carrying out face-to-face teaching, and a rather large amount of distance teaching, usually nowadays carried out with a significant amount of e-learning. There is not an absolute distinction between face-to-face colleges and distance teaching colleges – most distance teaching colleges in fact use blended learning for their offerings, often via a network of tutorial centres.

The same typology (see D.3.1) applies to virtual colleges as to virtual schooling. Listed examples are identified in ***bold underlined italic type***, with links to the relevant wiki entry. . Where there is currently (December 2012) no separate wiki entry, the link is to the organisation's website.

Notable initiative

In addition to entries for individual schools and colleges, this report also describes notable ICT-in-education initiatives in individual countries, related to the school and college sectors, but not specifically in higher education, which was covered in the earlier Re.ViCa project – see http://virtualcampuses.eu/index.php/Re.ViCa.

Listed notable initiatives are identified in **bold underlined red type** and linked to the relevant wiki entry. . Where there is currently (December 2012) no separate wiki entry, the link is to the organisation's website.

2.2 Exemplars

Our exemplars fall broadly into four categories:

- virtual schools and colleges operating across more than one country, including global organisations;
- virtual schools and colleges operating in a single country or region;
- notable initiatives (see 2.1 above);
- organisations which were identified too late during the project for separate wiki entries to be generated.

We have also mentioned a small number of ceased virtual schools, following the pattern established in Re.ViCa.

At the outset of the project, a target of 100 exemplars seemed reasonable and we expected that the vast majority of these would come from the USA, with a smaller number from Canada and some in Australasia. We did not expect to find more than a handful in Europe. We have identified substantially more in Europe than initially expected and have given details, together with links to the wiki, of some 200 exemplars in total. It must be stressed that this list is undoubtedly incomplete: we have been identifying additional virtual schools and colleges up to the end of the funded project.

The current state of our research has identified around 500 virtual schools, colleges and notable initiatives across the world. Almost 300 of these are in the USA; 21 are in Canada and 124 are in Europe. Australasia has around 20 but there are relatively few in Africa. Asia almost certainly has more than we have identified, especially in China but this has not been one of our study countries.

In Europe we have listed **all** the virtual schools which we have identified which appear to be currently operational, together with notable initiatives and a representative selection of virtual colleges and two ceased initiatives in England. For the USA, where the majority of virtual schools are to be found, we have described key examples of each type of virtual

school and in other geographical regions we describe the virtual schools, colleges and initiatives that we have identified up to the end of 2012. The template indicated in the work plan has been used for the case studies described in Deliverable 3.7 *Case Studies,* which is a public deliverable and thus available on the project website. However we have used narrative to describe exemplars in the text of this report.

2.3 Geographical regions

For the purposes of this analysis, we have grouped countries into six areas. The first five are based on the traditional continents; the final section on 'Islands' covers islands and island groups not included in the five 'continents'. The groupings and divisions are explained at the beginning of each section:

- Europe [chapter 3 of this report]
- Africa [chapter 4]
- Asia [chapter 5]
- The Americas [chapter 6]
- Australasia [chapter 7]
- 'Islands' [chapter 8].

Definitions of all regions and other geographic and political entities are all available on the VISCED wiki. In most cases these have been taken from Wikipedia and other encyclopaedic sources, but often with slight modifications to suit the purposes of the VISCED project and to allow each country (even those like Egypt, Turkey or Russia which straddle continental boundaries) to be considered in just one section of this and related reports.

2.4 Acknowledgements and related aspects

In addition to the authors of this Deliverable, much credit is due to the editors of the many country reports on the wiki and in particular to the editors of the hundreds of virtual school, virtual college and ICT-in-education initiative entries on the wiki, from which much of the material is drawn.

In order to preserve the variety and authenticity of this material, only minimal editing of layout and punctuation has been done for the text of the entries on virtual schools and colleges.

3 Europe

VISCED quotes the Wikipedia definition:

Europe is one of the seven traditional continents of the Earth. Physically and geologically, Europe is the westernmost peninsula of Eurasia, west of Asia. Europe is bounded to the north by the Arctic Ocean, to the west by the Atlantic Ocean, to the south by the Mediterranean Sea, to the southeast by the Caucasus Mountains and the Black Sea and the waterways connecting the Black Sea to the Mediterranean. To the east, Europe is generally divided from Asia by the water divide of the Ural Mountains, the Ural River, and by the Caspian Sea.

Including Turkey in Europe, and considering countries with partial recognition (in particular some regions of the former USSR), gives a total of 63 countries to consider.

3.1 Overview

VISCED researchers have identified 124 European institutions and initiatives which justify mention in this report as notable examples and individual entries on the wiki. A number of these are local, regional or national initiatives, rather than virtual schools or colleges [although they are noteworthy] and they consequently do not appear in the 'Virtual schools in Europe' category of the wiki. They are retained elsewhere as individual entries on the wiki and within the relevant country reports.

Deeper investigation of the notable examples suggests that VISCED has thus far identified a total of approximately 70 true virtual schools and colleges in Europe, together with a further 30 examples of partially virtual schools and colleges. Whilst the search has been deep and assiduous it is inevitable that there still exist European virtual schools or colleges which VISCED is yet to identify.

These 70 schools and colleges demonstrate a broad spectrum in terms of the target cohorts they aim to support and full-time, part-time, full curriculum and supplemental offers. Schools have been established to serve:

- sick students in hospital and home;
- excluded or at risk of exclusion;
- children of travelling families;
- students wishing to study subjects not offered by their host-schools;
- rurally isolated students;
- children of expatriate families;
- students seeking credit recovery, catch-up or revision;
- students who prefer self-directed learning.

However, with a few notable exceptions, they tend to be considerably smaller than counterparts in the USA, Canada and Australia where student populations of several thousands are common. The geographical distribution of the notable initiatives, virtual schools and colleges we have found in

Europe is shown in the table below. Only the 24 countries mentioned in the text of this report are listed, and where institutions do not cater for school-age pupils, they are counted as colleges:

Country	*Schools*	*Colleges*	*Initiatives*
Belgium	3	1	
Bulgaria	2		
Czech Republic	1		
Denmark	1	2	
England	13	15	3
Estonia	1		
Finland	5	1	2
France	2		2
Germany	1		2
Ireland	2		
Italy			5
Latvia	2	1	
Netherlands	1		4
Norway	1	2	1
Poland	1		1
Portugal	2		
Russia	1		1
Scotland		14	2
Serbia	1		1
Spain	9	4	2
Sweden	3	1	
Switzerland	1		

Turkey	3		
Wales	1	1	
TOTALS	**57**	**42**	**26**

Countries with 1-5 exemplars are highlighted yellow; 6-10 in green; and 11+ in blue.

In addition to the countries listed above, we have also identified a possible virtual school in Croatia, but this appears to be no longer operating and is not included in this report. The entry for Armenia included in the interim report (Deliverable 2.3) has been further investigated and is, in fact, a US-based organisation.

Whilst England, Spain and Finland have the greatest number of schools and Netherlands and Latvia are well represented, no single country dominates the findings with all of the larger Western and Scandinavian European nations represented. To the south, Portugal and Italy are also represented. This is in contrast to Central and Eastern Europe where VISCED has identified very few virtual schools or colleges, more surprising since many of these countries have private education providers and/or online learning at university level. Analysis of the reasons for this is ongoing but an obvious [possible] explanation is that the investment in the educational and domestic technical infrastructures in these areas lags behind that in Western and Scandinavian Europe. Notwithstanding the near blanket representation in Western and Scandinavian Europe there is, as yet, no single 'national' movement and no co-ordinated 'European movement'. In fact the European Virtual Schools Colloquium held by VISCED in Sheffield in May 2012 was the first ever gathering of European virtual schools.

Neither is there any *apparent* obvious government support or enthusiasm for virtual learning at a strategic level. Governments do, however, support individual projects – in fact the state is the biggest supporter of individual virtual schools. There is a significant number of private schools although no single provider is dominant. There are no large private providers running chains of virtual schools like K12 Inc in the US.

One exception is the European Virtual School [EVS] – the regional branch of the World Virtual School [WVS] – a U.S. based, non-profit body with over 500,000 students worldwide. The European Virtual School's most recent enrolment figures suggest that there are some 56,000 students across Europe and a further 58,000 in Turkey. EVS is the only visible, significant, virtual school presence yet identified in Eastern Europe and the former Soviet Union, with over 8,000 students in Russia alone.

3.2 Exemplars in Europe

This section gives details of exemplars from individual countries, including the eight European virtual schools selected for case studies. Links for each entry are provided to the project wiki. The notable examples are designed to illustrate the different types of virtual school currently operating in Europe – many of these are somewhat 'under the radar' and the lack of national regulatory frameworks is addressed in Deliverable 3.9 *Final Policy Recommendations.*

Details of notable examples from Europe are summarised under each country. The countries are listed in alphabetical order, without any implication of ranking. Countries where we have not identified notable examples are omitted from the list.

3.2.1 Belgium

Bednet is a regional project in Flanders through which children who are suffering from long term and chronic diseases can follow lessons and interact with their own class through videoconferencing. It is currently catering for around 160 children aged between 6 and 18 at all levels of education. Approximately 50% of all the children are cancer patients and in any one year, between 5 and 8 have terminal illnesses.

Bednet was first established in 2005 and started to provide a service to children in March 2007. Its twin aims of ensuring that children can keep up with their school work and remain in contact with teachers and classmates are central to its philosophy.

There are 9 FTE staff, including two IT support technicians. None of the staff are teachers, but there is a pedagogical lead person, who is responsible for directing and managing the coaching service alongside the director and office manager. Bednet has a very specific recruitment policy related to the sensitivity of the context in which staff work: most come from human sciences backgrounds and include former teachers and nurses. This focus on sensitivity and maturity extends to the IT support staff. Staff development is a core concern, with a full day staff meeting for training and peer support each month.

Bednet is a tailor-made system with a personal approach. Students are at home when they use the Bednet system to connect to their own school. The system can be used in hospital; but treatment issues, internet problems and security often make this unrealistic.

The child is linked to his/her class via the internet. A Bednet set consists of two laptops (one with the child, the other in the classroom), two webcams, two scanner-printers and a camera focused on the blackboard. Thus children can participate in lessons in real time, using sound or light signals to ask questions and interact. Both teachers in the school and children receive training in how to use the equipment. The technology has remained virtually unchanged since the service started and staff acknowledge that its systems may need updating.

The learning outcomes for the Bednet students are exactly the same as for their peers in normal classes; the overall objective is to ensure students return to their own school as soon as they are able: 90% of Bednet students move on to the next school year with their peers. The school remains responsible for the child's schooling: the Bednet staff describe themselves as facilitators.

There is no inspection regime as the service is not technically a school, but Bednet is working on a strategic plan to increase its service to 500 Flemish students annually and to become a fully integrated – and therefore supported – ministry service.

At present, 50% of the funding comes from the Flemish Ministry of Education and the other 50% is private funding from a mix of donors and sponsors. Students and schools are not charged for the service; in the present harsh economic climate Bednet is currently carrying out a detailed review of its service to see how it can become more cost-efficient without damaging the level and quality of the service it provides. Legally speaking, Bednet is a non-profit organisation or in Dutch: 'vereniging zonder winstoogmerk' [vzw]. The main office of Bednet vzw is located in Leuven, Belgium.

Besides the appreciated support by the Flemish government and the provinces of Antwerp and East-Flanders, Bednet is also supported by Belgacom, GDF-Suez, PC Solidarity, Kom op tegen Kanker en the Koning Boudewijnstichting. On the IT level, Bednet cooperates with Develop-IT and Androme.

Junior College is a cooperation between K.U.Leuven and more than 70 secondary schools in Flanders, reaching almost 3000 students in the target group. The aim of this initiative is to bridge the gap between secondary schools and university by bringing high standard science into the classrooms of motivated and talented last year secondary education students. Junior College has proven to be of positive influence on students' decision making process entering higher education.

Pupils from secondary schools get the opportunity to study a subject (in history, mathematics and languages) for two hours per week during one semester. K.U.Leuven offers all participating schools (at least) an introductory and a concluding seminar where students get the chance to attend and participate in lectures. In between the face-to-face sessions, professors, teachers and students together build up a strong knowledge base using a wiki which consists of academic articles, documentaries, expert interviews, web lectures and interactive learning materials.

Junior College seeks to offer the pupils a challenging programme and to provide an inspiring e-learning environment. Pupils are challenged to explore their intellectual limits and explore their interest in science and research. At the same time Junior College aspires to be a platform where students, teachers and university teachers with similar interests around substantive themes or subjects find each other and share knowledge.

Le Service de L'Enseignement à Distance is a distance learning service. Open and Distance Education is not new in Belgium, since as early as 1959, the Ministry of Education Le Service de L'Enseignement à Distance (SED) in the Belgian French Community, had already initiated self-learning through ODE. The aim is to democratize studies and life-long education and to prepare learners for examinations equivalent to the diploma of secondary education. The Open and Distance Education centre also offers services to children living outside of Belgium for the primary school level and to teachers continuing professional development. Courses also include computer literacy and languages. Special courses are also offered to address different target public special needs such as patients in hospitals and prisoners.

Take Off *asbl* is a non-profit organisation in Belgium which targets children in the French-speaking Community who have been sick for a long time so they can continue their education at home or

while in hospital through connecting to the class and teacher via videoconferencing. This is the Wallonian equivalent of Bednet and is a not-for-profit organisation is based in Brussels.

3.2.2 Bulgaria

Alongside the National Strategy and Action Plan for the implementation of ICT in all Bulgarian schools, there are two Bulgarian Virtual Schools available to students:

First Bulgarian Online School (FBOS) was established on September 15, 2005. The mission of FBOS is to provide distance learning education in Bulgarian language, history, literature, geography for children and adults worldwide.

FBOS launched the first e-learning system tailored to the specific needs of Bulgarian communities around the world. Using state of the art technology and employing experienced teachers from Bulgaria, FBOS managed to create an effective e-learning system that meets the unique needs of Bulgarian expatriates.

The virtual educational system of First Bulgarian Online School (FBOS) provides a comprehensive distance learning program for children and adults around the world. Students experience real classroom education from the convenience of their home regardless of their location in the world. The combination of live lessons in the school's Virtual Classroom together with the original content make FBOS the best opportunity to learn Bulgarian language, literature, history and Bulgarian as a foreign language.

Elika Virtual School was established in 2007. This virtual school helps students of different ages, grades, skills and interested in different aspects of education, to improve or test their knowledge using creative learning and teaching methods based on tradition and interactive methods.

Elika Virtual School operates as a partner to mainstream schools, educational organisations, and other institutions working with or supporting children and adults with disabilities or special educational needs. The school aims to prevent young people from "dropping out of the community" by helping them become active citizens.

Through its work, Elika Virtual School also aims to encourage teachers, educational organisations and centres to evaluate and adopt better working models of teaching, training, integration and collaboration with marginalised students. The school breaks down this broad aim as follows:

1. *To motivate behavioural changes by creating a transferable model which can be used in situations where individuals and organisations have difficulties to overcome and where employee motivation is low.*
2. *To develop a teacher training programme designed to increase students' communication and presentation skills*
3. *To develop, record and publish models for the use of presentations and e-portfolio as a stimulus for learning – made available in the form of a toolkit (handbook and CD-ROM) and an analysis report.*

3.2.3 Czech Republic

Whilst we have not identified any indigenous virtual schools offering a full curriculum, there is one initiative worthy of mention:

Junior Language School, Lupàcova is a school which has effectively and innovatively integrated ICT to change teaching and learning practices, in particular the school produces its own extensive database of learning objects (http://www.veskole.cz), which is the first repository of educational learning objects in the Czech Republic, and participates in several EU projects involving ICT use in education. In this context, training of teachers on ICT and on re-thinking traditional teaching practices to make them more interactive is crucial.

3.2.4 Denmark

Danes Worldwide makes provision for expatriate children, offering distance learning in Danish from kindergarten level to the tenth grade. The distance learning is organised in such a way that it can be fitted in alongside conventional school lessons.

VUC Flex are Adult Education Centres [Danish: Voksenundervisningscentre, abbreviated VUCs] which offer school and high school level courses to adults age 18 and up [with no upper age limit, and with occasional but rare dispensations for people under 18] who wish to upgrade their qualifications, e.g. for jobs or for vocational or higher educations.

3.2.5 England

Note that the home nations of the UK are treated as separate countries. All four have different traditions in schooling and all four have devolved governments with responsibilities for education. The differences are less marked in colleges than in schools.

3.2.5.1 Virtual schools

Currently active virtual schools in England are listed in alphabetical order, followed by two ceased initiatives.

Academus offers two 'brands': the Academus Alternative for Schools and Local Authorities and Academus Independent for Parents and Guardians of children aged 11-19. Classes are deliberately small, with no more than 12 pupils and a pastoral care system with extra-curricular opportunities. Academus works with pupils unable to attend mainstream school for a variety of reasons, including: Home-schooled; international expatriates; unable to attend school for medical reasons; excluded from Secondary School; Special Educational Needs (S.E.N); victims of bullying; School-phobic. It offers GCSEs, iGCSEs and A Levels.

The Bridge Academy and the Bridge Academy Online is a pupil referral unit managed by the London Borough of Hammersmith and Fulham which caters for 175 boys and girls aged 11 to 16 who are not accessing mainstream schools. Just under half the pupils are from ethnic minorities, predominately

Black Caribbean and Black African. Twenty-six pupils have statements of special educational needs, and 80% are eligible for free school meals. The standard of teaching at The Academy has for a number of years been recognised as of high quality, and the number of pupils achieving GCSEs has increased.

The Bridge Academy took part in an Innovation Unit sponsored field trial which started in Autumn 2006 and through this The Bridge Academy Online was launched formally on 15 February 2007. This is a virtual learning environment via which the school is setting up a differentiated core offer to enable it to provide for students outside the confines of the school building and school day. This offer ranges from a 5 GCSE diet to a highly individualised offer which includes (accredited) work and tailored courses. In phase 1 of the project, the Academy provided 16 Year 9 students with an ICT equipment package, online activities and support for students and their families. By changing the timetable so students work from home for a day a week, it allowed time for students to undertake these activities, and for teachers to personalise their learning. Content was drawn from other websites and sources and tailored materials developed.

An extensive network of relationships (between parents, staff and pupils) has been developed in parallel with the ICT network. The level of personalisation offered through the Bridge Academy and Academy Online is only possible because of the resources available and low learner-teacher ratio (maximum 6:1 and frequently lower). This means that it is unlikely to be replicable in mainstream schools (although it may be possible in Learner Support Units). However, specialist units and inclusion units may in some cases secure the additional resourcing necessary to provide a comparable level of personalisation and support.

The Bridge Academy was graded 'Outstanding' in its most recent Ofsted report in 2010 and has been the subject of a number of case studies, including the Innovation Unit (unfortunately the PDF of its report is no longer available) and UK Broadband.

Briteschool offers both Primary and Secondary education for home-schooled and expatriate students.

ConnEct Home Learning is an online flexible learning programme delivered by Loughborough College. The programme was recently known as the Satellite Virtual School and has been integrated in to the college since 2008. ConnEct offers both GCSE's and AS subjects for learners aged 16 plus. The programme initially was delivered to chronically ill learners, but has now been rolled out and is accessible to anyone. Currently the organisation is working with elite sports performers, as well as chronically ill learners and has developed a partnership with a remote college in Methwold.

The programme allows learners who are unable to access a college due to their individual circumstances the opportunity to continue their education from home. It provides an alternative way of learning other than the traditional classroom approach. All learners will be entered will have a seat at Loughborough College for their exams; chronically ill Learners can request special examination considerations.

ConnEct has its own website which is regularly up-dated with a blog, case studies and information about the staff and services. Learners have access to this as well as any of the online resources and information offered by the college.

Nisai Virtual Academy is an online learning community and real-time teaching environment, working in partnership with Staffordshire University, focussing on support for NEETs [Not in Employment, Education or Training] and SEN [Special Educational Needs] students.

Notschool.net is an Online Learning Community offering an alternative to traditional education for young people who, for a variety of reasons, are unable to engage with school or other complementary provisions such as home tutoring or specialist units. Stephen Heppell's model provided the inspiration for iScoil, described in the European case studies section above.

Oxford Home Schooling provides courses from Key Stage 3 to GCE A Levels to support parents who wish to homeschool their children. A full KS3 programme is currently advertised, together with a broad range of IGCSEs, GCSEs and GCE A Levels.

The website emphasises the benefits of homeschooling and contains links to two home schooling support organisations: Home Education Advisory Service (HEAS) and Education Everywhere.

It is the sister organisation of Oxford Open Learning (see below).

Pamoja Education is an education company, based in Oxford, England. It is dedicated entirely to providing top quality online courses for the International Baccalaureate® (IB).

Pamoja Education, its management and staff are committed to the IB's overall mission, and particularly to helping the IB increase subject choice and global access to the IB Diploma Programme.

Pamoja Education courses are developed and delivered in close cooperation with the IB, and all courses comply with the IB's rigorous quality assurance standards. The IB provides continuous review and feedback regarding course content and delivery.

Pamoja Education was founded in 2009 by Pamoja Capital, an investment group based in Switzerland focusing on socially responsible investments in the areas of alternative energy and education.

Already in its third academic year, Pamoja Education serves IB students and IB World Schools® offering May exams in 37 countries around the world. Preparations are now underway for the 2012-2013 academic year, when students will have a choice of 11 courses, covering four of the six IB subject groups.

Pamoja Education's online Diploma courses represent the very best in online pedagogy: courses are student-centric but teacher-led, designed to promote rich student-teacher and student-student interaction.

Classes are limited to a maximum of 25 students, with class sections balanced to ensure a geographically diverse student body – leading to global working relationships which are anything but "virtual".

Each course is developed by a team of experienced IB teachers, selected in close consultation with the IB. Lesson plans ensure that students master the Diploma Programme curriculum while also developing 21st century learning skills which will prove beneficial throughout their academic and professional careers.

Profits from Pamoja Education benefit the charitable McCall MacBain Foundation, supporting its commitment to improve health and education in Sub-Saharan Africa: Pamoja means "together" in Swahili.

Periplus Home Education provides live, online teaching for young people aged 11-18. Students can choose to do a full taught curriculum, individual subjects at any level or intensive, short-term tuition prior to exams.

The Cloud School is an example of a small scale virtual school, run by a single individual who had previously worked for InterHigh (see the entry for Wales below). Recently established, this purports to offer the IGCSE in English, Maths, Science, History, Economics, Sociology, Development Studies, Child Development and World Literature. AS, A2 and other examining boards are also available, as well as pastoral care with coaching programmes, adaptation to special needs and community activities.

The Web School offers full time tuition to learners aged 11 – 19 in virtual classrooms led by live, qualified secondary teachers. It is an independent school, free from local authority control and therefore learners have to pay fees. It is very small scale currently.

Wolsey Hall, like Pamoja Education, is based in Oxford and uses a learning management system to provide online learning for 14 to 18 year olds studying A-Levels and IGCSEs through personal tutorials, rather than classes. The business started as a correspondence college and has been supporting students on distance learning courses since 1894.

Former initiatives

Accipio Learning and The Digital Learning Community

Accipio Learning claimed to be the UK's leading provider of live, interactive, online education and offers a learning experience that is similar to a mainstream school. In partnership with schools and local authorities, Accipio teach the most challenging pupils and help them achieve academic success and re-integrate into mainstream school. However in August 2011 Accipio Learning went into Administration. This is one of very few examples of UK virtual schools which has not proved sustainable.

A second example of a 'failed' initiative is the Digital Learning Community, which was a self-contained initiative/team within the East Riding Council, School Advisory Service. DLC provides direct teaching services to schools in the shape of lessons broadcast via the Internet to subscribed school cohorts. This used to have a publicly accessible website, which appears to be no longer active.

Although this initiative appears to be defunct, there are many parallel initiatives in individual local authorities for looked-after and excluded children, which usually exist 'under the radar'.

3.2.5.2 Virtual Colleges

The situation in the college sector has changed dramatically during the timescale of the VISCED project and is continuing to develop rapidly, both in the public and private sectors. In the public sector ***LearnDirect*** is the largest organisation offering a wide range of online courses for employees and individuals enrolling privately. It offers both face-to-face and remote tutor support for its courses, operating through a network of organisations, many of which are general further education colleges.

Since 2000 ***LearnDirect*** has pioneered the large scale delivery of learning - supported by people but enabled by technology. The national website describes its work as follows:

With a mission to transform the skills and productivity of the working population by using technology to bring people together to work, share and learn online, we have shown how we can transform people's lives and help businesses thrive.

Back in 2000, we challenged the norm and took a bold step to deliver learning online. In doing so, we have built a unique and market leading position – using technology to provide learning and assessment solutions.

Since then, our work has needed to evolve to reflect the changing demands of our learner, the sector, as well as the political and economic landscape. Technology enables to us to do this – the explosion of internet usage and the power of the web, pushes us to find new ways to help people and businesses achieve their goals.

We offer a number of products and services, including:

- *A network of centres across England and Wales where people can learn new skills, gain qualifications and get tutor support.*
- *We offer courses and qualifications ranging from English, maths and IT to employability skills as well as vocational qualifications and, in selected locations, apprenticeships.*
- *A learner support centre which provides remote support to those people learning online from home or wherever they can access the internet.*
- *Working with businesses to provide them with the skilled staff they need to thrive.*
- *Short online courses which are available to buy directly from the* ***learndirect*** *website.*
- *Online tests and assessments, such at the Life in the UK test which we have run for the Home Office since 2005.*

Key facts

- *10,000 people log on and learn with* ***learndirect*** *every day.*
- *We've helped more than 3.5m people improve their skills since 2000*
- *More than 500,000 Skills for Life test passes have been achieved with* ***learndirect****.*
- *93% of our learners say learning with us has given them the skills to help them in their future working life.*
- *Learners can earn £2,240 more on average after learning with us.*

- ***learndirect*** *has helped more than 6,000 businesses equip their staff with the skills needed to succeed.*
- *Learner satisfaction with* ***learndirect*** *currently stands at 98%.*

None of the public sector organisations listed below can claim to be a fully virtual college offering a comprehensive range of courses. Most of the initiatives and providers listed cater largely for adults, but include numbers of learners aged 16-21 on their books, hence are in scope for VISCED.

Public sector: General Further Education Colleges (GFE)

All the 237[2] GFE, land-based and art & design colleges in England have VLEs which are accessible by students for course materials, the submission of assignments, communication with lecturers and research. The majority offer some part-time courses for students aged 18+ largely or entirely online, both in basic education and vocational training. However, with the exception of ***The Sheffield College*** (see below), few offer GCSEs fully online and we have not identified any English colleges offering fully online GCE A Levels: those that have investigated this report that the current funding regime militates against this.

The colleges listed below give a representative selection of exemplars.

Aylesbury College and ***Barking & Dagenham College*** have e-campuses which offers a range of part-time courses on a fully online basis.

Cambridge Regional College via their VC Training brand offers a range of short courses entirely online, and the ***College of North West London*** offers a range of vocational training online modules which can be studied on a stand-alone basis.

Cornwall College has developed significant distance learning provision, particularly in vocational areas, and offers some short IT courses entirely online.

Derby College, ***Gloucestershire College***, ***Highbury College***, ***Kendal College***, ***Myerscough College***, ***Newcastle College***, ***Somerset College*** and ***South Essex College*** are further representative exemplars of GFE colleges with substantial online provision accessible via their websites.

Sheffield Online College is part of The Sheffield College and has been offering online learning to learners and their employers since 1997, making it one of the first colleges in England to use the internet in this way. It has pioneered a fully online GCSE English Language course and the development of this was furthered by support from VISCED through WP6 (piloting).

Private providers

There is a small, but rapidly growing, number of private providers. Untrammelled by the same funding regime as the public sector colleges, several of these offer GCE A Levels fully online.

[2] the number of separate colleges changes each year: figures are taken from the September 2012 Association of Colleges (AoC) list at http://www.aoc.co.uk/en/about_colleges/index.cfm

Cambridge English Online began in 2002, specializing in innovative English language learning materials, but is now creating more resources for other subjects. It is primarily a resource developer and repository, rather than a direct deliverer of online learning.

College on the Net advertises a broad range of GCE A and AS levels online, including minority subjects such as Archaeology and Classical Civilisation.

The ***National Extension College*** was established in 1963 to offer educational opportunities to people who were unable or unwilling to attend a school or college. It offers a wide range of courses in academic subjects, childcare, the arts, management, accountancy and counselling, together with teaching qualifications and a large number of GCSEs and IGCSEs and GCE AS and A Levels.

In the 50 years since it was founded, NEC has helped three-quarters of a million learners achieve qualifications. Initially established as a correspondence college, it now uses the internet and a wide range of media for course delivery and remote tutor contact.

Online College of Art and Design provides school and Further Education courses in the art and design subject areas and also offers Recreational courses and portfolio preparation for university.

The ***Open College of the Arts*** offers an increasing range of both degree level and sub-degree level accredited courses in 2-D and 3-D art and design subjects entirely online.

Oxford Open Learning offers a wide range of GCSE, iGCSE and A level courses, as well as 'Skills for Learning' courses, including 'Everyday Good English', 'Everyday Mathematics', 'Everyday Information Technology' and 'Everyday Bookkeeping'. It has been offering course materials since 1988. It provides courses for students who are over 18 years of age. Its sister company, Oxford Home Schooling provides similar courses for students who are under 18 years old.

Students are usually adult learners, some of whom under-achieved in school and now wish to rectify that, and some who, whilst having a generally good academic background, now need a specific qualification to make progress in their career. The college invites applications from students both within and outside the United Kingdom.

Spurgeons College is a private not-for-profit Baptist religious foundation. Its online courses (validated by the University of Manchester) are designed to prepare students for Christian ministry and are largely at higher education level, but some are at further education levels and are available to 18-21 year olds and therefore in scope for VISCED.

Stonebridge Associated Colleges is an established provider of distance education and home study correspondence courses based in the United Kingdom but with students worldwide.

UK Open College offers GCSEs and A levels as well as vocational courses, available to students all over the world. Coursework can be submitted by post or email. Almost twenty percent of students are studying from outside the UK and the average age of students is 36. It has one of the largest selections of home study courses available, with over 600 home learning courses to choose from, the majority leading to fully recognised awards and qualifications. As an indication of its size, there

are 17 members of the support team named on the website; however UK Open College also has a network of other tutors relating to other subjects.

The Virtual College works with companies and public sector organizations as well as providing e-learning to individual learners through over 150 e-learning courses available direct from the college or developed alongside distance learning partners and it also runs its own Learning Management System. Its main clients are adults, but also include 18-21 year olds.

Vision2learn has run vocational qualifications have been running since 2001 and are suitable for people aged 19+ and as they lead to national qualifications are eligible for government funding in England.

3.2.5.3 Notable regional and national initiatives

EXite (Exploiting Information Technology in Education) is a new leadership programme for ICT in schools and academies. It builds on the original SLICT (Strategic Leadership of ICT) intervention programme, led by two of the directors of the original project. It was piloted in September 2011 and rolled out nationally from January 2012.

It will advise schools on learning platforms, Facebook, Twitter, Google Apps, Moodle, Twitter, Microsoft's free live@edu email service, greater use of web 2.0 technologies and mobile learning and will provide a framework of professional development opportunities for school leaders to review use, strategically plan and embed new technologies. The elements include face-to-face professional development days, online materials, toolkits, resources and Skype workshops.

For much of the first decade of the century, the largest initiative (mainly impacting on schools, but with some impact on FE colleges) was the **The South Yorkshire e-learning Programme** (SYeLP) , branded as **e-sy.info**. Established in 2001, using EU Objective 1 monies, it was a partnership of the four local authorities in South Yorkshire: Barnsley Metropolitan Borough Council, Doncaster Metropolitan Borough Council, Rotherham Metropolitan Borough Council and Sheffield City Council, with support from Yorkshire Forward and the Learning and Skills Council (LSC). Although the project has now finished, it has left a substantial imprint on ICT in education in the sub-region.

There have been a number of innovative project initiatives in English further education, amongst which **MoLeNET** (The Mobile Learning Network) has acted as a significant catalyst in developing online and mobile learning: this was an unique collaborative approach to introducing and supporting mobile learning in further education and training via supported shared cost mobile learning projects.

3.2.6 Estonia

There is one virtual school in Estonia – **Audentes e-Gymnasium.**

Audentes E-Gymnasium offers a combination of conventional and online learning format which is primarily intended for adult learners who have left high school to work and also for those who for various reasons (e.g. health, work or sports career) cannot attend school on a daily basis. It is part of the private Audentes School and teaches 16 different subjects in a course system. One course amounts usually to 35 hours of work. Thus, the whole programme for the secondary school comprises of 85 courses. The cost of one course is 65 Euros. The particular system will allow the subjects to be separated into blocks, e.g. two courses of chemistry are taught during the first semester and none during the second. Teaching is a combination of conventional and online learning, where face to face sessions amount to 16-20 hours per month and are spread over one weekend. Final examinations can only be taken at the physical school.

The virtual learning environment is set up in Moodle and the graduation certificate is accepted by universities.

3.2.7 Finland

Finland has a longer established and more embedded tradition of virtual schooling than most other EU countries. There are currently two notable e-learning initiatives:

eLukio is a consortium of upper secondary schools where courses can be taken virtually from the Moodle platform. Examinations however are mainly taken in one of the network´s schools.

Virta is not a stand-alone virtual school but an initiative designed to develop a model.

In addition to these national/regional initiatives, there are five exemplar virtual schools and one virtual college:

ENO-Environment Online is a global virtual school, operating in 150 countries worldwide.

Gymnasiet i Petalax is a Swedish-speaking virtual high school.

Etäkoulu Kulkuri is a distance school for Finnish children living abroad.

Two branches of the Otava Folk High School: **Nettilukio** and ***Nettiperuskoulu*** whose main target group is adults and younger people who do not have a graduation certificate from basic education.

Nettilukio has been the subject of a detailed case study, summarised below.

Otava Folk High School was established in 1892 and in 1994 received the status of 'upper secondary school for adults'. In 1996 it launched a project Internetix and within this project Nettilukio, a fully virtual upper secondary school, was founded. The first 13 students started in January 1997. Otava

Folk High School now consists of the actual physical Folk High School, Nettilukio (virtual upper secondary school) and Nettiperuskoulu (virtual basic education).

When the Internetix project first started the emphasis was on producing e-learning materials that students could use whilst taking upper secondary school courses. Over the years the emphasis moved towards learning platforms and Nettilukio developed its own learning platform, Muikku, designed to support both study and evaluation. The growing emphasis by the Finnish National Board of Education on virtual schooling encouraged the development of the fully virtual school.

There are now more than 500 students from all over the world in Nettilukio, covering the main categories of 'exclusion' described in chapters 1 and 2. At present, people with learning disabilities, or who have been bullied or found it difficult to cope in physical schools form the largest group of students. In 2011, 374 students left, with 39 graduating and the school received 739 new applications with almost 450 students actually starting.

Whilst the physical Otava Folk High School is small, Nettilukio is medium-sized by Finnish virtual school standards.

Staff members at Otava Folk High School may work across all three sections of the organisation. There are 23 part-time teachers at Nettilukio, who may live anywhere inside or outside Finland and work alongside their full-time job elsewhere. Four e-learning instructors are responsible for guiding student groups and there is a small central staff, including a principal and training manager. There are no school-specific staff recruitment policies; there is a strong emphasis on continuous staff development.

Students at Nettilukio may choose between three different methods for completing their courses:

- Non-stop courses involve independent study and can be commenced at any time. There is no fixed pace – students manage their own time.
- Collaborative courses are offered several times through the year and begin and end on fixed dates. When participating in a virtual class, students work together on issues and use each other as resources in a closed environment. Discussion forums, wikis and virtual conferencing tools are widely used.
- Phenomenon-based learning takes a topic (e.g. hunger and thirst, the welfare state, the Web 2.0 world) and integrates subject areas, according to students' personal choices. These courses are offered in an open, public online environment and often involve external experts. Web 2.0 technologies (e.g. blogs, wikis, video conferencing and social networking) are extensively used, together with Ning, Adobe Connect, instant messaging tools, email, Skype and Google. Students have also founded a closed Facebook group for peer learning.

Students are free to combine the three methods across their chosen programme.

There are no examinations or testing regimes. Evaluating individual tasks is the key point of assessment; this contrasts strongly with the physical Otava Folk High School. Formal course grades are provided according to the national curriculum and students who cover the whole upper

secondary curriculum receive an official High School Diploma and are able to take the Matriculation examination – a qualification that has international acceptance.

The drop-out rate is high. However a single figure is difficult to calculate as many students return to study after initially stopping as students can start and stop at any time, and some take only one or two courses, whilst others tackle the full curriculum. Two main causes of drop-out are a misconception of the amount of work involved in independent study and changes in life situations which make studying impossible.

Studying is free for students tackling the full upper secondary curriculum if they are not registered at another upper secondary or vocational school. Students undertaking single courses pay a fee, but this is often paid by another school or employer.

The school receives a state grant for each student with the amount depending on the extent of the individual programme.

Sotunki Distance Learning Centre was founded in 1999 and currently contains about 130 adult students and 250 single-course students from other upper secondary schools.

3.2.8 France

France has a number of major ICT initiatives in the school system, but few fully virtual schools.

Two notable initiatives are:

L'Éspace Numerique de Travail (ENT) – Digital Workspace **(DW**) is a complex of online services at the disposal of the educational community by the school institutions. This way it constitutes the information system of the institution, by offering to each user (teachers, students, parents and school staff) a personal space which includes what is needed for working, learning or accompanying the learning processes of students. Students, teachers, parents and community can access their digital workspace from whichever computer. They can find there information on school life, parts of courses made available by their teachers, exercises etc. Two important examples are the Strasbourg and Clermont-Ferrand authorities, who have set up the programme in all of their middle and secondary schools. In 2009, 600 schools had digital workspaces, with 700, 000 opens accounts.

The "Digital textbooks available on virtual learning environments" is an experimental service. Since September 2009, the Ministry of Education has been carrying out an experiment in 12 académies (local education authorities – there are 30 académies in France). Digital textbooks have been made available on virtual learning environments in order to reduce the weight of pupils' schoolbags, develop the use of ICT, and help create tomorrow's multimedia digital textbooks. The project has been established in partnership with textbook publishing companies who have developed new online textbooks. Ten publishing companies now offer full web textbooks on two platforms. The 65 lower-secondary schools that are concerned by this experiment are already equipped with a virtual learning environment and have access to online teaching resources. More than 8,000 pupils in 6ème (age 11) and their teachers, from 21 départements (county size local authorities) and 12 académies,

have online access to the new digital textbooks via six different virtual learning environments and pupils leave their traditional paper textbooks at home. The départements, which already finance the ICT equipment of lower secondary schools, are completing it and ensuring that internet connection speeds are high enough to allow the use of such online textbooks in class. The state, which finances paper textbooks for all lower secondary schools, also contributes €430,000 towards the cost of acquiring the 4-year rights to use those digital textbooks. The académies, through their bodies of inspectors, help ensure the success of the experiment which is to be carried on to the next school level of 5ème (age 12) and is to last five years.

There are two notable examples of virtual schooling:

Centre national d'enseignement à distance (CNED)
The Centre National d'Enseignement à Distance (CNED) – National Centre for Distance Education – is a French public institution under the oversight of the department of education dedicated to providing distance learning material. It was created in 1939 and has provided on-line material since the mid-1990s. The 3000 programmes it offers range from pre-primary education to university level. At school level, in addition to being the distance education provider for the Ministry of Education, the CNED also offers home packages for subjects that are not taught in school and support courses or summer courses. The Campus Electronique is an open platform of information and pedagogical services on the Internet. Its services include reception and information, assessment and guidance, telelearning, a resource centre, forums, access to networks; the services are accessible from anywhere and at any time through the Internet and via digital satellite.

The services of CNED are also used to ensure access to learning to pupils who for health reasons cannot attend normal school. With its services for older teenagers, it also qualifies as a virtual college.

Académie en ligne was created by the CNED in 2009. It offers offers free of charge on-line courses, covering all years of compulsory education, in all relevant subjects. This service which address both pupils and their family, was enriched in 2010 with interactive units for primary school and college. These units provides synthesis of main curriculum themes, complementary activities for training on the specific topic, and complete courses are also available.

3.2.9 Germany

Homeschooling is illegal in Germany itself, but is permitted for expatriate children through the **Deutsche Fernschule,** still largely operating as a correspondence school, but now developing a web-based virtual capability.

Two notable examples of current ICT initiatives are:

Lehrer-online (teachers-online) is the national German school server, funded by the national ministry for education and research. The main tasks of Lehrer-online are the provision of information and teaching material for schools(primary schools, secondary schools, vocational schools). New media is a strong focus of the programme.

Lehrer-online is part of an online network www.schulen-ans-netz.de, financed by the Federal Ministry of Education and Research (BMBF) and, in its first phase, sponsored by Deutsche Telekom as well. Some German federal states have similar and linked initiatives, e.g. Bavaria, Lower Saxony etc.. Like all the web-based services, provided by the Schulen ans Netz, this portal was also supported by a team of education experts, IT-specialists and teachers who were knowledgeable of the current educational needs.

The services of Lehrer-Online include practical teaching modules including free-of-charge working materials, methodological and didactical articles and suggestions for classroom preparation, which have been developed and approved by teachers in the classroom and carefully developed, researched and validated by editorial staff, both in terms of subject and methodology, before being published. There are also dedicated discussion fora, where teaching professionals can exchange their ideas and experience.

- An information service specially tailored to users' needs. This includes news about schools, new media and education policy along with in-depth information on practical legalities like data privacy and copyright issues.
- The Virtual Learning Environment lo-net offering virtual rooms for cooperation with colleagues as well as for class teaching and cooperative projects with other schools in Germany and elsewhere.
- The homepage generator for primary schools Primolo is a net-based tool which can be used free of charge and which enables primary school children accompanied by a teacher to design their own web sites.

Lo-net and Virtuelles Gymnasium Sonthofen

The Sonthofen Gymnasium, in Sonthofen is an interesting example of adoption of the lo-net services to create virtual classrooms and change the traditional way of teaching-learning in school.

Lo-net stands for "lehrer-Online-Netzwerks" (teacher on line network) and is a service provided by Schulen ans Nets – free of charge – for schools. The second version of lo-net was launched in 2006, and provides for the possibility to create virtual learning environments (virtual classrooms and groups) where teachers and students can work and where it is possible to exchange artefacts and materials. As mentioned in the Lo-net website homepage, "LO-Net makes true the dream of the virtual school: teachers and learners work together in classes and courses online, school organization and work with parents take place in the network. Already more than 6,500 schools nationwide use the web-based learning and work lo-net platform, the comprehensive and innovative solution for schools."

Virtuelles Gymnasium Sonthofen is a service from the Sonthofen Gymnasium, which has subscribed to the lo-net system, so that all teachers and students have their own account, which is also an email

address. In 2006 many teachers in the school were already giving their lessons using lo-net, including homework, opportunities for additional practice, etc. Students can also work with their classmates, exchange material, i.e. upload and download presentations. Forum and chats are also available. The learning environment access is controlled but can be opened either to other classrooms, as well as to parents etc.

3.2.10 Ireland

Bridge 21 is a notable joint venture of Trinity College, Dublin and Suas Educational Development. It has three core strands:

1. A schools programme to scale and adapt our learning model for use in Irish secondary schools nationwide.
2. The Bridge2College outreach programme, based in Oriel House – a team-based experience for young people to explore learning through technology.
3. A learning and research centre in Oriel House, Trinity College Dublin, to innovate, evaluate and refine 21st century learning methodologies.

The second, and most significant, virtual school in Ireland is **iScoil**, which has been explored as one of the European case studies.

iScoil is run as a private not-for-profit organisation funded by the Presentation Sisters in Ireland. It grew from the UK online learning model Notschool.net, the brainchild of Stephen Heppell.

iScoil caters for young people aged 13–16 who are out of mainstream school, largely referred for school phobia and refusal or disaffection and mental health issues. The usual number of students is around 45–50 at any one time.

Students are referred to iScoil through an established process by welfare officers working with the National Education Welfare Board (NEWB). Criteria for referral include having been out of school for at least 6 months, having tried other provision and having at least one supportive parent or guardian.

The original approach was fully online, but this has now been broadened to include a centre-based element with a blended learning approach. At present there are 3 centres in operation in Roscommon, Limerick and Longford.

The original platform was FirstClass, but this has now changed to Moodle, which offers greater flexibility for learning materials and pedagogy.

iScoil staff are made up of mentors, subject specialists and central team members. Both mentors and subject specialists are qualified teachers who work part-time. The central team comprises a manager, an administrator, a learning and support technician and a full-time education officer and this team manages and co-ordinates the delivery of the programme. Central team members are the first point of contact with the student, family and referral agencies.

Staff members are recruited on the basis of normal recruitment policies and are also required to have appropriate ICT skills. They are supported through a continuous programme of staff development, including a significant amount of training and support in IT.

iScoil operates an individualised online learning programme and whilst it does provide opportunities for students to collaborate and work together, it does not insist on this.

iScoil commissioned a thorough interim evaluation of the first two phases taking into account the results of the first 85 students who had participated up to the end of 2010. The evaluation identified considerable learning gains in personal effectiveness, interpersonal and social development and functional skills. Gains related to 'working with others' were strongest in those who had attended centres and there were also very positive gains in ICT, literacy and mathematics.

The approach taken to progression is to support students to move on to an appropriate situation. The evaluation showed that 65% of students either returned to mainstream school or went on to further education or training.

iScoil has been recognised as a provider within the Further Education & Training Awards Council since 2010. It has an in-house accreditation system linked to the external National Framework of Qualifications.

iScoil does not yet have an official status within Ireland; the concept of the virtual school is new to the Irish system. However, it has been specifically mentioned in the recent Programme for Government as an innovative initiative for tackling the problems of early school leavers in Ireland.

3.2.11 Italy

Although we have not identified any fully virtual schools, the wiki describes five exemplars, four of which are connected to aspects of inclusion:

cl@ssi 2.0 is aimed at exploring the potential of ICT in transforming learning environments and is implemented through pilots in school at lower secondary level across all Italian regions, funded by the Ministry of education. The website offers presentation of several of the pilots carried out so far as well as data and info on participating schools.

Islands in Network (Scuole in rete) is a project aimed at ensuring the integration and combating isolation of insular schools7classroom in Sicily by networking them with inland schools/classrooms. The context in which insular schools act is problematic, since the absence of aggregation centres and limited connections could result in cultural isolation and closure. These schools are also affected by a high turnover of teachers. The idea of a distance network of schools was born exactly to combat such isolation and its consequences.

The national portal **HSH@Network (Hospital School Home)** is aimed at maintaining relationships between institutions and families so as to facilitate study for students in hospital, in house therapy

or in day hospital. The portal include a platform called HSH (hospital school home) which addresses teachers who can create ad hoc virtual learning group for their students.

@urora is a project sponsored by the Ministry of Justice to re-integrate young offenders into learning.

Scuola B@rdi is a project of the province of Parma targeted at remote areas of the Apennines. The Parma province has created a common path for the first two years of secondary education aimed at students who live in small municipalities which are far away from their schools, in order to reduce their commuting and combat drop out. In particular, students from these municipalities can follow some general courses at distance and are provided with a platform for studying on line and staying in touch with teachers of their school. For more specific courses they have to go to travel to their school.

3.2.12 Latvia

The major virtual school – **Rīgas Tālmācības Vidusskola** – is explored as one of the European case studies.

Rīgas Tālmācibas Vidusskola (RTV) was established in 2009, with the support of the Ministry of Education and Science. Initially offering general secondary education, it has now started to offer primary education as well. The school was established with advice and guidance from a secondary school in neighbouring Lithuania.

RTV is the first distance learning school in the Baltic states to be accredited by its national ministry. All of its programmes have been accredited for 6 years, which is the maximum period allowed.

Student numbers have increased each year and there are now around 450 enrolled. The numbers change each week, since enrolment is continuous. Students currently live in 22 different countries and are aged from 14 to 57. They include most of the categories as described in the introduction of this chapter, including a considerable number of older people who for one reason or another were not able to complete their secondary education at the usual age.

More than half the students are full-time. They are admitted based on their previous school report, or on an individual assessment if they are older and do not have this available. The smaller proportion of part-time students use RTV as a supplementary school to complete subjects they want to improve. Most of their study is done at home, or in the case of elite performers, wherever their role has taken them.

RTV has 29 teaching staff delivering lessons, of whom 20 also work with students on the internet. The central staff team consists of a principal, a deputy director, two educational technologists and an accountant. There is strong support for professional development.

Communication between students and teachers is carried out on the school's e-study environment and may involve Skype, phone, email or any web-based programme that they agree to use. Interestingly, students are encouraged to recommend teachers for the school and several have been recruited in this way.

Every class has a schedule created by the central team, with tests each month. The academic year is divided into two terms. Teaching and learning takes place in a range of modes: around 50% is independent study with supplementary online materials; 30% independent study with compulsory textbooks; and the remaining 20% is split between online group tutorials (6%), individual online tutorials (2%), individual correspondence tutorials (3%) and tests (8%). Study materials are provided through video lectures, Ministry-prepared interactive materials, private lessons and Skype lessons.

Students take the same examinations as in conventional schools. Outcomes match those from conventional schools, but with fewer top grades and fewer bottom grades. The examination period of two weeks in May is the only time that students are required to attend the physical school. The school is currently negotiating with the Ministry to make it possible for students in Ireland and England to take examinations at the Latvian embassy in these countries.

The school is a private school with its own financial base. Students pay fees, unless they have a disability. The state pays the salaries of the teachers.

In addition to this, there appear to be at least two other notable examples of virtual schooling/virtual training:

Rīgas Komercskola Tālmācības Vidusskola offers basic education (7th-9th grades) or vocationally oriented general upper secondary education (10th-12th grades) on a distance learning basis. In English it is called the School of Distance Education "Riga Commerce". It claims to be the only accredited distance learning school in Latvia that offers a professionally oriented curriculum.

College of Business Administration: Although specialising primarily in degree and higher level studies, the College also offers sub-degree professional courses which are marketed to students both in Latvia and broad who have completed high school education. Its mission aims:

'To become the leading distance learning business high school both in Latvia and in the Baltics, therefore to attract students from other countries of the world on the basis of distance education. In the process of development and employment of new and competent tutors in future to offer 2-nd level higher education, professional MA courses and doctorate. Taking into consideration the quality of education we offer and its up-to-dateness, make CBA popular not only in Latvia, but also abroad.'

3.2.13 Netherlands

Virtual schooling in the Netherlands is only permitted in exceptional circumstances.

The IVIO@school arm of **Wereldschool** is the only Netherlands virtual school to provide a full virtual programme for indigenous children – and this is for excluded children who are unable to attend bricks-and-mortar schools. Wereldschool has been developed as one of the VISCED case studies:

Wereldschool was founded in 1948, initially to provide education for the children of Dutch nationals living in the former Dutch colony of Indonesia – to ensure they were not disadvantaged if/when they returned to the Netherlands. The school has changed radically from the initial 'Correspondence school' model to the point where all contacts between students and teachers are now facilitated through the internet, typically using email and Skype.

In 2011, it split its operation into two separate 'sister-schools'. Wereldschool continues to support children overseas and another school – IVIO@school – has been developed to support children in the Netherlands who are not considered well-suited by the traditional Dutch education system: this may be because they have learning difficulties or disabilities, school-phobia, illness or are incarcerated in a young offender institution. Amongst the IVIO cohort are some very academically gifted students.

Both the Wereldschool and IVIO philosophies are founded on meeting the individual needs of the students. However, the models have some critical differences. Whilst home schooling is usually legal for Dutch children living overseas, it is not legal for those educated in the Netherlands. These children (excluding those in prison who attend prison schools) are expected to attend a physical school where they work through the IVIO materials and are supported online by IVIO teachers.

The IVIO@school works together with regular schools in the Netherlands. Some schools timetable specific 'IVIO' subjects, but most schools create time for IVIO lessons and in this time, each student works on their own subjects. The mentor of the children is in the class and helps all the students to plan the lessons. The IVIO teacher guides students from a distance and responds to questions about a specific subject. IVIO@school already has 600 students of whom 90% are full-time.

The Wereldschool offer covers pre-school (3 years) through to upper secondary (18 years). Wereldschool itself currently supports approximately 700 students overseas – across 128 countries – 15% of whom study a full online-curriculum.

Since its main goal is to (re)integrate students into their home-nation school system, Wereldschool prefers teachers who maintain their curriculum and pedagogic knowledge through current

employment at traditional Dutch schools. These teachers often combine their work at Wereldschool and a traditional physical school.

There are 10 primary teachers and 35 secondary teachers, all working part-time, with 12 support staff. An individual full-time teacher will support approximately 80 students. Wereldschool does not specifically recruit teachers for their ICT skills, but seeks good teachers who are willing and capable to adapt to new techniques. They then receive support in developing ICT and online teaching skills and are closely monitored. Every month the school checks the pace and quality of the feedback supplied by the teaching staff: teachers have to respond to messages within 48 hours, correct every test within 5 days and send stimulating feedback to their students to keep them motivated. Most Wereldschool teachers work primarily from home but get daily support from the head office, twice-yearly catch-up meetings, professional development workshops and an annual official appraisal.

The students' engagement with Wereldschool is tailored (in consultation with the family) to the individual's needs. Some students register at a local school in their new country of residence and enrol with Wereldschool for supplementary courses (e.g. Dutch) which will help their re-integration when they return to schooling in their home country. Other students opt for the Wereldschool full-curriculum and are essentially home-educated. Most of the students following the complete curriculum are looking for a more social environment. Sometimes they work on their programmes at a host school so that they can participate in subjects such as gymnastics or art-classes. Other full-time students study together with fellow homeschoolers, perhaps in a library or at home.

Students and their families choose the model which best meets their own needs. The majority of students following only a few subjects study at home so that they can easily combine the self-study with other (home) work.

Students are supplied with a comprehensive manual and package of learning materials (books, CD-ROMs, etc.) The manuals contain a lesson planner and all lesson materials. For primary students the manual is written for the parents whilst for secondary students the manual is written for the students. Parents of primary school children are expected to work with their children. Secondary school students are expected to work independently with these materials and use web technologies to contact their teachers for support. Their parents are encouraged to act as mentors. The students periodically have to take online tests, which are supervised by the parents. The student/parent sends the answers to the teacher. In the final year of secondary school, the students have to return to the Netherlands to take the official finals which are administered by an independent, national institute responsible for all official school exams that do not take place at a school.

Wereldschool is planning to replace the current learning materials with online resources and to include multimedia content such as video. However, digitising the curriculum content looks demanding since cooperation with publishers is proving somewhat problematic. Similarly, another 'bottleneck' is to find an appropriate and affordable digital platform: most platforms are designed primarily for 'classes' whereas the Wereldschool model is highly personalised.

Wereldschool has chosen an approach based on meeting the specific needs of the individual. The students work at their own level in their own space. Because the students live in different time-

zones, peer learning is not always possible. However, Wereldschool intends to investigate the feasibility of integrating peer learning in its programmes. Currently, students are encouraged to participate in local sport clubs and other social situations and to communicate with each other through an electronic message board.

Wereldschool sees personalisation as the critical factor for sustainability. Today the main communication channel is email. Whilst email is very quick, it is also impersonal. The challenge for Wereldschool is to integrate modern techniques that enable an even more personalised approach to its learning programmes.

The Wereldschool is recognised as a school by the Ministry of Education. Every year Wereldschool has to provide its learning outcomes to officials and every three or four years they visit the school to inspect all learning materials, policies, etc. However, its funding mechanism is totally different from other national Dutch schools: Wereldschool is privately owned. The only funding received directly from the Dutch government is for 'Dutch' as a subject and students or their guardians have to pay for the rest of their education themselves.

There are four other notable initiatives worth mentioning:

Acadin.nl is a digital learning environment for supporting gifted children

The Edufax virtual classroom is a private company supplying virtual courses for expatriate children. Edufax is a Dutch company supplying educational consultancy, language courses and distance education to children and adults living temporarily in all four corners of the world. Since 1992 Edufax has been supporting HR managers and families in all aspects of educational development during their years as expatriates. In 2010 there were 700 Edufax students between the ages of six and 18.

The **EMINUS** project at the REA college provides virtual vocational training for people with physical disabilities.

Virtual Music School is a learning environment which was tested in the Utrecht Conservatory where it is now incorporated in the first year of a four year curriculum, and used during school time.

3.2.14 Norway

We have not been able to research the situation in Norway as thoroughly as planned, although previous research in Re.ViCa has demonstrated a breadth of e-learning in higher education. The largest provider of online learning in the Baltic is ***NKI Distance Education***, which provides a broad range of subjects from secondary to masters level and had around 11,000 enrolments in 40 countries in 2010. 70% of these were women.

The **Globalskolen**, which is part of the EXPAT programme, offers free online education for primary and secondary school age children living abroad, using asynchronous teaching, is another notable example of virtual schooling and Norway and is linked with VUCFlex in Denmark and **Deutsche Fernschule** in Germany.

NKS is a smaller distance learning provider, with around 100 courses available online, some of which are at secondary level.

There is, however, a new national initiative (DVM) for establishing a permanent national service for the teaching of mathematics. DVM is an initiative that was announced in the White Paper on Secondary Education in 2011 and is now a task that is given to the **Centre for ICT in education**. DVM will be piloted in the school year 2013-2014,after the ICT centre has submitted its recommendations, including a full report and business development plan to the Ministry of Education in October/November 2013

For virtual colleges, there is ***Campus NooA***. In December 2012, Campus NooA was officially accredited by Vox as a 'net school' (nettskole) according to the Norwegian Adult Education Act. (Vox, Norwegian Agency for Lifelong Learning, is an agency of the Norwegian Ministry of Education and Research). Although described as a school, it displays the characteristics of a college. . Although primarily delivering programmes in higher education, it offers a wide range of language courses which are available to the VISCED age range.

3.2.15 Poland

We have identified one virtual school, believed to be the first in Poland, and a significant initiative.

Szkola Online is the first secondary school in Poland on-line. The school is targeted at those who:

- have access to a computer and the Internet
- wish to obtain secondary education
- For secondary school certificate
- Do not want or cannot go to school (they live abroad, far from the centres of education, are temporarily or chronically sick, work, raise children, etc.).

Polska Szkola – in English, **Polish School** – is the educational portal run by the Centre for Development of Polish Education Abroad, in cooperation with the Ministry of National Education (Poland) to encourage participation in culture, teaching the Polish language, Polish history and geography abroad in order to maintain ties with the country of the Poles.

Polish School is to help:

- parents – in decisions about saving children from local schools in the country of residence, finding or creating a "Saturday school" in which the child can continue learning the Polish language, Polish history and geography, to be at a good level to return later to the Polish education system;
- teachers – in the exchange of information on existing curricula, textbooks, training, national and international projects, which may participate in Polish, Polish-American schools and Polish, Polonia students;
- directors of Polish school and Polish schools abroad

- in improving the professional skills of teachers, the acquisition and establishment of contacts with the Polish-American institutions supporting education, and potential international partners, national educational projects;
- activists of the Polish organizations and Polish institutions and NGOs as well as all interested parties exchanging information, establishing contacts.

Its web site (in Polish) is at http://www.polska-szkola.pl

3.2.16 Portugal

The most significant virtual schooling initiative is **Ensino a Distância para a Itinerância** which is described in detail as one of the European case studies.

Ensino a Distância para a Itinerância (ED) – previously known as Escola Móvel – is a distance learning project of the Portuguese Ministry of Education & Science aimed at ensuring regular schooling of travelling children whose families work in circuses and fairs. The project has recently broadened to include hospitalised children, teenage mothers and other young people who cannot function in bricks-and-mortar schools.

The project has grown and developed from an initiative started in 2005/06, which offered 13 travelling children and teenagers the possibility of daily school attendance through a virtual environment. From these early beginnings, the project has expanded to cover upper secondary education up to 17 years old, building on growing numbers (up to 100 students) and high success rates.

In 2009 Escola Móvel moved from being an experimental project to a state school; but a year later, with resources constrained by the economic crisis it once more became a pedagogical project of the Ministry, changed to its present name and started expanding into other vulnerable groups beyond travelling children. The project moved from the Ministry department into the school community, hosted by one school in the Lisbon region. The school hosts teachers and provides logistics and organisational infrastructure for the project. In the future, it is planned to base it in an additional school in the north of Portugal, where there is the largest concentration of travelling children.

Although online and 'at distance', the virtual school is largely based on the Portuguese national curriculum and follows a traditional approach involving subjects, timetables, assignments and grades. The underpinning approach and pedagogy is, however, adapted to the needs of the particular target group.

The project relies on 23 teachers and a project co-coordinator, with each teacher responsible for tutoring 3–5 students and establishing close relationships with their families. The staff of the host school provide logistics, administrative and financial support.

Currently teachers are assigned to the project on the national criteria, for a year at a time. They do not have any specific profile or preparation, but working together from the same space in the host

school, there is continuous dialogue and peer support providing all the necessary training. Teachers may stay with the project for one or more years and new teachers are supported and mentored by experienced staff.

Teaching is given through online communication and interaction; teachers have a set of teacher-developed resources as a basis for addressing subject-based and cross-curricular competencies. The curriculum covers all compulsory years of schooling from 5th to 12th grade.

Teaching is subject based and it is left to the creativity and motivation of teachers to develop inter-disciplinary projects, blogs, etc. Individual learning plans are designed when necessary and the pedagogy is student-centred, aiming at personalising learning based on continuous feedback.

The distance learning environment is felt to render some subjects impractical – e.g. music is substituted for physical education.

The school uses a Moodle platform, with chat as the main instrument for interaction during lessons. A blog is used for project work and cross-curricular activities and students are encouraged to use other online resources, such as YouTube. There have been experiments with videoconferencing using Adobe Connect to improve the teaching of languages and mathematics, but this has not yet been fully integrated into daily practice. Classes are mostly synchronous, but students are free to use the full range of ICT tools available to them for asynchronous work.

Although learning is student-centred, experience has shown that the target group needs strong central direction, particularly as their own lives are often unstable.

Students follow the same practices and procedures as conventional pupils in the national school leaving examination.

The school is subject to the same inspection regime as normal schools: this means that inspectors can arrive without notice and ask for a login to observe what is happening in the virtual classroom.

Students do not pay any tuition fees and staff are paid by the Ministry of Education at the same rate as teachers in the conventional system. Because the project depends in part on the funds available to the host school, the initiative is looking for additional private funding.

The project is currently undergoing a further phase of transformation. It is planned to capitalise on the lessons learnt and establish a system of school level distance education across the whole of Portugal, based on a network of six partner schools. Teaching would be networked, not linked to a specific school, but relying on the school partnership.

The second exemplar is **Escola Virtual**, an e-learning platform owned by the publishing group Porto Editora, a Portuguese private company. EV works with two different options: [1] Particular – service subscribed by students, teachers and parents who are individually self-study learners; and [2] Institutional – the EV operates as a service to the school where all content can be used by teachers and students in their classrooms.

3.2.17 Russia

Online and distance learning in Russia has tended to be aimed at those physically unable to attend schools. However, there is at least one officially sanctioned virtual school (**Телешкола**) which apparently has 11,000 students.

Центр дистанционного образования «Эйдос» (Eidos) is a distance education service with a range of goals for teachers, students of all ages, and parents. In particular it offers distance training of children and adults in Russia and abroad via e-mail and Internet forms; distance courses on developing children's creative abilities; and other distance educational courses for parents and their children. For more details see http://www.eidos.ru/eng/about/index.htm.

3.2.18 Scotland

(The home nations of the UK are treated as separate nations.)

Scotland was something of a graveyard for virtual schools at the start of the 21st century, with two of the very few examples of failed initiatives located around Glasgow. Although we have not identified any fully virtual schools currently operating in Scotland, there are two notable ICT initiatives – GLOW and SCHOLAR, both developed here as micro-case studies – which have been operating for a number of years, and significant virtual activity in Scotland's colleges.

GLOW is the national intranet for education in Scotland. Introduced initially for schools, it is now used in colleges as well; it carries an increasing number of Higher courses fully online and is linked to, and used by both school and college VLEs.

GLOW has developed a Virtual Campus which became available from August 2011. The intention is that students will be able to study courses even when there is very limited access to teachers in the students' school. Initially, the Virtual Campus will support two subjects – Advanced Higher History, and Advanced Higher French. Shortly after the initial launch, beginners Gaelic and Learning Skills will be added. There will be a fifth subject also offered from 2011 onwards: resources to support the Games Design NPA, with online tutorials and video interviews to support this.

GLOW has recently completed an online e-moderation course which would be undertaken by a member of staff who would be willing to support students through a course, with the students coming from various schools.

In September 2011, following lengthy consultation, the Scottish Government cancelled planned procurement updating the software and established a review of future development. The objectives have been restated as follows:

- Develop resources to support schools in teaching on-line learning skills. These skills are an important part of a broad general education particularly as some learning in the senior phase is likely only to be accessible to some schools via on-line arrangements.
- Government or Education Scotland should investigate alternative models of centralised on-line schooling to assist individual local authorities deal with aspects of inclusion (for example travelling families, children in hospital, excluded children, children in care, children with phobia, etc.). Stephen Heppell's NotSchool.net model is also worth investigation.
- Scottish Government or Education Scotland along with local authority, industry and higher education partners should start to develop and capture examples of emerging pedagogical practice for learning, teaching and assessment. This should include 1:1, flipped classroom and mobile technologies in learning. Scotland may benefit from a centre of emerging practice.

It should be noted that many practising teachers have, in the past, been very vocal in their criticisms of GLOW, with most identifying outdated software as their main bugbear.

SCHOLAR operates as a supplementary school, with potential students applying through their mainstream school, where they undertake an induction programme. SCHOLAR provides an integrated set of materials and services which meet the needs of both students and their teachers. These resources include:

- Comprehensive online interactive learning materials, activities, assessments and revision packs.
- The **GLOW** learning platform giving access to online communities, resources, monitoring information and information tools.
- Study guides which contain key reference materials and learning activities.
- Tutor notes with valuable curriculum and planning information.

A recent case study (2010) undertaken by Heriot-Watt University asserts:

'SCHOLAR is the largest sustainable e-learning programme for schools in the world. Created by Heriot-Watt University based in Edinburgh, it delivers cost-effective online, interactive learning courses and underpinning e-assessment to more than 400 Scottish secondary schools, both public and private, in subjects ranging from science and mathematics to business and languages. SCHOLAR is designed for 16- to 18-year-old students, to help make them college- and career-ready, and now reaches more than 90 percent of that population.'

SCHOLAR is currently developing an additional set of study units targeted at young people who have completed their Highers and are waiting to take up places in higher education – these units are designed to smooth the transition from school to university by introducing students to the study skills needed for higher education and the pace of work they will need to undertake.

The University of the Highlands and Islands, developed here as a micro-case study, is a major network of colleges serving the remote areas of the north of Scotland and its islands. It comprises 13 colleges and research institutions:

- ***Argyll College UHI***
- ***Highland Theological College UHI***
- ***Inverness College UHI***
- ***Lews Castle College UHI***
- ***Moray College UHI***
- ***NAFC Marine Centre UHI***
- ***North Highland College UHI***
- ***Orkney College UHI***
- ***Perth College UHI***
- ***Sabhal Mòr Ostaig UHI***
- ***Scottish Association for Marine Science UHI***
- ***Shetland College UHI***
- ***West Highland College UHI***

Since the beginning of the century, the member colleges have been linked by a videoconferencing system, which has enabled them to develop flexible online provision, both for higher education programmes and further education courses within the scope of VISCED. The University's website describes its study opportunities as follows:

- ***Study where you want, when you want***
- *You should be able to study at university no matter what your circumstances are, which is why we offer you different,* ***flexible ways of studying****, so that* ***you can fit your learning into your lifestyle****.*
- *At the University of the Highlands and Islands you can study part time or full time, from a distance, online, at one of our local learning centres, or come into one of our* ***main campuses*** *– the choice is yours.*
- *We use* ***technology in an innovative way*** *to ensure maximum flexibility in our courses to allow you to fit your studies around your personal and professional commitments.*
- *The majority of our courses are available to study on a* ***part-time*** *basis, and you can even study on a* ***module-by-module*** *basis and build up your qualifications over time.*
- *Many courses are available to* ***study online*** *from your home or place of work – or anywhere with an internet connection!*
- *The University of the Highlands and Islands is committed to* ***widening access to and participation in higher education*** *across our region. We aim to ensure that our curriculum offers* ***flexible entry and progression routes****, and that courses are available as widely as possible across the UHI network. Widening participation focuses on the individual and is about* ***encouraging people into higher education*** *and providing all the support they need to make their transition and progression as successful as possible.*

This applies equally to the further education courses provided for students aged 16+ by the member institutions, making this one of the most developed network of virtual colleges in a single European country. A full range of Scottish Highers is available entirely online through member colleges.

In addition to these major national initiatives, almost all of Scotland's colleges offer a range of online courses, ranging from basic education through to higher education. Although none of them operates solely as a virtual college, at least one of them (***Carnegie College***) was able to provide a full learning programme for all students online during heavy snow in the winter of 2010/11 when the physical college was inaccessible. A good example of online courses available is ***James Watt College*** - the link illustrates this from the open learning section of the college website.

We have identified one private college which operates entirely through online distance learning – the ***Interactive Design Institute*** (IDI) is a distance learning provider of online qualifications in Art and Design. It was established in 2004 to offer on-line courses in Art and Design to UK and international students. IDI is a Collaborative Partner of the University of Hertfordshire. It has enrolled students from over 47 countries. It offers a range of art and design courses up to and including Degree level.

There is another more traditional correspondence distance provider based in Scotland, ***International Correspondence Schools*** (ICS Learn), claiming to be 'the world's most experienced distance learning organisation' with over 120 years experience, but with not all offerings online yet.

3.2.19 Serbia

We have identified one virtual school and another notable initiative.

Belgrade Metropolitan High School (BMHS) is the first fully online high school in Serbia, operational from September 2011, by providing online learning services only to special groups of students that cannot learn at normal high schools, such as:

- Active junior sportsmen and sportswomen
- Handicapped students with difficulties to move and travel,
- Students leaving in small rural and remote areas, without secondary schools
- Students temporally leaving abroad and want to continue their education according to the Serbian education system.

BMHS also plans to develop a new curriculum that is more focused on informatics and ICT and will offer it to regular online students from September 2012 (starting with Grade 9, age 15).

Belgrade Open School is not a virtual school or even a school. However, it is a non-governmental, not-for-profit educational organization in Serbia, which among other things, fosters e-learning. Since 2002, in cooperation with the International Centre "Olaf Palme", CePIT has developed the project 'Virtual schools'. By constructing, applying and standardizing the original methodology of internet-based learning, this project aims to support and promote the process of decentralization of educational system and structure in Serbia.

The first virtual courses in Serbia CePIT were organized in 2002, and so far twelve e-courses were held. Internet course "European Integration" was nominated for the best e-content during the World Summit on Information Society (WSIS, Geneva, UN, 2003).

By this time, "virtual courses" engaged about 50 lecturers, and almost 300 participants from around 30 different cities from Serbia and the Western Balkans. The most prominent result of these courses are two published collections of participants' final papers, dictionary of democratic society, e-magazine "Nova škola", which were was also published as a special issue of "Prosvetni pregled", and "European union – youth guide".

For more details see http://www.bos.rs/cepit/eng/e-learning/.

3.2.20 Spain

Although Spain has a central government and education ministry, the 17 autonomous communities are fully responsible for the schools in their territory and that includes the promotion of ICT in schools. ICT policies vary in emphasis and depth among the seventeen Autonomous Communities; it is worth mentioning, for instance, that Extremadura has become known worldwide for its commitment to open software and its excellent rates of computers per pupil, and that all communities have their own plan to promote connectivity and hardware deployment.

Escuela 2.0 is a nationwide ICT plan for schools, building on the developments already achieved in each region and going further, trying to provide open access to hardware and digital content in schools in order to promote the integration of ICT pedagogically into school life.

Within this rich and complex picture, we have identified at least eleven schools and colleges which are either full virtual schools or offer the Bachillerato (the Spanish matriculation qualification) online in addition to their physical provision:

- **Epysteme** is a virtual school offering support for home-schooling from primary through secondary education for young people unable to attend school physically. It is a collaborative project with the Orange School of California and is linked to US qualifications.
- **CIDEAD** (Centro para la Innovación y Desarrollo de la Educación a Distancia) offers distance learning for primary, secondary and high school students, with adults also able to access its courses.
- **CEAC** (Centro de Enseñanza Privada de España) is a private organisation offering the Bachillerato online.
- ***Aula Aragón*** is a project of the Aragón government offering an online Bachillerato and vocational training.
- ***Bachillerato a Distancia Colegio de Madrid*** is linked to the National Autonomous University of Mexico, but its online Bachillerato is available in Spain.
- **IES Isaac Peral** is a public centre, joined to the Department of Education of the Murcia region.
- **IES J. Ibáñez Martín** is a Murcia secondary school offering the online qualification.

- **IES Juan Carlos 1 de Murcia** is another Murcia secondary school offering the online qualification.
- **IES José L. Castillo Puche de Yecla.**
- **IES San Juan de la Cruz** – a Murcia secondary school in Caravaca de la Cruz.
- **IES Francisco Salinas** is a secondary school in the Junta de Castilla y Léon.

The Bachillerato can be taken online by under 18 year olds through the ***Institut Obert de Catalunya***, but only in exceptional circumstances. There are similar online arrangements through the ***Colegio Pascal*** **in Andalucía**. Interestingly, the Bachillerato is available online through a number of international organisations in several Spanish-speaking countries of Latin America.

This list is almost certainly incomplete, as four of the eleven listed schools come from only one of the 17 autonomous communities and one of the smaller ones at that; this suggests that Spain has some of the most highly developed virtual schooling provision at upper secondary level within the EU, alongside Finland and the UK.

In addition to the exemplars mentioned above, Spain is also the base for **iEARN**, an international organisation developing networking projects between schools and teachers across 130 countries and particularly active across Africa.

3.2.21 Sweden

Sweden has a system of state-financed free schools competing alongside the existing state schools. In order to differentiate themselves, some of the free schools have chosen to focus on digital tools in pedagogy, but this has not been a particular driver of a move towards virtual education.

The national government has an ambivalent attitude towards virtual schooling, with funding generally limited to supporting expatriate students.

Nevertheless, a combination of geography and innovation has led to the development of at least four virtual schools:

- **Värmdö Distans** – an upper secondary school for 16–18 year olds.
- ***NTI*** – largely dealing with adult education, but open to 18–21 year olds.
- **Korrenspondensgymnasiet i Torsås** – an upper secondary school.
- **Sofia Distans** – described below in detail as one of the VISCED case studies.

Sofia Distans was established in 1994 to enable expatriate Swedish students to study within the Swedish school system. The Swedish School in Moscow uses Sofia Distans for its grade 6–9 children, which is the age range covered by Sofia Distans. The school follows the basic Swedish school curriculum and grading criteria, with students graded in school year 8–9.

Funding is a mixture of public and private: the school has a deal with the Swedish government that gives some money for the students living abroad and the students have to pay the rest for themselves. For students living in Sweden, the municipality in which the students live pays the fee.

In total, around 40% of funding comes from the state, 20% from the municipalities and the remaining 40% from fees.

There are 500–600 enrolments in each year. There are 20 teachers and every student has a parent or tutor in their home location. Over recent years, the number of overseas 'missionary schools' for expatriate Swedish children has reduced dramatically and this has impacted on the numbers at Sofia Distans. Furthermore, Sofia Distans now includes students *within* Sweden who are not able to attend conventional schools, largely for medical reasons. Such students study half the time at home and half the time in their main school, whilst staff teach from the Sofia Distans base.

Pedagogy is conducted through online blended distance learning. Most students are engaged in self-study, following Sofia Distans prepared study plans. Teaching is subject-based. Distance learning is the core teaching method. The school sends the planning, paper books and material needed for the course via mail and teachers put online material and assignments on the learning platform (FirstClass) and then the students send their work and questions back to the teachers via the platform. The material provided from the school varies from paper copies to all kind of digital formats: video, sound, and text. The school guarantees answers within 24 hours. The teachers only work daytime (Swedish time), so the interaction is usually asynchronous. When recruiting staff, Sofia Distans looks first for flexibility and ICT skills for all categories of staff. Extensive in-service training is provided.

Every student has a tutor assigned to them who helps them following the study plan, but the student is responsible for time management of his/her studies. There is very little drop-out.

Student outcomes are similar to physical schools: Sofia Distans conducts the national tests in Swedish, English and mathematics. The qualifications are recognised in Sweden and the school is subject to the normal Swedish inspection regime.

Sofia Distans has quite a high level of autonomy. Future plans for the school envisage an increase in numbers. The main barrier is the Swedish government's ambivalent attitude towards virtual schools.

3.2.22 Switzerland

We have identified one international school in Switzerland, **ISBerne Online**, which offers the International Baccalaureate worldwide and is run by K-12 Inc. The website is at http://www.isberneonline.com

3.2.23 Turkey

(For the purposes of VISCED Reports, Turkey in its entirety is regarded as part of Europe.)

There are several virtual schooling initiatives in Turkey, and almost certainly more than we have so far identified. The most fully developed is the **Open High School**, described here as a micro-case study.

The **Open High School** Turkey [OHS Turkey] supports e-learning interactive distance education by making use of a three dimensional approach to learning materials. It makes use of the following:

- Printed educational materials
- Education through the media
- Face-to-face teaching

These three different approaches to teaching materials make use of the following technologies: printed materials, radio and audio cassettes, telephone and fax, audio conferences, video conferencing, computer, Internet and web conferencing.

The Open High School's main office is situated in Ankara, Turkey. It has other campuses in different parts of the country.

It was established in 1992 within the department of Film, Radio and Television Training. Its mission is to promote equal opportunities for education for all, making use or cutting edge information and communication technology. It also saw as its mission to bridge the gap between the knowledge of technologies used at school and those used in the professional and industrial environment.

It combines technology from scientific and technological development with face-to-face training activities to offer a truly holistic education to thousands of students all over the country and beyond. Face-to-face training schedule varies each term but is compulsory. Students can enrol for the face-to-face training in their area when the schedule is available online, to attend face-to-face training in training centres, schools and institutions, primarily public education.

It also offers learning opportunities to Turkish citizens living in Middle Eastern countries. The training period today takes 8 terms or 4 years for the issuing of a diploma even though in 1992 when it started, it only took 2.5 years. It was from the Open High School that the Open Vocational High School was borne.

More information about Open High School can be found via the following link: http://maol.meb.gov.tr/English_Site/Meslek_Eng_AnaSayfa.html.

Two other notable examples are:

Open Primary Education School – this admits all types and ages of students including those who are beyond the age limit for compulsory education and those who could not complete primary school for various reasons. It delivers courses using various ICT resources including television and radio programs, internet, printed documents, CD-ROMs and many other tools.

The **Open Vocational High School** uses similar methods to the two exemplars described above: this was established in 2006, initially as an offshoot of the Open High School.

3.2.24 Wales

(The home nations of the UK are treated as separate nations.)

Wales is home to **InterHigh School**, a fully virtual secondary school since 2005, with two additional linked 'brands' established in 2010. This is one of the VISCED case studies.

InterHigh was established in 2005, initially for students aged 11–16, up to GCSE level.

The catalyst for the launch of the school was the nationwide roll-out of broadband, although the school's technology worked equally well with dial-up internet connections.

From an initial enrolment of 23 students, the school has grown each year since 2005. By 2009, it had more than 200 pupils spread across its five year groups. After five years of steady growth, InterHigh leaders felt they had reached a crossroads; they wanted to build on their success but decided to limit pupil numbers to 300, believing significant further expansion would have a detrimental effect on the quality of personalised education offered to each child. They decided to grow laterally by launching three new business divisions: joint ventures with local authorities and individual schools in the public sector, independent schools and tuition businesses.

The main new business is Academy 21, which caters for pupils excluded from conventional schools and referred by their local education authority.

In addition, in response to demand from parents, they launched a sixth form – InterHigh Advanced – in September 2010.

InterHigh is a private school and, as a registered not-for-profit company, all monies are ploughed back into the school. Fees are approximately 20% of the average amount charged by conventional private day schools in the UK.

Most of the pupils live in the UK; the remainder are expatriate children living across the world. Within the UK, the school has proved particularly beneficial for children who, for a variety of reasons, are unable to settle at mainstream schools, including children with Asperger's syndrome and other forms of autism and the full range of inclusion issues described in the introduction to this chapter.

Students study mainly from home and staff do most of their teaching from home. All studying is done virtually. Lessons are very similar to those taught in any typical English or Welsh secondary school, following the National Curriculum with internal tests to assess progress. Lessons are held every morning, starting at 9.30 am and finishing at lunchtime, with the afternoon largely free for students to complete homework, work together on projects or undertake extra-curricular activities. The school can demonstrate that, even with only ten hours of direct tuition per week, they are able to cover the same amount of material as in the 30+ hours in a conventional school. IGCSE examination results are very similar to the average recorded by conventional schools; the school will put any pupil forward for examinations, not just the best students.

The development of InterHigh has coincided with the rise of Facebook, MySpace and other social networking sites. Pupils are encouraged to use these to chat to friends, help each other with work and make new friends in the same way as the rest of their generation – texting, blogging, emailing and tweeting.

Extracurricular activities include an annual play, where rehearsals and performance take place over the internet. One of the highlights of the school's calendar is the annual InterHigh Weekend, where pupils and parents gather for a weekend of activities at a residential college in Wales.

As it has expanded, InterHigh has recruited highly qualified experienced teachers who have worked in both the state and private sectors.

The virtual classroom is built around an interactive whiteboard and uses customised web and video conferencing software provided by Voxwire, an American company.

InterHigh is not inspected under the Welsh national inspectorate regime, as Estyn (the Inspectorate) does not recognise it as a school. Like all pioneers, InterHigh has faced an uphill battle to gain acceptance from the authorities. However, projects with children placed by local authorities have been singled out for praise when the local authority's education support services were inspected by Estyn, the Welsh Inspectorate. The school has been granted 'New Provider' status by the Open and Distance Learning Quality Council and is working towards full accreditation.

First College takes an independent college approach to studying, an excellent preparation for later qualifications, University, or (self) employment. This virtual school is in fact an online high school - not a college. It is very much a family business - the founders created it to educate their own child, who is now also an online teacher at the school. It is physically based in Newport, Wales.

In the further education sector ***Coleg Sir Gâr*** has run a virtual college from its Llanelli campus, with 4500 students engaged in online learning since 2003. Current developments in further and higher education in Wales may put the continuation of its online services at risk.

Most of the Welsh further education colleges offer a range of online courses; a representative exemplar is ***Pembrokeshire College***, which specialises in online science courses, encouraging students to come in to the physical college to take part in practical workshops to ensure that their GCE A Level qualifications are acceptable for university entry.

4 Africa

VISCED quotes the Wikipedia definition:

> *Africa is the world's second-largest and second most-populous continent, after Asia. At about 30,221,532 km² [11,668,545 sq mi] including adjacent islands, it covers 6% of the Earth's total surface area, and 20.4% of the total land area. With more than 900,000,000 people [as of 2005] in 61 territories, it accounts for about 14% of the world's human population. The continent is surrounded by the Mediterranean Sea to the north, the Suez Canal and the Red Sea to the northeast, the Indian Ocean to the southeast, and the Atlantic Ocean to the west. There are 46 countries including Madagascar, and 53 including all the island groups.*

VISCED then says:

> *Not all of these are in our list – only those where e-learning plays a non-trivial role.*
>
> *The list at present is not complete.*
>
> *In addition to specific countries, see also:*
>
> - *Northern Africa*
> - *Sub-Saharan Africa*
> - *Southern Africa*

4.1 Overview and summary table

In spite of considerable desk research and consultation with experts in the field it has proved extremely difficult to identify pure virtual schools or colleges in Africa. This is perhaps not surprising given the relatively poor state of the educational and domestic technical infrastructure. VISCED's sister research project into virtual HE campuses Re.ViCa (funded 2007-09) found a handful of such initiatives in Africa and during the VISCED research we have uncovered some additional virtual higher education provision where countries with historic and/or linguistic links [such as Brazil, Portugal and France] have extended specifically into African nations. However, this is still comparatively rare and does not appear to permeate the sub-Higher Education sectors.

There are two initiatives headquartered outside Africa, but whose focus is Africa, or includes Africa – the **African Virtual School** and the **Africa Virtual School**. The latter is the first regional school of the World Virtual School [WVS] a U.S. based, non-profit body with over 500,000 students worldwide [see below].

Even allowing for the impediments detailed above, the reach of the AVS demonstrates that these are not insurmountable. Several African cities have an infrastructure which could potentially support virtual schooling. (Indeed, several European virtual schools have students in Africa, usually with expatriate parents.) It is likely, therefore, that there exist virtual schools in Africa which we are yet to identify. The demand for improving education in the face of severe economic restrictions, plus the targeted activities of both charitable and private organisations would suggest that we will see virtual schools emerging on the continent. The experience of Canada and Australasia points to some of these evolving from existing distance learning initiatives such as correspondence or radio schools.

The table below summarises exemplars included in this report:

Country	***Schools***	***Colleges***	***Initiatives***
Several, especially Francophone			ACTE
Africa – wide			iEARN
Africa-wide	Africa Virtual School		
West Africa	African Virtual School		
Botswana		BODOCOL	
Egypt	NESA school		
Guinea			Under the Kapok Tree
Namibia		Namibian College of Open Learning	
South Africa	Hatfield Online Christian School		
Tunisia	Tunisian Virtual School		

4.2 Exemplars – more than one country

There are a number of global 'ICT for education' organisations which operate across the continent of Africa and it is perfectly possible that some of these will develop [and, indeed, may have already developed] a virtual schooling 'flavour' to their enterprises. Two of the most likely are **iEARN**, whose website has a separate African section at http://www.iearn.org/regions/africa and **Agence de**

Consolidation des Technologies de l'Education [ACTE], operating particularly across Francophone Africa as Africa Acte http://www.africacte.org/:

- **iEARN** already operates [in partnership with local bodies] in 30 African nations. Several of iEARN's projects are already identifiable as forming the foundations for virtual schooling.
- **ACTE** operates in a similar number of African nations. It describes its 'Centre of Excellence' as '*a technology lab that serves as a gateway to free academic services, content development, and activities that ACTE offers to schools and the community-at-large'.* Some of its community outreach activities are moving towards virtual schooling.

The most notable exemplar in Africa is the **Africa Virtual School** [AVS], developed below as a micro-case study. The AVS is the regional arm of the World Virtual School which describes its offer as:

> *The World Virtual School offers a full array of elementary, middle school and high school courses, with both remedial, advanced placement and world languages so that students around the world can earn an American High School diploma, entirely over the internet. Students pay membership fees based on their native country's GDP and can earn an American diploma for as little as $4. For students unable to pay, a scholarship program is available through the WVS.*
>
> *WVS also offers an International High School diploma program that includes courses of a global nature and perspective, meant to prepare students to participate in the global economic and cultural community on par with students around the world. The International diploma program is offered at the same membership rates as other courses and is available to students of all countries who have internet access.*

Figures quoted in November 2011 suggest AVS has over 45,000 students in some 50 countries across the continent. AVS is not actually 'active' in all 50 countries but does operate [with local partners] virtual schools in 20 of these.

Its website is http://www.africanvirtualschool.com

The Africa Virtual School has students in the following countries [enrolment figures for 2011 in brackets] but it only operates in those where indicated [bold type and yellow highlighting].

Country	No of students	Country	No of students	Country	No of students
Algeria	502	**Ethiopia**	6458	Niger	165
Angola	299	Gabon	62	**Nigeria**	1825
Benin	92	Gambia, The	264	**Rwanda**	1332
Botswana	980	**Ghana**	1346	São Tomé & Príncipe	92
Burkina Faso	82	Guinea	91	Senegal	825
Burundi	346	Guinea-Bissau	468	Seychelles	84
Cameroon	980	**Kenya**	5261	**Sierra Leone**	641
Cape Verde Islands	56	Lesotho	886	Somalia	825
Central African Republic	854	**Liberia**	1246	**South Africa**	3462
Chad	231	Libya	513	South Sudan	824
Congo, Republic of	854	**Madagascar**	32	Sudan	825
Congo, Democratic Republic of	675	**Malawi**	892	Swaziland	824
Cote d'Ivoire	46	Mali	482	**Tanzania**	461
Djibouti	82	Mauritania	98	Togo	642
Egypt	465	**Morocco**	898	Tunisia	816
Equatorial Guinea	182	**Mozambique**	426	**Uganda**	461
Eritrea	78	Namibia	1346	**Zambia**	2845
				Zimbabwe	3456

The **African Virtual School** (not to be confused with the **Africa Virtual School**) is a virtual school set up to help students in West Africa pass exams. It does this by helping them revise using quizzes and videos online. This means that they can revise Maths and English anytime and anywhere. It also provides supplementary Maths and English revision guides for senior secondary school students. The "spiritual home" of the African Virtual School is Freetown, Sierra Leone. The international partner is HowsonUK, an education company registered in the UK. (The parent organisation is based in London, although the website features the Stars and Stripes.) The exam revision courses are suitable for Junior and Senior Secondary students, focusing on the Waec (West African Examinations Councils), Neco (Nigerian National Examinations Council) and Jamb (Nigerian Joint Admissions and Matriculation Board) Maths and English Exams. Schools from Nigeria, Sierra Leone and Ghana subscribe at approximately $20 per learner year. For this, students get Maths and English Practice Questions for students, Online Maths Worksheets to help teachers create worksheets on the fly and discounted purchase of Maths books and English readers.

Below, we describe virtual learning developments briefly in the two major sub-regions of Northern and Sub-Saharan Africa, with a separate section on South Africa.

4.3 Northern Africa

We have found at least one virtual school in **Egypt**: a **NESA** network school in Cairo.

There is also evidence of online learning being available to some students at school-level in **Tunisia** (**Tunisian Virtual School**), but none in any of the other countries. Given recent political disturbances and changes well recorded through social media, it is likely that the unrest and instability across much of the region has hindered the development of virtual schooling.

4.4 Sub-Saharan Africa

Whilst there is evidence of ICT capacity building initiatives in many Sub-Saharan African countries, we have not found evidence of any indigenous virtual schools. Telecommunications infrastructure is generally weak and in countries with high school dropout rates and low levels of literacy, there are more pressing priorities.

Rwanda appears to be the country with the best developed infrastructure and evidence of significant capacity building.

There are a number of international organisations providing online resources, training for teachers and, in some cases, online classes, but none of these operate as a fully virtual school. Our evidence from internet searches suggests that international organisations are most visible and active in Francophone Sub-Saharan African countries: the websites of ACTE, ORIDEV and iEARN are all in French.

There is an international commercial company, The African Virtual School, which offers online examination courses in West African countries such as Sierra Leone. The parent organisation is based in London, although the website features the Stars and Stripes.

In some Lusophone countries (e.g. Guinea-Bissau) there are HE links with Brazilian universities, but no such links are evident in the schools sector.

There are a number of relatively small scale ICT projects in individual countries, e.g. **Under the Kapok Tree** in Guinea.

4.5 South Africa and neighbours

(This is the region called 'Southern Africa' by VISCED.)

It is not surprising that we have found a wide of range of ICT in education initiatives in the Republic of South Africa, the most developed and economically powerful of the Sub-Saharan countries. Whilst an e-education White Paper in 2004 set a goal of making every learner in both primary and secondary schools ICT-capable by 2013, the existence of well over 30 separate ICT initiatives, several of which are commercially sponsored and driven towards one product range, has meant that progress has been patchy. Although there are projects involving the use of mobile classrooms and remote online resources, there appears to be only one example of a fully virtual school similar to virtual high schools in the USA, Canada and Sweden – the **Hatfield Online Christian School**.

We have identified two examples of virtual schooling in countries bordering on South Africa: in Namibia, the ***Namibian College of Open Learning*** **(NAMCOL)** offers a range of upper secondary courses online and in Botswana its sister organisation, ***the Botswana College of Distance and Open Learning*** **(BOCODOL),** is a private provider offering both secondary and further education through distance learning.

5 Asia

5.1 Definition

Wikipedia notes that:

> *Asia is the world's largest and most populous continent. It covers 8.6% of the Earth's total surface area [or 29.4% of its land area] and, with almost 4 billion people, it contains more than 60% of the world's current human population.*
>
> *Chiefly in the eastern and northern hemispheres, Asia is traditionally defined as part of the landmass of Eurasia – with the western portion of the latter occupied by Europe – lying east of the Suez Canal, east of the Ural Mountains, and south of the Caucasus Mountains and the Caspian and Black Seas. It is bounded to the east by the Pacific Ocean, to the south by the Indian Ocean, and to the north by the Arctic Ocean.*

Conventionally, Turkey is assigned to Asia even though part of it is in Europe.

VISCED has also (as usual) included the Middle East and Turkey in the Asia category of the wiki and the Near and Middle East are dealt with in this Asia Region Report. There are 59 countries listed in the Asia category of the wiki and these can be accessed at the following link http://virtualcampuses.eu/index.php/Asia. Turkey, however, is also included in the VISCED Europe grouping and its exemplars of virtual schooling are included above in section 3.2.22.

5.2 Overview and summary table

Even when considering such a large area [including the Middle East as it does under this definition] VISCED researchers have so far identified relatively few institutions which meet the 'virtual school' criteria applied within the project. This was somewhat surprising. Although there were strong suspicions [based on prior research and consultation with regional experts] that the majority of the 'continent+' had no virtual schools, there are several regions which have been spoken of as being advanced in terms of their use of educational technology – most notably Japan, South Korea, Singapore, India and parts of China [namely Hong-Kong and Shanghai]. Only in South Korea (and possibly Israel) have we unearthed evidence of rapid current development.

Whilst there is much activity in distance learning in higher education, there are relatively few indigenous virtual schools in any of the major Asian countries, though recent developments suggest that South Korea and Indonesia may be exceptions. However, the **NESA** Virtual Schools Project – a co-operative venture between the Near East South Asia Council of Overseas Schools and the US Department of State – manages online learning in 25 schools across the Near and Middle East, North Africa and South Asia. Six of these are in South Asia: three in India and one each in Bangladesh, Pakistan and Nepal. Enrolment numbers are not available; it is likely that most of them are expatriates.

However, VISCED research has revealed a number of factors which may explain there being fewer *visible* virtual schools than expected. These are discussed below but it should be noted that it is fully expected that the number of 'Virtual schools in Asia', wiki entries will grow as the project attracts more contributors from the region.

There is also evidence that the chains of International Schools which operate across the region [but particularly in the Middle East] are developing their virtual schooling capability. The wiki thus contains an entry for the **NESA** [Near East South Asia] Virtual Schools -although the actual levels of 'virtual schooling' appear to be low at the present there is already some activity and the phenomenon is noteworthy. The Middle East has clearly presented challenges in terms of research over the past year since many of the countries have experienced substantial upheaval. Interestingly [much like the Hong-Kong example noted above] there is evidence of virtual schooling being identified as a temporary solution to the disruption to students' education[3].

The table below summarises exemplars included in this report:

Country	*Schools*	*Colleges*	*Initiatives*
various	NESA schools: 24		
India	1		1
Indonesia	4		
Israel	2		1
Japan	3		
Singapore	1		
South Korea	5		2
Taiwan	1		
Thailand			2

5.3 The Middle East

For the purposes of this VISCED report, we take the following 13 countries as this region: Bahrain, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, United Arab Emirates, and Yemen. There is a significant amount of virtual activity at higher education level, but not yet at schools level; though several of the countries, particularly the oil-rich Gulf States, have

[3] See Bahrain English School
http://www.britishschoolbahrain.com/images/Newsletter/newsletter21022011.pdf

ambitious long term plans for e-activity. Perhaps the most developed are Qatar and the United Arab Emirates, with national e-strategies extending to the end of the decade.

Whilst we have not found evidence of indigenous virtual schools in the region outside Israel, the American influence is represented by 15 schools in the **NESA** Virtual School Project (see 5.2 above), with two in each of Qatar and Lebanon, three in the UAE, four in Saudi Arabia, and single examples in Oman, Jordan, Syria and Kuwait.

5.3.1 Israel

In the autumn of 2012, the Israel Ministry of Education has launched the **Virtual High School**, in partnership with the CET (Centre for Educational Technology) and the Trump Foundation. The launch was accompanied by a press release from the Ministry (http://jtec.macam.ac.il/portal/ArticlePage.aspx?id=1431) which stated: ' *The Virtual High School, a new initiative of the Ministry of Education, the Center for Educational Technology (CET) and the Trump Foundation was unveiled at a festive event attended by high school students from all around Israel at the CET building in Tel Aviv. The purpose of the virtual high school is to increase the number of students finishing their studies of mathematics and physics at an enhanced level attaining higher achievements.*

At the opening event, the students met with their virtual classmates, got acquainted with the virtual high school learning environment, listened to a lecture by a senior lecturer in physics, experienced research activities in physics (building a periscope and exploration of a pendulum), participated in a workshop in time management, and finally received a laboratory kit, an electronic stylus and a textbook.

At the beginning of the current school year, the virtual high school launched three classes in physics and three classes in mathematics. Six master teachers work in the virtual high school along with 46 tutors who are advanced university students with experience in digital tutoring. A hundred and twenty five students from 32 different schools are enrolled in the virtual high school this school year, enabling them to learn physics and mathematics at a five unit matriculation level.

Virtual high school courses are taught entirely online. A week of learning includes: synchronous lessons with a teacher in a class of 20 students, synchronous exercises with a tutor in small groups of three students and independent student practice with rich interactive content, virtual research laboratories and an array of tests and evaluations.'

ORT Aviv Virtual School was established together with the Hebrew University of Jerusalem in 1997. It is a pioneering attempt to harness new information technologies in an effort to enrich and improve the way in which children learn. This is done through the introduction of internet-based curricular modules (“virtual courses”) into the conventional classroom.

5.4 South and South East Asia

We include the following countries in this section: countries of the Indian sub-continent; Indo-China, Malaysia, Indonesia and the former UK colony of Singapore. We have not identified virtual schools or colleges in Pakistan, Bangladesh or the smaller Himalayan countries, although the VISCED webinar was attended by a researcher from Bhutan, who indicated that there may be more virtual activity in these countries than we have so far found. (There were earlier developments of 'open schooling' in Nepal and ongoing developments towards an Open University of Nepal, which is almost certain to have aspects of a virtual college as well as a virtual university, and there is distance learning for teachers in Bhutan.)

Similarly, we have not managed to unearth any evidence of virtual schooling in Indo-China, except for limited evidence in Thailand and Vietnam. The countries where we have identified notable examples are listed below, in alphabetical order.

5.4.1 India

There are a number of distance learning programmes in higher education, but we have not found evidence of indigenous virtual schools except for the National Institute of Open Schooling (NIOS). There are, however, a number of private companies providing lessons and courses either to individual learners or to schools. With its culture of supplemental learning, growing wealth yet vast poorly educated population, and the Indian government's stated commitment to developing online learning, it is reasonable to assume that there will be significant growth in the coming decade. There are also three international virtual schools within the NESA network.

It is very likely that there are a number of 'yet to be discovered' virtual schools in India and yet there are almost certainly fewer than many would have predicted. India is a provider of virtual schooling to other parts of the world and has several interesting virtual Higher Education initiatives. However, there are a number of factors which explain the mismatch between perceptions of virtual schooling in India and the reality. Firstly, a number of the virtual schools initially identified turned out on further investigation to be a 'tailored virtual school package' which schools buy in and then implement within their own institution – managed by their own teachers[4]. Similarly, some municipalities such as Brihanmumbai Municipal Corporation have introduced 'virtual classrooms' into all schools and these are sometimes known as 'virtual schools'. As such none of these meet the criteria applied by the project.

In contrast, **NIOS**, the National Institute of Open Schooling, is rapidly developing online access to a wide range of courses at both primary and secondary level: a recent presentation by Ramesh Sharma at the National Consultative Workshop on Virtual Open Schooling in India (October 2012) incorporates a review of virtual schooling across the world, with exemplars (all of which are included

[4] See http://www.smartclassonline.com/SmartClassOnLine/SmartClass.aspx

in this deliverable) from the USA, Australia, South Korea and Turkey. However, they also use a blended mode of provision to a network of study centres.

There is also evidence that a significant number of 'virtual schools' were offering graduate and post-graduate qualifications and were once more out of scope for the project. However, there is a virtual Indian music school, the **Shankar Mahadevan Academy | Learn Indian Music Online** which offers courses worldwide to students of all age ranges (and is therefore in scope).

5.4.2 Indonesia

In Indonesia there is growing evidence that distance learning is being deployed to provide students with access to courses normally not available to them at their physical schools and self-directed advanced and college preparatory courses. The legality of homeschooling is established in Indonesian law (see the micro-case study on **Morning Star Academy** below) ; the extent of the online learning and the use of ICT is unclear, but some provision clearly meets the VISCED criteria for virtual schooling.

At least four virtual schools have been identified: **Homeschooling Kak Seto**, **Homeschooling Logos**, **Homeschooling Primagama** and **Morning Star Academy**, which is developed below as a micro-case study.
Homeschooling Primagama offers a range of services: homeschooling at all levels from Elementary to high school, with additional private tuition and consultancy if required. National and international examinations are offered, including IGCSEs, GCE O, AS and A Levels, through Cambridge International Examinations.

Homeschooling Kak Seto and **Homeschooling Logos** offer similar programmes, but with more of an emphasis on outdoor activities and less on private tuition.

Morning Star Academy is a member of the Association of Classical and Christian Schools, a US-based organisation with a relatively strict approach to promoting the Christian faith through education. It sets out its vision and mission as follows:
Vision: '*Building the Nation through Education*'
Our vision is to instil in each student a passion for learning and to assist parents in their mission to develop young minds with a classical academic preparation, equipped with analytical thinking skills. We desire to produce young men and women of virtuous character and excellence who will be leaders in their communities and for this nation.
Mission: 'The purpose of Morning Star Academy is to raise up the next generation of leaders by implementing the lost tools of learning (trivium) and to restore traditional family values through parental involvement in the education of their children. It is our goal to assist parents in providing for their children a classical education with character building. Morning Star Academy offer families a complement to their home study by providing three-day per week classroom instruction, with an emphasis on classical as well as traditional subjects. We are committed to see each student reach his or her best potential in all areas of life.'

The school website describes its development:
'In the early beginnings, Morning Star Academy was launched with a few families whose children were in first through sixth grades. It was a big challenge for parents to take this responsibility. However, after seeing dramatic changes in their children's lives, news about Morning Star Academy spread quickly through word of mouth. Now, parents who want to see each of their children develop in their learning skill and abilities are catching the vision more quickly and getting committed to educating their children.

As parents are equipped to take responsibility for applying the right education philosophies to their children's education and moral development, families are being restored and growing stronger in their relationships with one another. Children have more respect for their parents because parents are interested and involved in the child's education, development of values and lives.

Within six years, Morning Star Academy has grown to become a parent-directed learning community of over five hundred and fifty students from pre-school to high school.

Since 2004, Morning Star Academy has now established a network of over twenty schools in the underdeveloped, remote areas throughout Indonesia, with the aim of raising up a new generation of local leaders in each province. Through an intensive training program, Morning Star Academy has become the regional headquarter for training all teachers in our network, before releasing them to start new schools in these provinces.'

As with the other Indonesian homeschools, the website goes to some length to emphasise the legality of homeschooling:

'MSA is considered as an informal and distance learning educational institution

- ***According to Article 1.12**, an informal education may conduct a structured and hierarchical education activity.*
- ***According to Article 1.13**, an informal education is conducted by a community and family*
- ***According to Article 1.15**, a distance learning education is an educational activity where students can communicate with the instructors/teachers through multimedia communication'.*

The school stresses the importance of strong parental involvement, its Christian principles and its commitment to personalisation:

- *The strong foundation of MSA educational activities lies on the 100% parental involvement in their children's progress.*

- *The education system and activities shall follow the Christian classical school standard of structure and hierarchy.*
- *Every student shall be trained, educated and treated especially according to his/her talents and strong points.*

Accreditation is through both national and international examinations - the international examinations through Cambridge International and the testing and diploma through US-based regimes:

- **SAT (Stanford Achievement Test)** – an American academic standardized test to be taken by every elementary through high school students at the end of the school year.
- **High school diploma** accredited by Franklin Classical School.
- **National Education Accreditation -** by parental discretion, students may gain the national standard of education achievement conducted by the Indonesian Department of Education.

5.4.3 Singapore

Together with South Korea, Singapore is considered to be advanced in its infrastructure [and by many, in its education system] and yet the only virtual school identified thus far is the **K12 International Academy** – the Singapore branch of the American provider K12 Inc, which offers a wide range of courses for full or part-time study.

There are a number of online learning vendors operating in Singapore but these tend to offer supplemental online resources. However, it should be noted that Singapore is a city state with a population of only 3 million confined within a relatively small area. It also seems to have its own, apparently successful, strategies for dealing with students at risk of exclusion – socially or educationally. As such, the drivers we have seen elsewhere for the development of virtual schools have far less traction in Singapore. That is not to say there are no drivers, or virtual schools.

5.4.4 Thailand

The national government Educational Development through E-Learning Plan (2009–2012) made provision for significant development of online and distance learning for schools in Thailand. The focus of the investment is on the provision of hardware and online learning resources; specifically for Science, English and Mathematics. Building on its long tradition of distance learning through television, Thailand now has two key organisations operating in the field: **Distance Learning Television Station** (DLTV) and the **Distance Education Institute**, both of which are involved with both school and continuing education.

5.4.5 Vietnam

Anecdotal evidence suggests that whilst the internet is used for teaching, there are no virtual schools. However, the Ministry of Education website suggests that there are some virtual vocational training courses, linked to the college network.

5.5 The Far East (East Asia)

Four countries are listed in the sub-sections below. In alphabetical order these are China, Japan, Mongolia and South Korea. We have not thought it a good use of resources to research North Korea.

5.5.1 China

A decision was taken when designing the VISCED research programme, that *intensive* investigation of China was unlikely to represent the most effective use of scarce research-resource. It is fully expected that virtual schooling will expand significantly in China given that it exhibits a near 'perfect storm 'of virtual school drivers [geographic isolation, migrant and transient populations, educationally excluded, specific language needs etc] against the context of an expanding economy.

Whilst we have not studied China in any detail there is evidence of significant developments in the field of 'online learning'. Without dedicated native language speakers it is difficult to be unequivocal (particularly about the definition of 'online learning') but research elsewhere indicates as many as 200 'online schools' in China serving some 600,000 students. In terms of student numbers these (understandably) appear to be clustered around Beijing with one-fifth of all 'online students' native to the capital. Beijing No. 4 school is reported as having 60,000 students. There is also plenty of evidence of distance learning projects for remote rural communities. Further research would be illuminating not only to discover whether this is indeed the full extent of online (pre-HE) education in China, but also to investigate and compare the PISA high-achieving city states of Shanghai and Hong Kong – given their culture of supplemental and/or intensive extra-curricular education. This is particularly pertinent since, whilst national and regional governments were initially the prime funders of school-level online learning, it is now private schools which seem to be driving the development.

5.5.2 Japan

Whilst there is legislation promoting e-learning and distance learning in higher education and junior colleges. there are currently just three virtual school wiki entries: the **NHK Academy of Distance Learning**, the **Super English Language Virtual High School** and the **Nagoya International School**, the first two of which are developed below as micro-case studies. The first two of these are notable examples which are described in more detail below. Whilst is it likely that terminology, language and the alphabet have masked some virtual schools from the researchers it should also be noted that the three schools identified are all 'national' schools.

NHK Academy of Distance Learning is an educational institution established as one of the affiliated bodies of NHK, Japan Broadcasting Corporation. It consists of three sections: a high school, a social welfare education and lifelong learning courses. These are operated on a correspondence basis [postal system in Japan, NHK's educational programs on TV and radio, and new methods of audio-visual education, including e-learning]

High School

In the 1960s, when NHK Gakuen Correspondence High School started, the enrolment rate of high school education in Japan was less than 40%. At that time, the important role of this school was to spread high school education farther and wider for those who could not go to ordinary high school due to economic or other reasons. In recent years, the enrolment rate comes up to more than 97%, but there are still certain people who cannot go to high school regularly; some students cannot find a high school suitable for them, some others cannot adapt to school.

NHK Gakuen offers the following courses:

1. General Course

Students study 74 credits over three years in this course. Finishing all the provided subjects, the students are officially certificated as high school graduates. They have to participate in three major activities; studying with TV and radio, making reports and attending school for classroom instruction. Students learn with NHK TV and radio programs and are provided textbooks based on high school curriculum, send in reports on each subject once a month or so, and the teachers of NHK Gakuen correct, evaluate and return them to each student. Instructors also do their best to encourage students not to drop out. Perseverance is the most effective tool for learning. Not only by mail but also by telephone students can get in touch with teachers for close and direct instruction. In addition to communication by mail, NHK Gakuen has introduced a new system of learning, 'e-learning' . Students are also required to attend some fixed hours of schooling once a month. It is held at NHK Gakuen in Kunitachi, Tokyo and 33 cooperating high schools in each district all over Japan. NHK Gakuen also opens intensive schooling twice a year for those who cannot attend monthly schooling.

2. Special Course for Overseas Japanese

This is a course for students who move abroad willing to continue studying the Japanese high school curriculum preparation for their return to Japan.

Social Welfare Course for the Graduates of High School [two-year program]

In 1988, the Social Welfare Course was created as an advanced extension to the ordinary high school curriculum. The Social Welfare Course is designed to help students to become community volunteers capable of creating a better community and to train themselves to become caring professionals called "certified care workers". The curriculum includes comprehensive studies of topics that concern the public, including the environment, day-to-day living and culture, and challenges facing human beings, in addition to theoretical studies on welfare. Furthermore, students gain an understanding of the significance of welfare through field education that includes hands-on

experience and training as volunteers and social welfare specialists. The academy has a total enrolment of 4,000 students at present, while the graduates of the program, of which there are currently more than 27,000, are actively engaged in social welfare projects across the nation.

Features of Social Welfare Course

1. Preparation for the State Examination for Certified Care Worker The completion of the prescribed courses during the two-year study qualify students for the national exam to become certified care workers.
2. Community School Network This is a network initiated and run by the graduates, and deals with welfare activities in a number of communities.

The **Super English Language Virtual High School** in Japan is funded by the National Ministry of Education, Sports, Science and Technology [MEXT] as part of their **Super English language** high school programme, which was initiated in 2002.

Kumamoto was selected as one of 16 prefectures to be the host of a pilot program with the goal of improving English education for the entire country. The Virtual High School idea was home grown in Kumamoto.

The Super Virtual High School is a consortium of:

- Daiichi Senior High School
- Kita Senior High School
- Toryo Senior High School

For more details see http://www.higo.ed.jp

1. Vision

Each student signs up for World Culture Classes. These classes will focus on topics that interest students while also teaching them about English and the world outside of Japan. They will spend at least one class hour a week on these classes. Beyond this hour, they may access VHS in their free time, or during extra class hours to complete work or explore the site.

2. Goals

- Get students excited about English by teaching them in English about topics that interest them.
- Further facilitate internationalization by increasing student exposure to non-Japanese young people and give ALTs a greater opportunity to get to know other Japanese students.
- Give ALTs [Assistant Language Teachers] the opportunity to teach a subject other than straight English thus increasing their job satisfaction. They will teach on their own, without a team-teaching partner, though Japanese Teachers of English will be involved in the project. In this way, we will also utilize Kumamoto's ALTs more effectively.

- Expose Japanese students to their role as world citizens and give them enough information to spark an interest in the world outside of our ken, thus further increasing internationalization.
- Give our students the confidence to communicate in English, both with native speakers and other non-native speakers alike.
- Revolutionize English education in Kumamoto while producing active learners who are unafraid to pursue their academic interests and goals.

3. Operation

Though the Base Schools may choose to present the day to day operations of Virtual High School in differing ways, they will all adhere to some basic operational criteria.

1. Each participating school has a 1-hour class devoted to the Virtual High School class.
2. Each student will study the World Culture classes. They use methods such as email, in person activities, web pages and the internet to accomplish class goals.
3. ALTs will design the curriculum. Other ALTs will become Homeroom Teachers and communicate with the students via e-mail while also evaluating their performance. Classes can be from 1 to 4 weeks long.

Nagoya International School, founded in 1964, is a private, non-profit, co-educational day school offering an instructional programme from pre-school through grade 12 for students from 22 countries with approximately 25% from North America.

The school serves students whose parents work in the diplomatic corps and the international business community, as well as host-country students and other long-term residents of Nagoya.

There are 36 full-time teachers from six different countries. All faculty members are certified in their respective countries and approximately 75% hold Master's degrees.

The school provides an American, standards-based curriculum and the language of instruction is English.

Japanese course offerings are extensive (7 levels); level 4 is equivalent to an Advanced Placement class.

NIS is a candidate school for the International Baccalaureate Diploma Programme and the high school has implemented pre-IB courses from 2007-2008.

5.5.3 Mongolia

A set of initiatives and projects have been developed in the country to support mainly non-formal rural distance education. The initiatives and experimentations undertaken so far try to build on the well-consolidated network of non-formal education centres. In 2001, the International Development Research Centre of Canada (IDRC) funded the Internet Based Distance Education Project in Mongolia. The project offered experimental web-based instructional courses on specific subjects such as English language, IT and computer skills, gender issues and legal rights.

5.5.4 South Korea

South Korea is an accepted leader in terms of its educational and domestic technology infrastructure and its students have been judged amongst the most competent users of ICTs – it would have been natural to expect a number of virtual school initiatives.

The largest virtual school identified is **Cyber Home Learning System**, developed here as a micro-case study**.** This is the nationwide online learning initiative of the South Korean Ministry of Education. The Cyber Home Learning System was developed in 2004 with three key objectives:

- first, to reduce the education divide,
- second, to reduce private tutoring expenses,
- third, to enhance the quality of public education.

In 2005-6 there were over 1.5million participating students supported by over 6,000 cyber teachers.

Further information

CHLS is based on a suite of four major services

- customized learning using content for self motivated study,
- Q&A service with cyber teachers,
- assessment of academic performance
- career counselling service for school applications.

References

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- http://english.keris.or.kr/ICSFiles/afieldfile/2009/01/09/CHLSofKorea.pdf
- Analysis on the Effectiveness of Cyber Home Learning System
- http://english.keris.or.kr/ICSFiles/afieldfile/2006/08/10/KERISRandD.pdf

We have also identified other virtual schools and linked initiatives, which support the view that South Korea is fast becoming the most significant player in virtual schooling in the region.

The second large scale virtual school is The **Air and Correspondence High School (ACHS)** which was established in 1974 with the aim of providing secondary education to people who are under-privileged for economic or personal reasons. Since 2009, 40 ACHSs have been affiliated with public schools in Seoul and Pusan. The ACHS offers a blended learning programme, with Internet and offline classes (2 times per month), various learning tools and differentiated educational methods.

The Cyber High School was launched in January 2000 and the associated press release claimed that this *'marked the beginning of Official Cyber Education at school level in Korea.'*

The system was developed by LG-EDS Systems jointly with the Korean Education Development Institute and provided High school education content available to anyone on the internet

Users could then receive formal high school education through the internet. When users logged on to a class in the cyber public high school, they could receive classes on real high school subjects without restrictions on time and location.

The **EBS Internet service** (EBS) was launched by the Korea Educational Broadcasting System (KEBS) in 2004. The major purpose of this service is to promote the quality of public educational services and reduce the citizens' economic burden of private education. This service provides online lectures for high school students preparing for a national entrance exam for higher education. It offers the students high quality learning materials and helps to reduce the educational gaps between regions and people of differing social status. In order to enhance the service in 2010, KEBS recruited outstanding teachers in design, development and delivery of online lectures. It has also begun to offer learners differentiated courses according to their level of proficiency, and to provide a mobile service using smart phones.

From records of ministerial visits, we have identified two other schools which are either already offering a fully virtual programme, or are about to launch one: the **Hanse Cyber High School** and **Kyungbock High School**.

5.5.5 Taiwan

There is a branch of the **Calvert School** apparently operating in Taiwan, but it is not clear from the website exactly what is currently being delivered.

6 The Americas

6.1 Introduction and overview

This chapter covers all the states of the USA, Canada and the whole of Latin America (which is defined in section 6. below). It does not include the Caribbean, which is dealt with in Chapter 8.

The table below summarises the numbers of exemplars described in this report. The full list of virtual schools and colleges with wiki entries in this supra-region is given in the Annex at the end of the document.

Country	*Schools*	*Colleges*	*Initiatives*
Argentina	2		
Bolivia	1		
Brazil	5	7	2
Canada	8		
Chile	2		
Colombia	2	3	
Mexico		1	4
Peru	2		
USA	20		
Uruguay	1	2	1
TOTALS	**43**	**13**	**7**

Countries highlighted in yellow have 1-5 exemplars in this report; green shading means 6-10; and blue shading more than 10.

6.2 USA

It should be stressed that the individual schools described in the sections below are representative of different patterns of virtual schooling in the USA; this is not a comprehensive list.

6.2.1 Introduction

As of Dec 2012, there are over 260 US Virtual School entries on the VISCED wiki. Below is a selection intended to illustrate the spectrum of provision through single institutions through, school- district, multi-district and state-wide with public, private and charter schools offering full-time and supplementary learning to a variety of student cohorts from mainstream to religious groups, offenders and vulnerable young people.

With regards to virtual schooling, the USA is almost certainly the most intensively studied country in the world at the current time. iNACOL [the International Association of Online K-12 Learning] is based in the USA and provides an invaluable focus for research and advocacy. The annual Keeping Pace Reports [for the USA] and the State of the Nation Reports [for Canada] form an excellent foundation for research into arguably the most mature virtual schooling region [North America] - capturing as they do the disparities, differences and nuances between and within nations, states and school boards. iNACOL categorises USA virtual schools in terms of reach as follows

- Single-district programmes
- Multi-district full-time schools
- Consortium programmes
- State virtual schools
- Programmes run by postsecondary institutions

However, the governance models in the USA are much more varied than this [understandably given the variety of political philosophies, funding streams and regulatory frameworks across the 50 states] and the influence of the private sector – both in offering private education and in running public schools – is evident.

USA schools may employ combinations of synchronous, asynchronous and blended learning to support full-time and/or supplementary learners.

6.2.2 Virtual initiatives in schools

Online education in the US has gained considerable traction over the last 15 years – seemingly more so than in any other country. A major report from the International Association for K-12 Online Learning [iNACOL], A National Primer on K-12 Online Learning [Second Edition], estimates that over 1.5 million American K-12 students were engaged in online and blended learning for the 2009-2010 school year [out of approximately 55.2 million students enrolled].This represents roughly 3% of the US K-12 population.

This relatively small figure belies the scope and nature of the programmes now available. Options vary from state to state, school district to school district, and even from school to school. As the Primer notes, whether a student has the option to participate in “supplemental” [i.e. single] courses or full-time online programmes remains a matter of state policy and local laws, “with a few states

providing opportunities for most students, a few states providing almost no opportunities, and most states falling somewhere in the middle". Moreover, iNACOL and others acknowledge their ongoing struggle to survey data in this relatively new and rapidly changing arena; there is no single authority to whom any of the schools listed in this survey must report, and relevant data is not always made available to the public.

As of 2010, supplemental or full-time online learning opportunities were available to students in 48 of the 50 US states. 38 states had state virtual schools or state-led online initiatives [with a 39th set to open in 2011]; 27 states plus Washington, DC had full-time online schools serving students state-wide; and 20 states were providing both supplemental and full-time online learning options state-wide [but not as part of a state virtual school]. This can be compared to 2001, during which approximately 10 states had state virtual schools and even fewer offered other online education options. The three main types of US virtual school are summarised in brief below, as outlined in Keeping Pace With Online Learning: An Annual Review of Policy and Practice, Evergreen Education Group [2010]. Note that not all schools fit neatly into one of the slots below, but without this kind of rough categorisation it would be exceedingly difficult to approach the vast array of US virtual schools.

It should be noted than where US research literature is quoted the original authors may be applying a specific, quantitative definition of a 'blended learning' course [the Sloan definition from Allen, Seaman, and Garrett[5]].

1. *Traditional Course: 0% of instruction or content delivered online*
2. *Web-facilitated Course: 1-29% of instruction or content delivered online*
3. *Blended/hybrid Course: 30-79% of instruction or content delivered online*
4. *Online Course: 80%-100% of content is delivered online*

6.2.2.1 US state virtual schools – overview

- Operate in 38 states
- Are state-led online learning initiatives, with course enrolment ranging from several thousand to 16,000 for 2009-10
- Boast 450,000 "course enrolments" nationwide, i.e. in which one student takes one course
- Often provide local school districts with **supplemental online courses**, as well as online learning expertise and thought leadership for their own schools

[5] Allen, E., Seaman, J. & Garrett, R. [2007]. Blending In: The Extent and Promise of Blended Education in the United States. Sloan-C Consortium. Available for download at: http://www.sloan-c.org/publications/survey/pdf/Blending_In.pdf

- Have **students who study online part-time only** [taking "supplemental" online courses while physically enrolled elsewhere]
- Saw enrolment increase by nearly 40% from 2008-09 to 2009-10, though most gains came from the states of North Carolina and Florida only
- Have virtual school enrolments exceeding 10,000 for 2009-10 in eight different states [Alabama, Florida, Georgia, Idaho, Louisiana, Michigan, North Carolina and South Carolina]
- Are usually funded by legislative appropriation

6.2.2.2 US multi-school-district full-time online schools – overview

- Operate in 27 states [each has at least one]
- **Have few or no part-time students**; most have enrolment of a few hundred to several thousand
- Usually attract students from across an entire state, so are found in those states that permit students to enrol across district lines
- Are typically charter schools [i.e. special publicly funded schools operating under their own charters/standards, attended by student choice]
- Are usually affiliated with a private national organisation e.g. Connections Academy, K12 Inc., Advanced Academics, or Insight Schools
- Are often funded via state public education funds that follow the student

6.2.2.3 US single school district programmes – overview

- Are represented by only 11 well-established programmes nationwide
- Serve only students who reside within a single, local district of residence
- Serve **mostly supplemental students** [though some serve full-time students]
- Are often focused on credit recovery or at-risk students
- Make up the fastest growing segment of K-12 online learning

There are additionally a number of virtual schools run by consortia or postsecondary institutions, i.e. some which are not state, multi-district or single district schools.

6.2.3 Notable examples, including micro-case studies

6.2.3.1 State-wide Public Schools: Florida and Michigan

Florida Virtual School (micro-case study)

The *Florida Virtual School* [**FLVS**] is a US state virtual school founded in 1997. It is located in the south eastern state of Florida, USA. FLVS offers education at the K-12 level [kindergarten through twelfth grade]. FLVS will enrol students through age 19; students must complete their course before age 21. All courses are fully online.

There were 213,296 semester course enrolments for 97,182 students in grades 6-12 in 2009-10. Additionally, in 2010-2011, more than 115,000 students across the state of Florida took at least one course with the Florida Virtual School.

FLVS is roughly three times larger than any other state virtual school, and 10-25 times larger than most.

More Details

The first US state-wide online public high school [i.e. open to all Floridians], FLVS makes its courses free to all Florida students; others may enrol and pay tuition. FLVS is a curriculum provider and does not award diplomas directly. Floridian students are typically enrolled in a Florida public school.

Funding of FLVS is built directly into the state education funding formula. Funding is performance-based: *FLVS receives funding only for students who successfully complete their courses*. This is the same funding formula as for the state's traditional public schools, i.e. the funding tied to that student goes to FLVS.

Florida school districts may select to set up their own FLVS Franchise schools.

FLVS is known [and sometimes maligned] for its use of eLearning Centres [ELCs] and Virtual Learning Labs [VLLs]. 150 schools in Florida have implemented these in partnership with FLVS, in which:

- The traditional school provides scheduled time and a workspace [such as a computer lab or library] and FLVS provides the teacher and an online course.
- ELCs and VLLs each have a facilitator to work in tandem with the online teacher.

State-wide, the number of VLLs greatly expanded in 2009-10 [especially in Miami-Dade] due to class size reduction legislation [as districts select virtual options to meet the new requirements].

The Florida Virtual School web site is at http://www.flvs.net/Pages/default.aspx.

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Michigan Virtual School

The *Michigan Virtual School* [**MVS**] is a state virtual resource established in 2000. Run by Michigan Virtual University, it is located in the state of Michigan, US.

MVS had 15,000 course enrolments in 2009-10.

While not a school per se, MVS works in partnership with schools to provide online learning options that supplement what is currently being offered. It targets schools in its advertising, offering to expand curriculum and save money and resources. It does not directly grant credit or diplomas. Courses are almost entirely online, and may be taken either from a school classroom or from home. They may be either instructor led or self-paced.

Courses are available to students at the middle school and high schools levels [sixth through twelfth]. Students taking courses through MVS must be no older than 20 years old.

The Michigan Virtual School web site is at http://www.mivhs.org.

More Details

MVS is a "private, non-profit Michigan corporation" funded by annual legislative appropriations, course tuition, and private grants. Its parent organisation is Michigan Virtual University [MVU], an unusual arrangement.

In 2006, the Michigan Legislature was the first in the nation to pass a requirement that students have an "online learning experience" before graduating

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6.2.3.2 State-wide and Multi-district Charter schools

Oregon Connections Academy

The *Oregon Connections Academy* [**ORCA**] is a public K-12 school partnered with the private Connections Academy to provide a full curriculum. It is located in the US state of Oregon. Authorised by Scio School District 95C, ORCA began serving students state-wide in September 2005.

There were 2,457 students enrolled in 2009-2010.

ORCA is a full-time tuition-free virtual charter school; students study from home.

The Oregon Connections Academy web site is at http://www.connectionsacademy.com/oregon-school/home.aspx

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- Oregon Connections Academy web site, http://www.connectionsacademy.com/oregon-school/home.aspx
- "Oregon Connections Academy", CCD Public school data 2009-2010 school year, http://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&SchoolID=411104001680&ID=411104001680

Open High School of Utah (micro-case study)

The *Open High School of Utah* [**OHSU**] is based in the US state of Utah. Founded in 2009, it is a public charter school which aims to provide Utah students with an online, virtual environment to fulfil their "full academic and social potential". Courses are fully online.

In 2011 OHSU offered education for 500 full-time high school students in grades 9-11, and planned to add grade 12 in 2012.

OHSU offers a full college preparatory programme and the opportunity for students to earn both a high school diploma and an associate's degree from Utah State University. It is estimated that 39% of existing students' "needs [were] not being met in previous school situations".

The Open High School of Utah has been supported in part by a grant from the US Department of Education's Fund for the Improvement of Education [FIPSE].

The Open High School of Utah web site is at http://openhighschool.org

More Details

Founded by OER evangelist David Wiley, OHSU is committed to using open educational resources [OER]; the entire curriculum is based on open educational resources, enhanced with screencasts, interactive components and other activities.

As this is a Utah public school, any 9th grade high school student [13 to 15 years of age] in the state of Utah can apply. Enrolled OHSU students can take advantage of the OHSU partnership with Utah-based Brigham Young University Independent Study [in the Utah Higher Education Consortium] to take BYU independent courses at no cost.

All OHSU students are issued/provided a laptop and an internet connection subsidy, along with CDs/DVDs and other instructional supplies. Learning is self-paced, in collaboration with teachers. OHSU utilizes both synchronous and asynchronous types of communication. For each course, students have the opportunity for synchronous instruction with their teacher [daily]. For more details see http://openhighschool.org/teaching-model

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- Open High School of Utah web site, http://openhighschool.org

The charter proposal is at http://openhighschool.org/wp-content/uploads/2009/07/OHSU-Charter-as-Amended-Apr09.pdf

Georgia Cyber Academy

The *Georgia Cyber Academy* [**GCA**] is a full-time, tuition-free online charter school for students in grades K-10, located in the US state of Georgia. It is proclaimed to be one of the fastest-growing public schools in the state [though enrolment figures are not readily available].

GCA is partnered with the private K12 Inc for provide content/curricula. The high school programme is a combination of self-paced work and scheduled lessons and activities. Students will spend no more than 20-25% of their time on the computer in the early grades, and more at higher levels.

The Georgia Cyber Academy web site is at http://www.k12.com/gca

More Details

Throughout the year, students are invited to participate in school outings, field trips etc.

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- Georgia Cyber Academy web site, http://www.k12.com/gca
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/

6.2.3.3 Single District Public Schools: WOLF and Jeffco

WOLF School

The *WOLF School* [**Washoe On-line Learning for the Future**] is a free online public school located in the US state of Nevada. Students who reside in Washoe County may attend in grades K-12. WOLF is part of the Nevada Online School Network, and partnered with the private Advanced Academics.

During the 2009-2010 school year WOLF had 208 students.

Learning is 100% online, and may be either part-time or full-time. Students already enrolled in the Washoe County School District may take one course at a time while enrolled full-time at their traditional school, with a $120 fee per course.

The WOLF School web site is at http://www.learnwithwolf.com/index.html

More Details

Washoe County School District will issue a student's diploma on behalf of the WOLF School.

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- WOLF School web site, http://www.learnwithwolf.com/index.html
- "Washoe Wolf High School", CCD Public school data 2009-2010 school year, NCES, http://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&SchoolID=320048000775&ID=320048000775

Jeffco's 21st Century Virtual Academy

Jeffco's 21st Century Virtual Academy [**Jeffco**] offers online courses for grades 7-12 for students throughout the US state of Colorado. The public Virtual Academy is backed by Jeffco Public School and offers both part-time [supplemental] and full-time study. Tuition-free students need to be residents of Colorado and under the age of 21, although out-of-state or international students may enrol on a fee-paying basis.

In 2010-2011 there were 144 full-time and 188 part-time students enrolled.

Learning takes place almost entirely online.

The Jeffco web site is at http://www.jeffcopublicschools.org/online/

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- Jeffco's 21st Century Virtual Academy web site, http://www.jeffcopublicschools.org/online/
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/

6.2.3.4 Single District Charter Schools: SusQ-Cyber Charter School

SusQ-Cyber Charter School

The *SusQ-Cyber Charter School* [**SusQ-Cyber**] is a free public charter school open to students in grades 9 through 12 who are school-aged residents of the US state of Pennsylvania. It was opened in 1998.

In 2009-2010 there were 190 students enrolled.

Students study from home and are expected to study for a minimum of 5½ hours per school day. Programmes entail regular communication with a teacher [phone, Elluminate] and other features [e.g. physical education requirement at a local gym]. Courses are self-paced.

The SusQ-Cyber Charter School provides, by law, each student with a computer and printer. Internet access is also provided.

The SusQ-Cyber Charter School web site is at http://www.susqcyber.org/

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf

- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- SusQ-Cyber Charter School web site, http://www.susqcyber.org/
- "Susq-cyber Cs", CCD Public school data 2009-2010 school year, http://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&SchoolID=420002800368&ID=420002800368

6.2.3.5 Consortia: Virtual High School Global, Vermont and Wisconsin

Virtual High School Global Consortium (micro-case study)

The US-based Virtual High School Global Consortium [VHS] was founded in 1997. It is a non-profit consortium that offers high school courses to students worldwide, and mostly to students within the US. Its offices are located in Massachusetts, US.

The total 2010 student enrolment in its "NetCourses" was 15,237.

VHS students typically access their [asynchronous] online courses from within their local, traditional schools. Courses are mostly supplemental, focusing on Advanced Placement, honours level, remediation and credit recovery.

Member schools pay an administrative fee and pay for professional development. There were 770 member schools worldwide, from 34 US states.

In September 2011, VHS announced a partnership with the private Connections Academy, designed to expand the number of core online courses offered for credit recovery purposes.

The Virtual High School Global Consortium web site is at http://www.govhs.org/.

More Details

The Virtual High School has 51 non-US members [international schools].

Students participate in organised online "classes" which do not exceed 25 students.

As noted on the VHS web site:

Schools can join VHS as Individual School Members or Student-Only schools. Individual School Members participate in VHS by freeing a high school teacher one period a day to teach a VHS course online. Student-Only schools do not have a teacher teaching a VHS course, but only have students taking VHS courses. VHS also accepts individual students

VHS is "based in the Massachusetts Virtual High School" – an entity about which little discrete information exists.

Most participating schools sponsor one VHS course, allowing 50 students [per year] to take one online course through VHS.

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Connections Learning Partners with Virtual High School to Expand Core Course Offering", Connections Academy Press Release, 12 September 2011, http://www.connectionslearning.com/connections-learning/news/CL-partners-with-Virtual-High-School.aspx
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- Virtual High School Global Consortium web site, http://www.govhs.org/

Vermont Virtual Learning Cooperative

The *Vermont Virtual Learning Cooperative* [**VTVLC**] is an organisation developed through a partnership of public schools which is funded by a grant provided by the Vermont Department of Education. It is located in the US state of Vermont. The programme enables students to take classes not available at their local schools, or not available at a time during which they can attend them.

VTVLC offered 18 supplemental courses to 300 students in the autumn of 2010.

The VTVLC coordinates the efforts of Vermont public schools to offer online classes. In addition, a broad range of professional development activities are offered to prepare teachers to meet the challenges of teaching in an online environment.

Schools that provide teachers and online classes are able to access other courses being offered through VTVLC from around the state with no exchange or loss of tuition dollars.

The Vermont Virtual Learning Cooperative web site is at http://www.vtvlc.org/

More Details

The VTVLC is managed by Vermont's River Valley Technical Centre School District in partnership with Springfield School District, Burlington School District, Community College of Vermont, Marlboro College Graduate School, and Learning Network of Vermont.

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf

- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- Vermont Virtual Learning Cooperative web site, http://www.vtvlc.org/

Wisconsin eSchool Network

The *Wisconsin eSchool Network* is a network of eSchools located in the US state of Wisconsin. They are located in the state of Wisconsin.

The Wisconsin eSchool Network is a consortium of nine school districts, five of which are among the 10 largest districts in the state [Kenosha, Janesville, Madison, Appleton and Sheboygan].

The Network had 4,641 course enrolments in 2009-10.

See http://www.wisconsineschool.com/Network.asp for a full list of members.

The Wisconsin eSchool Network web site is at http://www.wisconsineschool.com/

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- Wisconsin eSchool Network web site, http://www.wisconsineschool.com/
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/

6.2.3.6 Private Provision of Public Schools: Mississippi Virtual Public School

Mississippi Virtual Public School

The *Mississippi Virtual Public School* [**MVPS**] is a free state-wide virtual public school, located in the US state of Mississippi. It is partnered with the private Connections Academy for course provision, and [as of November 2010] was the first and only state virtual school to be entirely run by a private provider.

MVPS served approximately 2,863 students with 6,357 course enrolments during the 2009-10 school year. MVPS also offers supplemental AP preparation courses.

MVPS seeks to provide Mississippi students with access to a wider range of course work, with improved flexibility in scheduling. The school was established by State Board of Education legislation in 2006. MVPS was funded by state appropriation of $1.9 million in 2008-09, with some additional grant funding, and $1.8 million for 2009-10.

All students are required to gain approval from their local school before they can take an online course through MVPS. Private and homeschool students must meet the same requirement and must use the local public school for which they are zoned.

For the 2011-2012 school year MVPS reached maximum capacity as the school could no longer afford to bring in students using public funds. Mississippi students in Grades 9-12 and their parents may purchase online courses directly from the National Connections Academy private online programme, which has established a course list and discounted pricing for Mississippi families.

The Mississippi Virtual Public School web site is at http://www.connectionsacademy.com/mississippi-school/home.aspx

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- Mississippi Virtual Public School web site, http://www.connectionsacademy.com/mississippi-school/home.aspx

6.2.3.7 Post-secondary Schools Provided by Universities

Independent Study High School

The *Independent Study High School* [**University of Nebraska-Lincoln Independent Study High School**, **ISHS**, **UNL Independent Study HS**] is an online high school located in the US state of Nebraska. It is part of the University of Nebraska-Lincoln.

The Independent Study High School had 43 students in 2009-2010*.

ISHS students are located in 135 countries worldwide. Courses are self-paced and designed for the independent learner; they have no age or grade requirements. Home school students may choose to complete a diploma by studying online full time; students enrolled in a local school may take individual [supplemental] courses.

The Independent Study High School web site is at http://highschool.unl.edu/

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- Independent Study High School web site, http://highschool.unl.edu/
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/

- "UNL Independent Study High Sch", CCD Public school data 2009-2010 school year, http://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&SchoolID=310005901875&ID=31000590187

*Elsewhere [http://www.nytimes.com/2011/11/20/education/stanfords-online-high-school-raises-the-bar.html?_r=2] a figure of 250 students graduating annually is quoted.

Brigham Young University Independent Study

The *Brigham Young University Independent Study* programme [**BYU Independent Study**] is a university-based online education programme that offers roughly 600 university, high school, junior high school [middle school] and personal enrichment courses to individuals worldwide. It is located in the US state of Utah.

BYU Independent Study targets high school students seeking to graduate early or even simply on time, and high school students taking college courses for dual credit at their high school and prospective college.

The BYU Independent Study web site is at http://ce.byu.edu/is/site/

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- Brigham Young University Independent Study web site, http://ce.byu.edu/is/site/

6.2.3.8 Inclusion schemes

Cook County Sheriff's Department Virtual High School [Offender Learning]

The *Cook County Sheriff's Department Virtual High School* is a fully online high school diploma programme [HSDP] in a US adult jail, launched in 2009. In June 2010, it graduated its first class of seven.

The programme serves 17-21 year olds that have not graduated from high school. Students begin by taking credit-recovery courses before moving on to other graduation requirements. The school's mission is to help students complete high school, setting them "on a path to success, rather than down a road of criminal behaviour."

The programme's private partner is Aventa Learning.

The Cook County Sheriff's Department Virtual High School web site is at http://www.cookcountysheriff.org/ReentryAndDiversion/ReentryAndDiversion_VirtualHS.html

More Details

HSDP works in coordination with Chicago Public Schools [CPS], which oversees the programme. CPS staff analyze student transcripts, monitor compliance with graduation requirements, and assign final grades based on performance. When students earn all the credits needed to graduate, they receive a high school diploma from the last Chicago Public School they have attended. Alternatively, students can earn an eighteen credit diploma from Pnuema, a private school which utilizes the same online courses

All high school courses offered are approved by the State of Illinois and the City of Chicago, Classes include all core requirements [English, Mathematics, Sciences, Foreign Language], electives [Health, Driver's Education, Career Planning, Art and Music], and credit recovery courses.

Through Aventa, students access their courses online at one of four computer-enabled classrooms; Cook County provides the computers while Aventa delivers the online learning. Each student is assigned a personal online teacher.

References

- "Alternative High School Program in Cook County", Aventa Learning web site, n/d, http://aventalearning.com/case-studies/Cook-County-Alternative-School
- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- Cook County Sheriff's Department Virtual High School web site, http://www.cookcountysheriff.org/ReentryAndDiversion/ReentryAndDiversion_VirtualHS.html
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports

Kenosha eSchool [Vulnerable young people]

The *Kenosha eSchool* [**eSchool**] is an online high school located in the US state of Wisconsin. Founded in 2007, it is part of the Kenosha Unified School District. Students may study part-time or full-time from any Kenosha district school.

There were 89 students enrolled in 2009-2010.

Its mission

The Kenosha eSchool, in partnership with Wisconsin eSchool Network, exists to utilize new and emerging technologies providing students' access to high-quality standards-driven curriculum in an environment that is self-paced and accommodating to students' varying physical locations, individualized plans, and time frames

Any Kenosha area student grades 9-12 may request enrolment in eSchool courses. Special consideration may be given to students "with significant life obstacles: i.e. dropouts, adjudicated and/or incarcerated youth, teen parents, home-based [home-bound] students, students with physical, mental or emotional difficulties, voluntarily withdrawn or expelled students, self-supporting youth, transient students, students in treatment programs, homeschooled, and open enrolled students."

The Kenosha eSchool web site is at http://eschool.kusd.edu/

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- Kenosha eSchool web site, http://eschool.kusd.edu/
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/; state profile at http://www.kpk12.com/cms/wp-content/uploads/EEG_KP2010-stateprof-WI.pdf

City of Angels Virtual Academy

The *City of Angels Virtual Academy* [**COAVA**] is the online academy of the Los Angeles Unified School District, or LAUSD. COAVA became a full-time online academy in 2010. Education is available for student in grades 9-12 [high school], with a K-8 curriculum in development as of 2011-2012. The entire 9th and 10th grade curriculum is available online.

Based in California, US, COAVA served 650 students in its first year, 2010-2011.

It is designed for students with special interests and abilities, scheduling problems, or individual needs that cannot be accommodated in the traditional school setting. Those having problems in traditional schools, are single parents, and are potential dropouts are of particular interest. Students study from home.

COAVA serves a student body drawn from a 700-square mile area. Instructional sites house between two and five teachers and are located in community centres, churches, LAUSD-owned properties, and commercial buildings.

The City of Angels Virtual Academy web site is at http://www.lausd.net/City_of_Angels/coava/index-1A.html

More Details

COAVA is a joint venture between Los Angeles Unified School District's City of Angels School, the Office of Instruction, the Office of Educational Technology, and the Beyond the Bell Branch.

References

- "LAUSD offers virtual academy for students", ABC 7 Eyewitness news piece, 16 August 2010, http://abclocal.go.com/kabc/story?section=news/local/los_angeles&id=7613616
- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- City of Angels Virtual Academy web site, http://www.lausd.net/City_of_Angels/coava/index-1A.html
- City of Angels School brochure, http://www.lausd.net/City_of_Angels/pdf/COAS%20Brochure.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/

The American Academy [Drop out and credit recovery]

The American Academy [**TAA**] Inc. is a private online high school located in the US state of Utah. It specialises in providing a complete high school education to non-traditional students, and providing supplemental "just in time" courses for students struggling to graduate on time [or seeking to graduate early].

Dozens of school districts in several US states [e.g. Washington, Florida] use TAA's services for their students.

Established in 2007, TAA offers a Dropout Recovery Programme web site.

The American Academy web site is at http://www.theamericanacademy.com

More Details

Financial partners of The American Academy include Austin Ventures, vSpring Capital and Peterson Ventures.

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- The American Academy web site, http://www.theamericanacademy.com

Omaha Public Schools eLearning

Omaha Public Schools eLearning [**OPS**] is a district-run school programme in the US state of Nebraska, founded in 2006. OPS was initially designed to meet the needs of credit recovery students

in grades 9-12, but evolved into a blended learning programme for all students. Credit recovery students access online content while at a physical school with in-person teachers.

In 2010-2011 there were nearly 15,000 blended face-to-face students; 600 full-time online students; and 2,500 supplemental students.

OPS uses OER content from NROC [Monterey Institute for Technology and Education].

The Omaha Public Schools web site is at http://www.ops.org/district/. There is no obvious web site for its eLearning programme.

Note: most of this content is drawn from a single report, "Keeping Pace With K-12 Online Learning," and at a glance, content has proven difficult to confirm via other sources [Sept 2011].

References

- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice". Evergreen Education Group, 2010, http://kpk12.com/reports/

Slavic Christian Academy [Common interest groups]

The *Slavic Christian Academy* [**SCA**] offers Christian online homeschooling courses for students in grades 3-12. It is located in the US state of Washington. Founded in 2004, it is a religious non-profit private school with four physical campuses located in the north-western US, in addition to its online school. SCA graduates receive a Washington State Diploma.

SCA had 249 K-12 students in 2009-2010.

Full-time [grades 3-12] and part-time [grades 7-12] education is available. Tuition may cost between $240 and $1680 per year.

Advertising clearly targets parents of homeschoolers, e.g.

"By using SCA's accredited online program, parents no longer have to worry about obtaining teaching credentials, grading assignments or even creating homeschooling curriculums."

Completely online courses are provided by the "Switched-On Online" [SOO] curriculum provider. Courses involve teacher-led instruction; "classes" of under 20 students; and teacher support via email or phone.

The Slavic Christian Academy web site is at http://www.slavicchristianacademy.com

More Details

Slavic Christian Academy is a member of Association of Christian School International [ACSI], approved by Washington & Oregon Office of Superintendent of Public Instruction [OSPI & ODE], and granted the **provisional accreditation** by the Northwest Accreditation Commission [NWAC].

References

- "A National Primer on K-12 Online Learning", iNACOL, October 2010, http://www.inacol.org/research/docs/national_report.pdf
- "Keeping Pace With Online Learning: An Annual Review of Policy and Practice", Evergreen Education Group, 2010, http://kpk12.com/reports/
- "Private School Universe Survey [PSS]", NCES 2009-2010 data, http://nces.ed.gov/surveys/pss/privateschoolsearch/school_detail.asp?Search=1&SchoolID=A0903764&ID=A0903764
- Slavic Christian Academy web site, http://www.slavicchristianacademy.com/

6.3 Canada

It should be stressed that the individual schools described in the sections below are representative of different patterns of virtual schooling in Canada; this is not a comprehensive list.

6.3.1 Introduction

As of December 2012 there were 21 Canadian virtual school entries on the VISCED wiki. Below is a selection intended to illustrate the spectrum through single institutions, to school district, multi - district and province wide, with public and private schools offering full-time and supplementary learning to a variety of student cohorts from mainstream to religious groups and First Nation learners. It is expected that this list will be added to as other researchers become aware of the wiki and begin to contribute. Whilst in some provinces and territories virtual learning has been in decline for 2 or 3 years the figures for Canada as a whole are growing. New virtual schools and consortia are being developed. However some of these remain difficult to identify since they may be small existing physical schools in remote locations which are now being supported to offer significant online learning. As such they do not always use the term 'virtual', 'online' or 'cyber' schools.

Virtual initiatives in schools

Distance learning is a feature [to a variable degree] of the education systems in all thirteen territories and provinces. The 2010 iNACOL Report 'State of the Nation: K-12 Online Learning in Canada' estimated that between 150,000 and 175,000 students were enrolled in distance learning courses and/or programmes. This constitutes between 2.8% and 3.4% of the total K-12 student population. Unsurprisingly, given the vast land area and regional autonomy, there is an extremely broad spectrum of distance learning provisions varying by cities, districts, provinces and territories.

'The highest level of activity appears to be in British Columbia, which also has the most comprehensive legislative and regulatory regime. The only province that does not have its own K-12 distance education programme is Prince Edward Island, which relies upon programmes from other jurisdictions [similar to the three northern territories]. The only jurisdictions that continue to maintain single province-wide systems are Newfoundland and Labrador and New Brunswick.'

"...other trends include a high level of district-based cooperation in the Provinces of Ontario and Saskatchewan. The total K-12 student population in Canada for 2009-10 was just over 5.2 million."

The 2011 iNACOL report 'State of the Nation: K–12 Online Learning in Canada' has calculated that there are now 207,096 K-12 students enrolled in 'distance learning'. This represents an overall [nationwide] growth in the proportion of K–12 students involved in distance education to 4.2%. This does, however, mask decreases in some provinces e.g. New Brunswick.

The 2011 iNACOL Report mentioned above details the provincial enrolments as follows:

Province/Territory	*K-12 Students*	*Enrolled in DE*	*Percent Enrolment*
Newfoundland & Labrador	168,729	**~1,000**	1.5%
Nova Scotia	128,131	**~2,450**	1.9%
Prince Edward Island	21,126	**66**	<1%
New Brunswick	104,421	**1,841**	1.8%
Quebec	949,350	**~30,000**	3.1%
Ontario	2,061,390	**~50,000**	2.4%
Manitoba	179,975	**~9,000**	5.0%
Saskatchewan	159,465	**3,285**	2.1%
Alberta	585,397	**21,339**	3.6%
British Columbia	649,952	**~88,000**	13.5%
Yukon	2,933	**95**	3.2%
Northwest Territories	8,576	**20+**	<1%
Nunavut	8,855	**~0**	-

It should be noted, however, that, in the Canadian K-12 context, 'distance learning' and 'distance education' includes print-based [offline] materials. iNACOL also observed that distance education is often provided as a solution to longstanding challenges such as geographical isolation and/or non-viable study cohort sizes rather than as a choice for students.

The key 2009 and 2011 reports 'State of e-Learning Canada' provide an overview of the history of virtual schools in Canada:

> *'Virtual schooling in Canada first began in 1994–1995, and advancements in K–12 e-learning continue to develop across the country...In 2003–2004, more than one-third [36%] of secondary schools across Canada had students participating in electronic or online courses. The curriculum of most online courses was developed by the school board, district, jurisdiction or province/territory. The proportion of students enrolled in online courses differed according to the instructional level, type and size of school, and geographic location. More rural schools than urban schools reported having students who participated in online courses. Close to 40% of rural secondary schools reported offering online courses to their students, compared with 35% of urban secondary schools. Only 3% of elementary schools had students participating in online courses in 2003–2004.'*

Before comparing these figures with those collected by others it should be noted that the report defines virtual schools as follows:

> *'Virtual schools do not have a building or physical location; they are operated and managed online.'*

It is unclear whether this excludes the many Canadian online, distance learning programmes which consist of a physical location at which students undertake some of their online studies [perhaps a partner school] but where the students host 'school' is an online entity. It should also be noted that many programmes have appeared since 2003-04.

6.3.2 Notable examples

6.3.2.1 Province-wide public school: Argyll Centre

Argyll Centre (micro-case study)

The Argyll Centre is '*...an Edmonton Public School in Alberta, Canada, with campuses in Calgary and Lethbridge, that provides distance learning for Elementary, Junior High and High School in both online and offline programs, as well as acting as a facilitator and curriculum resource centre for homeschooling families.*'

Students can choose to study solely to the Alberta Program of Studies [APS] – either the full annual course load or a few courses at a time – or to blend APS with other programmes of study [providing this meets the provincial Home Education Regulation].

Its website is http://argyll.epsb.ca/www/index.php

Further information

The Argyll Centre is [in relative terms] well-established having developed from the genesis of an experiment in the mid 1990s when a number of Edmonton Public Schools investigated the implications of students having access to 24/7 learning. The Centre formally dates from 1997.

The Argyll Centre offers a variety of home-based and face-to-face, on-site, education options to students throughout Alberta. There appears to be a strong emphasis on parental engagement [or, more accurately, involvement] to the extent that in some programmes the parent is the primary educator for parts of the course[s] and the teacher for others.

Live Online is a constructivist-based approach which combines parent-teacher-pupil triad with synchronous [live] virtual classroom, asynchronous [access anytime] learning tools and spaces, and the home environment. It allows students to set and follow a self-paced, individualized program. Live Online is for Grades 1-9 and aspires to "...construct social learning communities." Students learn in "...multi-graded, cross-curricular learning cohorts."

At the heart of the Argyll Centre's menu is the online programme Learn Net [for Grades 4 to 12] which Argyll Centre describes as

"...a teacher directed, online delivery strategy. Students in both elementary and junior high LearnNet programs are assigned a teacher. Students in High School are assigned a teacher advisor for each subject. Students registered in the LearnNet program can expect teacher to provide yearly and monthly plans to support learning and time management. In consultation with parents and students, adjustments can be made to help meet individual needs."

Students can select to combine online and offline, on-site and off-site or home based study to suit their circumstances [Blended Education]. However, to qualify as blended, at least 50% of the program for grades 1-9 and at least 20% for grades 10-12, must be teacher directed instruction that follows the Alberta Program of Study. The rest of the program may be Home Education that meets the Home Education Regulation.

Other strands include the Alternative High School and the eTourism programme – a semestered "...online program which blends high school tourism credit courses, work/volunteer experience, and Canadian Travel and Tourism [CATT] industry certification." The full range of High School courses offered in 2011-12 is contained in the Argyll Centre High School Guide.

In 2006 Argyll Centre was said to have had supported over 5,000 students through Grades 1-12. More contemporary figures are being sought and will be added when identified.

References

- http://argyll.epsb.ca/www/index.php
- Argyll Centre High School Guide 2011
- http://argyll.epsb.ca/www/Documents/Argyll_HS_Guide_11-12.pdf

6.3.2.2 Province-wide First Nation Public School: Credenda

Credenda Virtual High School & College (mini-case study)

The *Credenda Virtual High School* [CVHS] in Saskatchewan is a virtual school which was established in 2005 to meet the needs of the communities in the north of the province. It has now evolved to become a First Nations high school for all students across Saskatchewan representing a diversity of ethnicity. Its website is http://www.credenda.net

This was one of the schools selected as a VISCED case study.

Credenda Virtual High School (CVHS) is a private school, established in 2005 by the Prince Albert Grand Council initially to serve the needs of the geographically isolated – and typically First Nation – communities of northern Saskatchewan, where high drop-out rates and low attainment levels were evident. CVHS was created to meet a specific need and acts as a supplementary school, not a complete replacement. It was designed to support schools through partnership working to meet student needs wherever class sizes were too small to justify offering a course (or where the course was best delivered by a subject specialist) and students study both at home and in their community's host school.

Initially established for the high school and adult students of northern Saskatchewan, Credenda now proactively promotes itself as a "First Nation school that welcomes everybody". It has expanded its reach and now caters for students from school districts across Saskatchewan province and beyond – with some students studying from overseas. There are around 500 students each academic year.

CVHS provides fully online courses which are predicated on high levels of personal support and interaction between teacher and student – this includes daily instruction and encouragement, easy access to technical support and help desk personnel, guidance counselling services, and administrative support combined with the on-site teacher interaction for moral support and accountability. This role of the on-site teacher is considered by CVHS to be critical (e.g. ensuring that students are on task). Consequently, Credenda requires participating First Nation schools to have a qualified teacher on-site (at the students host school) teacher to supervise and monitor students when they are taking their online CVHS courses.

Each live classroom session is recorded and archived for eStudents to access later for review or completion of their assignments.

Credenda provides a curriculum for Grade 10, 11 and 12 students as well as various continuing education courses for adult learners. Courses are taught by provincially qualified teachers in a live online environment – one not influenced by issues of race, gender, personality, appearance, and socio-economic status. Students have regularly scheduled classes daily in an online classroom setting with their eTeacher. Each course is structured with a common template for achieving learning outcomes.

In addition to academic and pedagogic support for students, CVHS is committed to high levels of pastoral support. eTeachers spend a great deal of time following up with students. If an eStudent is absent, they are referred to the principal and guidance counsellor who follow up with the eStudent and on-site eTeacher. Academically, Credenda has high expectations that are outcome-driven.

References

See iNACOL 2010 for a vignette of Credenda VHS:

- "State of the Nation: K-12 Online Learning in Canada", iNACOL November 2010
- http://www.inacol.org/research/docs/iNACOL_CanadaStudy10-finalweb.pdf

6.3.2.3 First Nation Public School: Keewaytinook

Keewaytinook Internet High School

Keewaytinook Internet High School [KiHS] in Ontario was established to serve the First Nation communities in the Nishnawbe Aski Nation [NAN]. KiHS was a pilot project for Grade 8 students in three communities but has now expanded to serve Grades 9 to 12 students in fourteen communities.

Its website is http://kihs.knet.ca

Further Information

Students attend a community classroom from 9 am to 4 pm and are supported by in-class teacher and teaching assistant and an online teacher. The programme is semester based with students able to take two courses in each of the four [9 week] semesters.

> *The students complete their actual studies online. The programme is primarily asynchronous, with online teachers posting activities each Sunday and students completing those activities and assignments online as the week progresses. Online teachers also schedule synchronous sessions using Elluminate® or Adobe Connect, as well as using video conferencing, to work on activities that require more direct instruction.*
>
> [Keewaytinook Internet High School vignette from iNACOL'S State of the Nation: K-12 Online Learning in Canada]

KiHS has achieved significant success in terms of completion and retention rates and progression to post-secondary education. Completion rates have increased year on year and whereas in the initial pilot year saw rates on a par with First Nation averages [19%] by 2009-10 these were 55% across the programme and up to 80% in some participating communities. Retention rates are typically 70% but with some communities achieving 90%.

Enrolment is also on the increase with a new high of 220 students active in KiHS during the 2009-10 school year.

KiHS is part of the Kuhkenah Network aka K-Net First Nations collaboration.

References

See:

- *State of the Nation: K-12 Online Learning in Canada*, iNACOL November 2010
- http://www.inacol.org/research/docs/iNACOL_CanadaStudy10-finalweb.pdf
- http://kihs.knet.ca/
- "K-Net: Connecting Communities One-Click At A Time"
- http://www.ohcc-ccso.ca/en/k-net-connecting-communities-one-click-at-a-time
- http://knet.ca/

6.3.2.4 Province-wide multi-school board public school [English speaking]: Learn Quebec

Learn Quebec

In 2006 *Learn Quebec* was created to provide a variety of resources to any English-language students [Kindergarten through to Adult] throughout the province. Learn Quebec evolved from a collaborative distance learning programme and retains an emphasis on math and science.

Its website is http://learnquebec.ca/en/index.html

Further information

The resources include asynchronous course content tutorials across the curriculum, live tutors available four evenings each week, ICT curriculum support and online professional development for teachers [including a focus on advice and support for teaching with ICT]. The core of the curriculum resources offered appears to be for Secondary students [and then Elementary students].

The synchronous distance education programme uses *"...a multi-point synchronous VOIP system with white board applications"* and the open source SAKAI as a learning management system. iNACOL 2010 observed

"Because of the platform's ability with low bandwidth, it is ideal for the restrictive connectivity issues encountered by many of the receiver schools."

Learn Quebec reported approximately 300 students enrolled in their synchronous distance education programme for 2009- 10 [although they have over 4,000 students who use their asynchronous tutorials].

References

See:

- "State of the Nation: K-12 Online Learning in Canada", iNACOL November 2010
- http://www.inacol.org/research/docs/iNACOL_CanadaStudy10-finalweb.pdf

6.3.2.5 Multi School-Board public schools consortium: Ontario eLearning Consortium

Ontario eLearning Consortium

The *Ontario eLearning Consortium* is a partnership of District School Boards established in 2001. The OeLC now develops and delivers online courses, resources and modules, trains teachers and performs quality assurances. Recent figures [2011] suggest that the Consortium supports [19 member boards] [both Public and Catholic see the Ontario Catholic eLearning Consortium], representing close to 900,000 students throughout metropolitan and rural areas.

Its website is http://oelc.ca

Further information

Ontario has well established tradition of offering district-based online learning programmes— dating back to the Avon Maitland Distance Education Centre in 1994-95. During the 2009-10 school year, the OeLC had 9,695 enrolments – up from 6,276 in 2008-09 [from iNACOL 2010].

References

- "State of the Nation: K-12 Online Learning in Canada", iNACOL November 2010

- http://www.inacol.org/research/docs/iNACOL_CanadaStudy10-finalweb.pdf

6.3.2.6 Public School Board [for Catholic schools]: Saskatoon

Saskatoon Cyber Catholic School

In 2000 Greater Saskatoon Catholic Schools System in Saskatchewan developed the *Saskatoon Cyber Catholic School* [SCCS] to serve schools across its constituency and catchment.

Its website is http://scs.sk.ca/cyber/

Further Information

The Saskatoon Catholic Schools System has been a leader in exploiting technologies in support of students' learning. In 1999 the Greater Saskatoon Catholic Schools executive council's desire to meet the changing education environment was the catalyst for the development of the Saskatoon Cyber Catholic School [SCCS]. By August of the following year the SCCS was operational offering 4 courses to the 156 enrolled students. The total [since its implementation] number of students enrolled now runs into several thousands.

Saskatoon Catholic Cyber School was intended to *"...have the potential to meet the needs of students in the global context by providing relevant education using current technologies."*. The teaching staff were said to be recruited for *" ...their content expertise within courses rather than their facility with technology."* The SCCS website states that teaching staff are all part-time at SCCS and all have taught conventional classes within the school division. NB. This last information is assumed to have currency but this particular web page has not been updated for some time [although the website itself is certainly current].

References

See:

- "State of the Nation: K-12 Online Learning in Canada, iNACOL November 2009
- http://www.inacol.org/research/docs/iNACOL_CanadaStudy_200911.pdf

6.3.2.7 Province-wide national and international private school: Virtual High School Ontario

Virtual High School Ontario

The *Virtual High School Ontario* [VHSO] is a private virtual school. VHSO offers a broad range of courses for Grades 9 – 12 students and also a range of programmes including summer schools, make-up credits and e-work-placements.

In 2009 VHSO had 2,200 active students enrolled across 64 courses.

Its website is https://www.virtualhighschool.com/

Further information

Virtual High School Ontario utilises:

- Desire2Learn's Learning Management System [LMS]
- collaboration tools facilitate communication – teacher to student and student to student
- professional animations, visuals, auditory devices for enhanced visual learning
- interactive exercises and assessments provide the student with an opportunity to evaluate your progress and aptitude
- online DropBox is used for submitting assignments thereby eliminating "snail mail"
- individual online storage space
- individual email account
- course work by past students is available to current students as reference material

The Virtual High School Ontario is also responsible for the Virtual High School Nova Scotia.

References

- Virtual High School [Ontario]: Wikipedia
- http://en.wikipedia.org/wiki/Virtual_High_School_%28Ontario%29
- "State of the Nation: K-12 Online Learning in Canada": iNACOL November 2010
- http://www.inacol.org/research/docs/iNACOL_CanadaStudy10-finalweb.pdf

6.3.2.8 Province-wide public school: Virtual Learning Centre, Ontario

Virtual Learning Centre [Ontario]

The *Virtual Learning Centre* [Ontario] was created by the Trillium Lakelands District School Board and has been operating since 1997. The VLC is a partner of both the Ministry of Education and eLearning Ontario. It takes paying public and private enrolments from both within and outside the province.

Its website is http://www.virtuallearning.ca/index.php#

See also the VLCs spin-off the Open School Ontario.

Further information

The TLDSB Director's Annual Report 2010 states that there were 1,787 online credits granted through the VLC.

VLCs courses blend *"...synchronous, streamed communication with the flexibility of static, anywhere-anytime course content."* VLC reports that attrition rates are under 20%. The programme is predicated on student-teacher interaction and students are encouraged to adhere to timetabling and schedules, and to attend web-meetings.

Whilst there are some self-paced courses available to grades 11 and 12 most require 'attendance' [not necessarily physical attendance] at scheduled 'classes' and follow a semester model.

Residents of Ontario are eligible to take online courses at no charge. However, those in full-time attendance at a publicly funded Ontario secondary school, have to make arrangements with the home school to take courses with the VLC. Where the home school is already collecting the full Ontario grant for the student it must be willing to share a portion of this grant with the VLC. Those outside of Ontario, pay a tuition fee to take courses. Residents of the Province of Ontario, not enrolled full-time in a publicly funded institution, are not usually charged a tuition fee.

References

- *Connecting The Dots: Director's Annual Report. Trillium Lakelands District School Board 2010*
- http://content.yudu.com/Library/A1q7kv/ConnectingtheDots/resources/index.htm?referrerUrl=http%3A%2F%2Ftldsb.ca%2Fannual-report%2F%3Flayout%3Ditem/

6.4 Latin America

6.4.1 Definition

Latin America is a term used most commonly to indicate as a whole the majority of the countries that comprise Central America and South America. More particularly, as noted on Wikipedia:

> *Latin America designates all of those countries and territories in the Americas where a Romance language [i.e., languages derived from Latin, and hence the name of the region] is spoken: Spanish, Portuguese, and French, and the Creole languages based upon these.*

It is a controversial term to some, and may be used differently by inhabitants of different regions. Spanish and Portuguese are the predominant languages of Latin America [with Portuguese spoken only in Brazil, the most populous country in the region]. The main language of countries is shown on the two lists below where it is neither Spanish nor Portuguese.

6.4.2 Notable examples of virtual schooling in Latin America

We have identified a number of indigenous virtual schools in eight Latin American countries, together with a growing number of notable ICT initiatives. With the sole exception of Telesecundaria in Mexico, the virtual schools are very small, and in some cases their sustainability appears questionable, with websites and blogs appearing inactive.

In addition to the small number of indigenous virtual schools, several American virtual schooling organisations market actively in several Latin American countries – e.g. Wilostar 3D in Paraguay – and the Bachillerato is available online in most of the Spanish-speaking countries, largely offered by universities which have links across the region – e.g. Instituto Friere, whose Latin American base is in Colombia, but whose website is most readily visible in Panama.

Indigenous virtual schools and notable initiatives are described below, with countries in alphabetical order.

6.4.2.1 Argentina

El Surco, La Escuela Virtual

El Surco offers virtual education at all levels from basic secondary education (secundaria ciclo básico) to higher education.

ORT

ORT Argentina currently includes: two educational campuses; a technical high-school with over 4,500 students; two post-secondary junior colleges with some 1000 students each; a department that develops joint cooperation projects and training programmes with other institutions and enterprises. It also offers virtual education at all levels from *secundaria ciclo básico* to higher education, through ORT Argentina Virtual Campus [http://campus.ort.edu.ar]. This is designed to work through blended learning, incorporating social networking and Web 2.0 services, to provide a full range of services to extend the school into the community.

6.4.2.2 Bolivia

Escuela Porvenir

The goal of this Village Power 2000 project is to provide electricity and an Internet connection to a school in deep rural Porvenir, Bolivia. Porvenir is a village of 600 indigenous people living in the Amazon rainforest. Services are limited – a diesel generator provides electricity sporadically, there is one satellite telephone and there is a small village school. The school provides education to grade 6. Geographically isolated, youth do not travel to another village or town to continue their education. Educational opportunities literally end at grade 6.

6.4.2.3 Brazil

Colégio Militar de Manaus

The Colégio Militar de Manaus, in the state of Amazonas, started its distance learning activities in 2002. Its aim is to serve students that are between 10-18 years old and registered from the 6th year of the fundamental cycle to the 3rd year of the secondary education (ensino médio), whose parents are on duty in the Amazon area or abroad. The school caters for approximately 400 students every year, located in 33 different countries. Among the media used for delivering the courses, these are

the most used: email, Skype, telephone, fax, mail and a virtual learning environment. The students receive printed materials, CDs and DVDs, all delivered through the Brazilian air force.

EVESP Escola Virtual de Programas Educacionais, São Paulo

The EVESP Escola Virtual de Programas Educacionais is an initiative of the São Paulo State Education Secretariat. The school was authorized by decree dated 20th May 2011. The aim is to offer 50 thousand language courses places for students of the São Paulo State Education System. The virtual school also targets the education of hard-to-reach audiences such as prisoners, Afro-Brazilians and the indigenous population.

Fundacão Bradesco Escola Virtual

The Fundação Bradesco Escola Virtual extends the pedagogical project of the Bradesco Foundation beyond the borders of its 40 school units. Dedicated to offering distance learning courses – Internet-based and "semi-presential" segments of Basic Education, Training and Youth and Adult Education, this portal for e-learning is available to students and alumni, educators and staff of Bradesco Foundation, as well as people in the community and unemployed people who wish to obtain a new qualification or retraining for work. Its web site ishttp://www.ev.org.br/Paginas/Home.aspx

Instituto Nacional de Educação a Distância [INED], Brazil

This is a private school based in São Paulo offering courses targeting the education of young and adult individuals – a population described as EJA [Educação de Jovens e Adultos – Education of the Young and Adults]. It also offers technical courses, preparing for the job market [equivalent to college – in Brazil described as Educação Tecnológica] – these courses can be attended by individuals of all age groups that qualify for technical secondary education [ensino médio técnico]. The technical courses at INED are licensed by the Brazilian Ministry of Education to be offered at a distance, in the blended learning mode as the Brazilian law requires [with face-to-face assessments]. The courses at INED are offered mostly using virtual technologies [email, discussion forums] and the students also receive printed course materials.

PROCEFET

PROCEFET (Programa de Iniciação Tecnológica e Cidadania do CEFET / Rio Grande do Norte) is a basic, entry level course on Technology and Citizenship offered at a distance, aimed at students of the ninth year of the fundamental years of public schools. The aim is to provide a revision of subjects such as Portuguese and Mathematics with focus on themes such as citizenship and ethics in relation to day-to-day activities at home, at school and in their professional environment. The mix of media used in the course includes printed materials, TV classes recorded on the university channel – available online and online assessment.

6.4.2.4 Chile

Think Academy International Virtual School

The *Think Academy International Virtual School* [Spanish: Colegio Virtual Think Academy] is based in Santiago and was founded in 2007. According to experts, the method allows young people to learn more and to socialize better, in addition to bringing the cost of education down. It was the first fully virtual school in Chile and aims to establish a platform for virtual education in Chile. Enrolment has grown from 10 students in 2007 to almost 60 this year. Even the Principal's own children are enrolled in the virtual school.

The model is based on the education system in Finland. According to the University of Memphis, USA, the system allows students to socialize up to 9% more while learning 6% more compared to traditional parameters.

Likewise, the students aged 13-18 share their education and experiences with peers from Australia, New Zealand, the United States, England and Portugal, using a method that combines adventure and entertainment and provides a large amount of information using current technology to its maximum potential.

In the case of disabled people, classes are subtitled for the deaf and spoken for the blind.

For logistical reasons, the only class that is not taught is physical education. To overcome this limitation, students are authorized to go out and play with their friends or do sports after 1:30 PM. At the end of the year the youths must take open exams and they can even obtain a certificate from a school in the United States.

Yo Aprendo

Yo Aprendo ("I am learning") is a curriculum designed to help students improve their academic performance and aimed at families who educate their children at home. The curriculum includes instruction, exercises and evaluations, as well as audio / video tutorials and links to interactive activities to make learning motivating and engaging.

The introductory page on the website states: "Yo Aprendo is ideal for students seeking an independent study programme, teachers who want a resource, and parents seeking tutoring help for their children."

Yo Aprendo currently has 37 students, learning at all levels up to mid-secondary. It focuses particularly on providing education for young people who have medical and emotional problems in attending normal schools: e.g. anxiety and depression, hyperactivity, Asperger's. It also provides for displaced young people and young people living in remote areas or outside Chile.

6.4.2.5 Colombia

Escuela Virtual de Caldas

Plataforma Escuela Virtual is the VLE for Escuela Virtual de Caldas. The last entry on the school blog is from 2008 and the VLE does not appear to have progressed beyond the first two stages of development, but the website is now live again.

6.4.2.6 Mexico

There is at least one international virtual school: **University of Guadalajara Virtual School,** which is part of the University of Guadalajara. This offers the Bachillerato (certificate of upper secondary education) online to young people unable to attend a conventional school and to adults without a matriculation qualification.

We have identified a number of notable ICT initiatives at school level in Mexico, the first of which is described below as a micro-case study.

Telesecundaria

Telesecundaria, the Satellite Television Network (EDUSAT), is a system of distance education programmes for secondary and high school students created by the government of Mexico. It is available in rural areas of Mexico as well as Central America, South America, Canada and the United States via satellite (Solidaridad 1 and Satmex 5).

The government accommodated a large proportion of the enrolment growth in lower secondary, particularly in rural areas, through the expansion of the Telesecundaria model since it required very little infrastructure and only one facilitator-teacher per grade. Lectures are given via satellite TV in 15-minute programmes. In 2002, 1.2 million students were enrolled which represented about 20 percent of the total enrolment in this level. Annual costs per student were about 16 percent higher than in regular schools (counting TV programme production, supplementary materials, teacher salaries, and infrastructure). Distance learning has proved to be a cost-effective model although student achievement results and completion rates are not as high as they are in regular secondary schools.

Three other exemplars are worthy of mention:

- **The School Network of Educational Computer Science (Red Escolar)**: using technology, students and teachers develop collaborative projects related to various subjects. For instance, they participate in reading and writing contests, puzzles, and team research.

- **Enciclomedia** started in 2003-04 and consisted of the digitization process of primary education textbooks in CD-ROM format.
- **telecentre.org** reports on an initiative linking primary and secondary school children in Mexico, Bolivia and Peru for some mathematics education.

6.4.2.7 Peru

Institución Educativa Virtual del Callao

Institución Educativa Virtual del Callao and its portal Virtual school of Callao portal appears to be a virtual school, but the two websites are only intermittently available. It appears to have enrolled its first 42 students in 2009, linked with the Universidad Nacional de Ingeniería (National University of Engineering), but more recent references are elusive.

Sanquira Virtual

Sanquira Virtual describes itself as "an educational institution in the field of Local Education, providing educational services to children in the town of **Sanquira**, developing skills and attitudes in students with teachers engaged in educational activities, parents identified with the institution and its children, which allow the school to train students capable of solving everyday problems their environment through new Information and Communication Technologies."
Sanquira Virtual is located in Yunguyo, a small town in the Puno Region in south-eastern Peru, near the Bolivian border.

6.4.2.8 Uruguay

The most notable initiative in Uruguay is **Project Ceibal,** an ambitious plan to transform education through ICT by issuing an individual laptop to each primary school pupil and teacher.

In addition to this national project, we have so far identified one fully virtual school – Escuela 20.

Escuela 20

Escuela 20 Uruguay offers a range of fully online courses across the secondary curriculum through its VLE. Courses start in February and August each year. It is aimed primarily at expatriate families and its website states:

'Escuela 20 is a private venture formed with Uruguayan teachers. As with many expatriate children, Uruguayan children living abroad normally enrol in a school in their country of residence, but before an eventual return to Uruguay, their years of study in foreign schools generally have to be revalidated through appropriate documentation of courses they have studied.

Escuela 20 is designed to facilitate the process of re-integration into Uruguay and the Uruguayan educational system. It provides distance learning in Uruguay History, Geography, Literature, Uruguayan Music, Uruguayan customs and language, etc. so as to give the basic tools for seamless re-integration on return to their native country.'

6.4.3 Virtual colleges found in Latin America

A number of the countries in South America provide vocational education through further education colleges which bear substantial similarities to UK colleges. Several of these offer full programmes of virtual vocational education, whilst others specialise in particular occupational areas. Countries where we have identified virtual colleges are listed in alphabetical order below: details of all these colleges may be found on the VISCED wiki.

6.4.3.1 Brazil

***Escola Técnica Aberta do Brasil* (E-TEC)**

The Escola Técnica do Brasil (Open Technical School of Brazil) is a national programme that aims to expand professional education in Brazil. It has been developed under the umbrella of the former Distance Education Secretariat (SEED) and the Professional and Technological Education Secretariat (SETEC). Its objective is to take technical courses to distant regions of Brazil and to the peripheral areas of big Brazilian cities. The aim is to encourage the young to conclude secondary education (ensino médio) and join the active workforce.

The Escola Técnica do Brasil is therefore an important step towards the democratization of public and free secondary education in Brazil in the distance learning mode. In 2008 alone for example 50 thousand places have been offered, and 193 regional centres with computers and libraries have been inaugurated across the country. Courses in 14 subject areas were on offer, to include computing, nursing, metallurgy, environmental studies, tourism, civil engineering, business management, health and social care, commerce, arts, chemistry and telecommunications. In total, 75 million Reais were invested, 143 courses offered, and 26 thousand students registered.

The model of E-Tec is similar to the one of UAB (Universidade Aberta do Brasil – Open University of Brasil). The Ministry of Education (MEC) is responsible for providing financial assistance for the production of courses. The states, federal district and municipalities provide the infrastructure, the equipment, the human resources and other items needed for each institution running the courses. The target was to provide infrastructure to 1000 regional centres and to register 200 thousand students up until 2010.

***Escola Virtual de Programas Educacionais* (EVESP)**

EVESP is an initiative of the São Paulo State Education Secretariat. The school was authorized by decree dated 20th May 2011. The aim is to offer 50 thousand language courses places for students of the São Paulo State Education System. The virtual school also targets the education of hard-to-reach audiences such as prisoners, Afro-Brazilians and the indigenous population.

The ***Fundação Bradesco Escola Virtual***, already described as one of the Brazilian virtual schools, extends the pedagogical project of the Bradesco Foundation beyond the borders of its 40 school units. Dedicated to offering distance learning courses – Internet-based and "semi-presential" segments of Basic Education, Training and Youth and Adult Education, this portal for e-learning is available to students and alumni, educators and staff of Bradesco Foundation, as well as people in the community and unemployed people who wish to obtain a new qualification or retraining for work. Its web site ishttp://www.ev.org.br/Paginas/Home.aspx

Instituto Nacional de Educação a Distância is also described as one of the virtual schools in Brazil. It also offers technical courses, preparing for the job market (equivalent to college – in Brazil described as Educação Tecnológica) – these courses can be attended by individuals of all age groups that qualify for technical secondary education (ensino médio técnico).

The technical courses at INED are licensed by the Brazilian Ministry of Education to be offered at a distance, in the blended learning mode as the Brazilian law requires (with face-to-face assessments). The courses at INED are offered mostly using virtual technologies (email, discussion forums) and the students also receive printed course materials.

The ***Projeto Bem Receber Copa 2014*** (Good Hosting Project – World Cup 2014), is sponsored by the Brazilian Ministry of Tourism. It offers online distance learning courses for employees of hotels, aiming to qualify them free of charge to be 'good hosts' during the World Cup 2014 in Brazil. Age range: all.

The Ministry of Tourism aims to qualify 306 thousand professionals up until 2013. These professionals are: porters, receptionists, room cleaners and hotel managers.

Rede SENAI de Educação a Distância

SENAI (SENAI Distance Education Network) offers a number of professional and technical courses aiming to prepare individuals for the job market. SENAI stands for National Service for Industrial Learning (Serviço Nacional de Aprendizagem Industrial). Technical courses are offered in the blended learning mode where face-to-face meetings happen at regional centres. SENAI provides printed and online materials and courses are free of charge, offered across the whole national territory. This is a major national organisation, somewhat similar to ***LearnDirect*** in the UK.

Serviço Brasileiro de Suporte à Micro e Pequena Empresa (SEBRAE)

SEBRAE (Brazilian Support Service to Micro and Small Businesses) offers about 15 courses online and free of charge to anyone wishing to learn more about business management and entrepreneurship. The courses are tutored on a virtual learning environment (platform WebAula), and the learners receive a course certificate on completion. The courses are offered free of charge and are open to anyone to study them. Users only need to have access to the Internet and commit to a certain number of study hours over a given period of time so that they can complete the syllabus. Some of the courses offered by SEBRAE are: Individual Entrepreneurship, Quality Management, Internet for Small Business and Innovation Management.

Serviço Social da Indústria (SESI)

SESI (Social Services for Industry)has a number of short open courses on different subject areas, ranging from music and arts to environment and law. They are open to all, usually at an affordable price and some of them are free of charge. These courses can be taken by anyone and they do not require any previous certificate or qualification. Examples of courses are Healthy Eating, Relaxation, Vocal health, Music and Recruiting Techniques. SESI Paraná in particular has won an e-learning award amongst other 25 e-learning institutions in Brazil for 'best practice' in 2011.

6.4.3.2 Chile

Centro Virtual de Actualización y Desarrollo del Diseño [***CEVADD***] is one of a number of examples of private organisations offering virtual courses in vocational areas – this one covers design and illustration of women's' fashion.

6.4.3.3 Colombia

Comunidad de Aprendizaje (SENA)

(Comunidad de Aprendizaje) SENA is a Colombian technical college which offers a wide range of courses completely online (cursos virtuales). Online courses include:

- Art, culture, recreation and sports
- Social sciences, education and government services
- Mining and extractive industries
- Finance and Administration
- Operation of industrial equipment
- Transportation
- Processing, manufacturing and assembly
- Health

- Information Technology
- Sales and Services

CESDE (described here as a micro-case study) is a large technical college (Institution of Labour and Education for Human Development) based in Medellin, Colombia, and founded in 1972. It now (2011) has a student population of 10,000 and offers vocational programmes in 22 areas:

- Business Administration
- International Trade
- Accounting
- Secretarial and Administrative Management
- HR Management
- Marketing
- Customer Service and Telemarketing
- Logistics Distribution Centres
- Multimedia Development
- Digital Graphic Design with specialism in Advertising
- Fashion Design
- Video Editing and Digital Photography Systems
- Computer Maintenance
- Software Development
- Electronics
- Data Networks and Telecommunications
- Hotel Management
- Table & Bar
- 3D Animation
- Mechatronics
- Food.

Some of these programmes are offered in association with the Autonomous University of Colombia and theUniversidad Salazar y Herrera. Seven degree programmes are offered in association with the University Corporation for Science and Development – UNICIENCIA (which also offers its own virtual vocational programmes, the Latin American University of Science and Technology, and the Universidad Salazar y Herrera.

Towards the end of 2006 the college established VLEs, with the aim of providing training in multiple settings, and initially to provide blended learning in some course modules. In 2009 the college

started offering six courses fully online, and this has now expanded to 8 programmes. This has enabled the college to recruit Colombians living in Italy, France and Spain, as well as in remote rural parts of Colombia. This makes CESDE one of the major pioneering institutions of virtual education and training in Colombia.

The eight 100% virtual programmes cursos virtuales are:

- Business Administration
- Marketing
- Hotel Management Systems
- Graphic Design
- 3D Animation
- Data Networks
- Telecommunications
- Software Development

INCAP is a technical college in Bogota offering a full range of vocational and professional programmes across all employment sectors. There is a strong emphasis on the use of technology – see the INCAP promotional video – and many courses can be studied entirely online [e.g. English language] or largely online, with tutorial support and practical sessions at the college.

6.4.3.4 Mexico

SEAD (Colegio de Bachilleres)

For some years it has been possible to study online for the Bachillerato (school leaving exam) at Colegio de Bachilleres (SEAD) in the same way as at the **University of Guadalajara Virtual School**.

6.4.3.5 Uruguay

Centro Nacional de Educacion a Distancia

Centro Nacional de Educacion a Distancia – the National Centre for Distance Education – offers a wide range of distance learning vocational programmes across the whole country. A full range of specialist courses up to professional level is offered in vocational areas:

- Advertising
- Administrative, Secretarial and Customer Service
- Agriculture & Horticulture

- Business and Commerce
- Clothing and fashion
- Construction
- Education
- Electrical and electronic engineering
- Food and drink
- Health and Beauty
- Information Technology
- Languages
- Motor Vehicle
- Refrigeration.

Courses may be taken entirely online, or with practical sessions at local centres.

The ***Labour University of Uruguay*** includes numerous virtual training courses below HE level, many of them similar to those offered by the CNED.

7 Australasia

7.1 Definition

Wikipedia notes the varying definitions of the term *Australasia*:

> *Australasia is a region of Oceania comprising Australia, New Zealand, the island of New Guinea, and neighbouring islands in the Pacific Ocean.*
>
> *Geopolitically, Australasia is sometimes used as a term for Australia and New Zealand together in the absence of another word limited to those two countries. Sometimes the island of New Guinea (Papua New Guinea and the Indonesian part of the island) is encompassed by the term.*

Australia, New Zealand and Papua New Guinea are the largest countries in this region.

See also Oceania, regarded by us as a separate continental region and included in Chapter 8.

7.2 Overview

Australia and New Zealand in particular [and to a lesser degree Papua New Guinea] have long-standing traditions of providing distance education. Driven by vast expanses of sparsely populated land [often inhabited solely by cattle farmers and the indigenous peoples] *Correspondence Schools* and then *Schools of the Air* were developed to serve huge tracts of Australasia. More recently, such provision of distance education has been catalysed by the recognition of the needs of Aboriginal communities and itinerant families. Difficulty in relocating teachers to these communities has also aggravated these challenges. Taken as a whole, it would be reasonable to note the similarities with Canada.

However, VISCED researchers initially found it more difficult than expected to identify virtual schools which meet the definitions applied. One reason for this is that a significant proportion of the distance education providers [particularly those established as *Schools of the Air*] are solely for Kindergarten, Preparatory and primary age children. A further significant proportion support either *Preparatory to Middle School* or more commonly *Preparatory through to Year 10 or Year 12*. These have all been deemed worthy of a wiki entry and included in the category 'Virtual schools in Australasia'. Even where it has been impossible to determine the numbers of 'secondary' students it is clear that the school provides elements of the secondary curriculum to learners of secondary age.

VISCED researchers have to this point identified 19 Australasian virtual schools which meet the criteria applied by the project. Of these 16 are in Australia and the other 3 in New Zealand. In addition, there are a number of virtual schooling projects in Papua New Guinea.

Whilst this is perhaps[6] fewer than one may expect the variety and practice discovered has indeed proved extremely rich. Some of the Australian schools, in particular, are amongst the most substantial and mature schools yet seen.

Only one virtual school making substantial use of ICT has yet been identified in Papua New Guinea. The table below summarises the exemplars described in this chapter of our report:

Country	*Schools*	*Colleges*	*Initiatives*
Australia	6	6	
New Zealand	1	1	2
Papua New Guinea	1	2	

7.3 Notable examples of virtual schools in Australasia

7.3.1 Australia

7.3.1.1 Brisbane School of Distance Education

The **Brisbane School of Distance Education** [**BSDE**] is a virtual school located in Queensland, Australia. It is one of the four mini case studies done by VISCED.

BSDE is by far the largest distance education school in Queensland with over 300 staff members [215 of whom are teachers] educating over 3800 students. The Executive Principal also plays a leadership role with the other 6 schools of distance education, which are located across Queensland.

Further information

BSDE has just moved into a purpose-built, Aus $30million, new facility – a brand new school comprising both junior and secondary schools with playgrounds and classrooms, family rooms and a library. What differentiates BSDE from traditional schools is the large 'distribution centre' which is required to manage the substantial amount of materials provided to support learners and their families.

Most students study almost fully online but they, and family members, also attend the school at least once a term or attend workshops and activities held in Queensland regional centres. Parents

[6] If one makes a crude comparison of the ratio of virtual schools to national populations then the number in Australasia is broadly in line with the USA and Canada. It should also be noted that the Australian population is largely confined to the coastal cities and that whilst there is a clear need to provide education for the geographically isolated *these are relatively few in number*.

are encouraged to become 'home educators' and are offered support to achieve a recognised vocational qualification as such. In common with other Australian states Queensland has a system of rotating staff around its schools and all teachers are appointed to schools by the state – so there is no 'cherry-picking' of staff by the school. BSDE has had to prioritise staff development and is now recognised for its expertise in this area.

No proprietary online materials are used by BSDE. All materials are OER and/or teacher created. BSDE employs a Curriculum Development Team of specialists – graphic artists, developers etc. All online materials are then provided through the Queensland state learning platform 'One School'. BSDE's results match, and exceed, those of the best schools in Queensland and the school has evolved from "...the last point of call, to leading staff" across the entire state.

Queensland is at the forefront of the development and testing of the Australian national curriculum – and BSDE is leading the state through 'wrapping' the new curriculum and providing it for schools state-wide.

BSDE was the outright winner of the Excellence in the Senior Phase of Learning award at the Queensland 2011 Showcase Awards for Excellence in Schools.

The Brisbane School of Distance Education web site is at http://brisbanesde.eq.edu.au

7.3.1.2 Open High School, Sydney

Introduction

Open High School is a New South Wales Department of Education and Training [DET] secondary distance education school offering courses in 13 languages to students in Years 9 – 12, and is located in the eastern Sydney suburb of Randwick. It is the other Australian mini case study.

Use of ICT

The *Open High School* Australia [OHS Australia] supports distance interactive e-learning and operates in a distance education mode with students completing the bulk of their learning in their home schools via a variety of strategies including: through the use of radio and audio cassettes, CD ROMs, DVDs, telephone lessons and fax, audio and video conferences, computers/internet and web assisted communication and blackboards – internet-based exercises delivered via the school's online Learning Management System, Moodle, face-to-face individual and group lessons.

The school also encourages students to attend face-to-face days which are usually held at Open High School once a term for students in Years 11 and 12 and once a semester for students in Years 9 and 10. These are valuable learning experiences where students meet their teachers and the other members of their class.

Student Achievement

Open High School has a history of outstanding HSC results. Students regularly top the state in examinations and approximately one third of each year's cohort achieve marks which place them in

Band 6 for 2 Unit subjects or Band 4 at Extension level, the highest bands that can be awarded. In the 2010 Higher School Certificate, Open High School students achieved first place in each of the following languages: German Continuers, Indonesian Background Speakers, Indonesian Continuers, Indonesian Extension, Japanese Background Speakers, Korean Continuers, Modern Greek Beginners, Russian Background Speakers, Spanish Continuers, Spanish Extension.

Open High School Australia believes that virtual schooling and distance education can in fact equip students with the skills and independence needed to become lifelong learners and teachers as well as producing excellent immediate results at national and international examinations. In 2011, Open High School initiated a project to consolidate the lifelong aspect of its holistic education.

More Details – Mission, Courses, Teaching Methods

Open High School provides learning opportunities for students with different options across geographical barriers throughout the territory of North West. It ensures that options are maintained despite geographical and other individual circumstances. In 2011 there is a network of 19 distance education schools and centres throughout the state delivering education, via a variety of media, to country, metropolitan, interstate and overseas students who meet enrolment guidelines.

Open High School is the only LOTE [Languages Other Than English] specialist school in the network. It currently teaches 13 languages in over 70 courses, to nearly 2000 students from over 500 government and non-government schools. Open High School employs over 100 full-time, part-time and casual teaching staff.

At Open High School, all students are part of a class even though their fellow students are from different schools spread across the state. A teacher interacts with students via written comments, CDs, phone lessons and conversations, fax, email, face-to-face lessons, school visits and study days. Students also have the opportunity to interact with the online learning system, known as Moodle.

Open High School offers courses for the following Board of Studies Stage 5 languages in Years 9 and 10: Chinese, French, German, Indonesian, Italian, Japanese, Korean, Latin, Modern Greek, Russian, Spanish.

Open High School offers Preliminary and High School Certificate [HSC] courses for the following Board of Studies Stage 6 languages in Years 11 and 12: Beginners [Preliminary and HSC], Continuers [Preliminary and HSC], Continuers and Extension [HSC only], Extension [HSC only], Background Speakers [Preliminary and HSC]; and these are for all the 13 different languages.

Open High School follows the prescribed term and holiday dates for NSW government schools as required. Open High School is open from 9.00 am to 3.30 pm on weekdays [except school holidays and public holidays].

Moodle Users

Moodle is Open High School's e-learning site for part or all of very dedicated lessons. Each teacher gives lessons on how to complete studying using the Moodle as well as completing and sending

homework. The Moodle site also displays all important dates and time tables relating to various courses. Students use the timetabled periods of their school only for work in an Open High School course. Work not completed during this time must be completed as homework. Students are required to take note of teacher's messages and comments as well as answer questions asked by their teachers.

Teachers are always available to answer questions that may arise, including difficulties with playing CD's, accessing and using Moodle, missing lesson materials or a change in personal details.

The Internet offers exciting opportunities for enrichment of the learning experiences of students studying foreign languages by distance education. The distance education mode requires students to take extra responsibility for their own learning. It is therefore expected that students will behave in a responsible way in all Open High School learning activities involving Internet use, observing all the rules in the following Code of Behaviour.

Open High School caters for students in Years 9 to 12 who attend a Government or non-Government school which does not offer one of the 13 languages offered at OHS.

Location and Address

Open High School is located in Randwick, Sydney, and is part of the NSW Department of Education and Training's rural and distance education network. For more information on Open High School Australia, visit its website: http://www.theopenhs-d.schools.nsw.edu.au

7.3.1.3 SIDE

SIDE [Schools of Isolated and Distance Education] is Western Australia's largest provider of distance education. SIDE is a secondary facility based in Perth and currently has 'thousands' of students enrolled.

Its website is http://www.side.wa.edu.au/index.php

Further information

SIDE was initially established in 1918 as the Western Australia Correspondence School. Today SIDE is a fully online school deploying 'cutting-edge' technologies and pedagogies including the web-conferencing platform Centra and Moodle learning environment. SIDE has a physical school-site with classrooms and a residential facility.

There is a parallel Primary SIDE.

SIDE has a focus on languages – the SIDE website says;

> *SIDE Secondary School offers a specialist program in Languages. This program includes the selection of four languages: French, Indonesian, Italian and Japanese. The quality of these programs has been enhanced by our Service Level Agreement with both Primary and Secondary Public Schools throughout Western Australia.*

References: SIDE: http://www.side.wa.edu.au/index.php

7.3.1.4 Karabar High School Distance Education Centre

Karabar High School Distance Education Centre is a New South Wales Department of Education and Communities, integrated High School and Distance Education Centre with a total enrolment figure of over 1,000 students of whom there are 250 full-time equivalent distance learners across New South Wales and the Australian Capital Territory [ACT].

Its website is http://www.karabardec.com.au/default.aspx

Further information

The school website lists "...a wide range of curriculum options for our varied and diverse community".

These include:

- Distance Education provision for students in Illawarra and South-East Region, half of Riverina Region, a number of schools in the ACT and students studying the NSW curriculum in a number of countries around the world.
- Curriculum provision for the Illawarra and South-East Industry Training College to provide senior students with an educational pathway that enables them to combine studying for their Higher School Certificate with trade training in a range of areas;
- An emphasis on curriculum differentiation in class programming to enable all students to maximise their learning potential;
- Being part of the NSW Department of Education and Training Partially-Selective High School Class Program [introduced in 2010];
- Gifted and Talented Student programs, including a Performing Arts/Gifted and Talented Student Class;
- A Special Education Unit with three classes, including a multi-categorical class;

References

- Karabar High School Distance Education Centre
- http://www.karabardec.com.au/Home.aspx

7.3.1.5 xsel [Selective Virtual High School - micro-case study]

Established in 2010, **xsel** is the Department for Education and Communities **Selective** Virtual High School for high-ability students from 16 schools across Lithgow to Broken Hill in Western New South Wales. The xsel virtual provision commenced in 2010 with an intake of thirty Year 7 students only. The school aims to grow until its first Year 12 graduates in 2015.

Students use a variety of online, collaborative and interactive tools in what is said to be Australia's first virtual selective high school.

The xsel program allows academically gifted students in rural and remote areas to stay at home, rather than having to travel to metropolitan areas to attend selective schools.

Students study face-to-face with teachers and peers across the Department's Western region which covers 385,000 square kilometres – an area greater than the size of Germany.

Students still go to their local high school but divide their time between the standard curriculum and the xsel program.

Its website is http://www.xsel.schools.nsw.edu.au/home

Further information

Text below is taken directly from the school website.

General Information

The Western NSW Region Virtual Selective High School Provision, [xsel], connects students from across the region into a selective strand covering English, Mathematics and Science using sophisticated technology and personal contact to deliver the curriculum. Students are enrolled both in the selective school [xsel] and also in their local secondary [base] school; meaning that they can access a challenging academic program without leaving home and friends to do so.

Structure

xsel Virtual Selective High School Provision is coordinated by the Manager, xsel, an xsel Teaching, Learning and Technology Officer and an xsel Support Officer. In 2010, the first Year 7 intake occurred of 30 students drawn from 16 secondary schools across Western NSW region. xsel students are divided into 'pods' of ten students with each pod allocated an English, Maths and Science teacher. Each base school has allocated a staff member who acts as an xsel support person to give the students personal assistance. Science teachers at the base school also assist the xsel students with the practical component of that course.

How the school works

Western NSW Region schools have for many years successfully used innovative technology to connect students and teachers in different locations. xsel builds upon and extends this experience into an exciting new range of opportunities for students.

xsel provides teaching and associated support of English, Mathematics and Science, while the base school will provide the rest of the school curriculum and extracurricular activities. xsel programs, teaches, assesses and reports in English, Maths and Science KLA's. Students do not attend these subjects in their base school. Each base school will provide a supervised learning space where the student will go for their xsel lessons. Each time English, Maths or Science appears on their base

school timetable, students go to their allocated xsel learning space and participate in the xsel program using the laptop supplied by xsel. In this way, xsel connects via technology the gifted and talented students from across the region.

The students of xsel receive daily lessons [known as 'synopps' -synchronous opportunities] delivered in real time by their xsel teachers. Students will be in small groups [generally a maximum of 10] and use their inbuilt webcam and microphone to connect into the virtual classroom.

Students will also have access to the xsel Moodle website. It is at this site where students download weekly activities and assignments and upload their completed tasks for marking. The xsel Moodle also has discussion forums, wikis, blogs and archival recordings of the xsel synopps. The full use of digital technology means students can fully participate in classes delivered by expert teachers from another location. Teachers and students communicate daily via email as well, which gives each student the individualised attention to support their individual learning needs.

Teachers are selected on merit from across the region and work in both xsel and their base school. Teaching in virtual modes and other xsel activities are conducted from the teacher's base school.

Each term, the xsel students meet for a residential camp. This is an opportunity for the students and teachers to interact face to face and carry out a range of educational activities.

Student Profiles

To gain entry into xsel, students need to have very high academic ability. However, as it is a virtual provision another range of capacities are also highly valued. These include:

- strong technology skills
- highly organised
- excellent time management
- high order problem solving and creative thinking
- highly productive [both in quality and quantity of work produced]
- resilient, trustworthy and reliable

Selection Process

The xsel virtual provision commenced in 2010 with an intake of thirty Year 7 students only. The school will grow until its first Year 12 graduates in 2015.

In Year 7, students are selected for placement in xsel via the Selective High Schools Placement Test. An intake of thirty students will be applied for the 2012 cohort. Future intakes may rise to sixty students per year but that will be decided after the first three years of full operation. To apply for the program students in Western NSW must complete the standard selective high school application

form plus the Virtual Selective Class- Report of academic merit and sit the standard Selective High School Placement Test.

For Years 8-12, should a vacancy arise, the xsel selection committee chaired by the School Education Director, will determine the students to be offered places and will determine a reserve list in priority order.

Applicants for entry into xsel for Year 8 for 2012 must complete the Entry to Years 8-12 Selective Schools Application form and the xsel Year 8 Application Form and supply all supporting information to the Manager of xsel by the closing date. The call for applications commences in late June, 2011 and closes in late July, 2011. Details will be published on this website

References

- xsel Virtual Selective High School
- http://www.xsel.schools.nsw.edu.au/home
- "Virtual school breaks new ground" [Dept NSW website]
- http://broadband.nsw.gov.au/news-events/featured/virtual-school-breaks-new-ground

7.3.1.6 Northern Territory Open Education Centre

The **Northern Territory Open Education Centre** [NTOEC] in Australia supports Interactive Distance Learning.

It was established by the Northern Territory Department of Education in 1980 to provide secondary and/or professional education for students in isolated and remote locations throughout the Northern Territory of Australia. Today they provide a fully accredited Year 10 to 12 program as well as an increasing level of vocational training to a wide range of school aged and adult students using distance education and open learning strategies. They are one of the best in the country, a succinct example of a virtual school initiative in Australia.

The School's motto is "Education Wherever You Are."

NTOEC make the use of Interactive Distance Learning [IDL] which involves the use of computers and satellite and/or internet connection to communicate using two way audio and video.

NTOEC have multiple IDL studios and broadcast regular lessons. IDL enables the NTOEC teacher to provide audio and visual contact and to share computer applications.

IDL transmission of lessons is used extensively for delivery to Community Schools and for a large number of Senior Secondary courses.

NTOEC enrols students who are studying Senior Secondary subjects [Years 10, 11 & 12]. NTOEC students come from a range of backgrounds including:

- students living in isolated areas without access to a Senior Secondary School
- students travelling [Australia or International]
- adults wishing to upgrade their Senior Secondary education
- students who have medical, social or behavioural conditions which prevent attendance at a local school
- students who are in jail or a remand centre
- students attending urban NT or SA Senior Secondary Schools who enrol for one or two subjects with NTOEC because they cannot access these subjects at their own school [dual enrolment and/or Holiday School]
- Senior Secondary students attending remote community schools [dual Community enrolment]
- students enrolled with the Alice Outcomes and Alternative Education Programs
- Senior Secondary students who attend an Area School [Jabiru, Batchelor, Alyangula] [dual Area School enrolment]

The school's main office is in Casuarina in the Northern Territory of Australia.

The NTOEC's website is http://www.ntoec.nt.edu.au/site/

References

1. Enrolment Eligibility Document "Northern Territory Open Education Centre – eligibility to enrol"
2. Policy Document "Northern Territory Open Education Centre – students based in other schools"

7.3.2 New Zealand

Te Kura (The Correspondence School) - micro-case study.

Te Kura is New Zealand's largest school, with more than 24,000 students a year studying full or part-time, and staff based around the country. Its web site is http://www.tekura.school.nz

It provides personalised learning programmes for students from early childhood to Year 13, as well as for adult learners and those with special education needs. Students live in every part of the country and overseas and come from all walks of life.

It works closely with local communities, schools and agencies that support the students.

It offers a wide range of learning programmes from early childhood level to Year 13. Students can study full-time or part-time, depending on their circumstances. Students may also be able to enrol as a 'dual student' if they meet the Ministry of Education's eligibility criteria for dual enrolment. Dual students must be enrolled by the host school. (In other words, Te Kura operates as a supplementary virtual school.) Support depends on the age of the student:

1. *Years 1 to 6:* Learning advisors of students in years 1 to 6 work closely with parents and supervisors to develop an individualised programme for each student based on the eight learning areas in the New Zealand curriculum.
2. *Years 7 to 10:* Students enrolled in Te Ara Hou (meaning "new pathway") will have a personalised learning programme based on their individual needs, interests and goals. Te Ara Hou offers an integrated programme of work which combines skills and knowledge from two or more subjects as well as more traditional subject-based learning. Your learning advisor will make sure all the curriculum areas are covered and that you are ready for qualifications level courses in year 11.
3. *Years 11 to 13:* Students can choose from a wide range of subjects to earn credits towards NCEA as well as the National Certificate in Mathematics and National Certificate in Computing.

Depending on what students are studying, Te Kura provides online support and teaching materials such as booklets, workbooks, readers, audio resources, CDs and DVDs, an MP3 recorder, interactive CD-ROMs, textbooks, mathematics and science boxes, art packs, and craft materials for technology.

For full-time, fee-paying or young adult students, Te Kura works with the student to develop a programme of learning that meets their needs. Each full-time or fee-paying student has a learning advisor (similar to a form teacher or class teacher) who will be their main point of contact at school. Learning advisors and teachers are in regular contact with students and their families to offer advice and support not just for students, but also for those, usually family members, who supervise their learning. There are also opportunities for face-to-face contact at regional camps, events, and achievement days.

Apart from Te Kura, the strongest example we have of virtual schools is the grass roots organisation of the **Virtual Learning Network** and the emergence of a larger network of schools in the urban areas called the **SuperLoop** in which the VLN participates.

7.3.3 Papua New Guinea

There is a long history of distance learning in Papua New Guinea. This is largely aimed at meeting the needs of school leavers, but at least one of the initiatives falls within the VISCED virtual school parameters:
The **Papua New Guinea University of Technology** has a correspondence-based High School Certificate Program delivered across PNG. PNGUOT has a network of 28 Study Centres across PNG providing support for the Programme.

7.4 Virtual Colleges in Australasia

As with virtual schools, there is a substantial amount of virtual education in Australia's TAFE colleges - probably as much as in England's further education colleges. There is one virtual college in New Zealand, and a different New Zealand-based organisation provides extensive virtual college courses in Papua New Guinea, together with a locally based private provider.

7.4.1 Australia

There are TAFE colleges and groups of colleges in every Australian state. A representative example is TAFE Open Learning Queensland.

TAFE Open Learning Queensland (micro-case study)

Students can get a nationally recognised qualification without attending any classes when they study through TAFE Open Learning. All courses are delivered off-campus, either via correspondence or online. TAFE Open Learning provides many options to progress your study. Students' previous education, training, work experience and life experiences may help them gain credit towards the course. Many courses also offer up to one year's credit towards a university degree.

With distance education, students can:

- enrol at any time of the year
- study at their own pace
- study anywhere and any time that is convenient
- pay as they go.

Course subjects include:

- business and finance
- community and human services
- construction and engineering
- creative services
- education and training
- government and public sector
- information technology
- science, animal science and environment
- tertiary preparation
- short courses.

TAFE OL provides distance education courses on behalf of four Queensland TAFE's:

- Barrier Reef Institute of TAFE
- Brisbane North Institute of TAFE
- SkillsTech Australia
- Wide Bay Institute of TAFE.

Several TAFE flexible study options are described - the descriptions are familiar world-wide:

- ***Online learning*** *uses a range of technologies and tools such as the world-wide-web, email, web and video conferencing delivered over networks.*
- ***eLearning*** *combines a wide set of applications and processes which use electronic media. eLearning can be used in the classroom, workplace or online.*
- ***Flexible learning*** *expands the choice on what, when, where and how you learn.*
- ***Blended learning*** *combines all of the above i.e. online, eLearning and flexible delivery blended to meet the needs of students and industry.*

Other representative exemplars include ***TAFE NSW***, ***TAFE Tasmania***, ***TAFE Training WA*** and ***Tropical North Queensland TAFE..*** At most of the TAFE centres, Certificate and Diploma courses are widely available online, with free tuition for under 21 year olds to facilitate changes in career aspirations. For those aged over 21, fees increase steeply and anecdotal evidence from an Australian resident suggests that the quality and amount of remote tutor support is very variable[7].

Linked with the TAFE network, ***OTEN*** offers over 250 qualifications and courses, offering the same flexible study options described for TAFE Queensland.

7.4.2 New Zealand

Open Polytechnic of New Zealand (OPNZ)

This was selected as a VISCED mini case study in order to include a virtual college in the report (Deliverable 3.7).

The Open Polytechnic is a specialist institution of distance learning based near Wellington, New Zealand, in the area of Lower Hutt, with Learning Centres in Auckland and Christchurch. It now has around 34,000 students, but very few under 20. There are more female than male students (57:43) and around 13% of students declare themselves to be of Maori ethnicity. There are 180 full-time academic staff and over 300 adjunct faculty (mostly off-campus) with relevant expertise.

Open Polytechnic began life as the Technical Correspondence School in 1946, providing resettlement training for returned servicemen and women following World War II. As part of wider education reforms, the institution was renamed The Open Polytechnic of New Zealand in 1990, becoming the

[7] Nahla Fayad, *pers. comm.*

specialist national provider of open and distance learning at tertiary level and adopting internationally proven models for distance learning course design, student support and quality control.

Course materials are still largely produced in hard copy as student surveys continue to show that that is what they prefer. Faculty contribute to the writing of courses and teach them using a range of teaching media from phone to email to correspondence. Course materials are designed by expert teams, which include external experts, and instructional designers and editors.

For secondary school students, Open Polytechnic can provide quality vocational and higher education programmes to senior secondary school students through a selection of courses that can be funded through the STAR and Gateway programmes. For most courses, enrolment is open, which means students may enrol at any time of the year.

Open Polytechnic offers a variety of courses at Levels 1–4 on the National Qualifications Framework for students still attending school. These courses are for students wanting to prepare for pre-vocational, vocational and tertiary studies. Successful students will leave school with credits towards industry or tertiary qualifications.
The programme can also give students the opportunity to try out an area of interest or develop general skills that will stand them in good stead when they leave school.

It also offers school students access to courses at Levels 4 and 5 on the National Qualifications Framework. These are generally not unit standard-based and therefore cannot be credited towards the National Certificate of Educational Achievement, but they give advanced students the chance to get started on higher-level educational qualifications whilst still at school.

7.4.3 Papua New Guinea

There appear to be at least two distance education providers which meet the VISCED parameters for virtual colleges. A major distance education provider at the secondary school level is ***Flexible Open and Distance Education (FODE)***, the former College of Distance Education, now part of a New Zealand-based organisation. FODE offers correspondence-based distance education programmes aimed at:

- students in Grades 6 to 8 in remote schools.
- students wishing to complete Grade 9 and 10 education through distance education.
- school leavers wishing to complete secondary diploma/certificate equivalency programs for tertiary entry.

Across PNG, FODE has 20 Provincial Centres, as well as 25 Affiliated Study Centres. FODE has an active enrolment of 46,000 students.

In 2011, the World Bank provided funding of US $6 million for the period 2011–16 to increase the number of out-of-school youth completing secondary programmes through FODE. As part of this project, the FODE's Grade 11-12 enrolment programme will be established in at least one secondary school in each of Papua New Guinea's twenty provinces.

The ***International Training Institute*** (ITI) is a private training college specialising in diploma-level business and IT programs. The ITI has run distance education courses for almost a decade, using correspondence and email. ITI has a flexible distance education model. There are no formal deadlines. Learners can sit exams at any time after enrolment or submit assignments after the end of the standard 17 weeks training period.

The Professional Staff Training Centre (STC) has offered a distance learning programme since 2004. The STC provides the full range of Cambridge International College programmes. However, most enrolments are in diploma-level courses in business, tourism and related fields and it is not clear from the website which age groups these are available to.
(details from ICDE Report (2012).

8 Islands

8.1 Definition

This section joins together the island nations indexed under VISCED but not covered elsewhere in this report. This includes [among others]:

- The Oceania region
- Islands of the Indian Ocean [a body of water defined by Wikipedia as washing upon southern Asia and separating Africa and Australia; see http://en.wikipedia.org/wiki/Borders_of_the_oceans#Indian_Ocean]
- Islands of the Caribbean [an island group defined by Wikipedia as separating the Gulf of Mexico and the Caribbean Sea, to the west and south, from the Atlantic Ocean, to the east and north; see http://en.wikipedia.org/wiki/Caribbean_islands]
- miscellaneous islands in these or other oceans

8.2 Notable examples of virtual schooling found on islands

8.2.1 Islands of Oceania

We have found considerably fewer examples of notable virtual schools on remote islands than expected. However, on a smaller and more tentative basis there is distance learning in schools (e.g. in Cook Islands, Fiji and Solomon Islands) and from some local universities (e.g. from the University of the South Pacific and from higher education institutions in French Polynesia and Micronesia.) There is also some delivery of international distance schooling into the islands, in particular (such as in Cook Islands and Vanuatu) from Te Kura in New Zealand and from some Australian virtual schools, depending on the island and its allegiances,

Only countries with identified virtual schools are listed. The full entries for each of these can be viewed on the wiki – see http://virtualcampuses.eu/index.php/Category:VISCED

8.2.2 Islands of the Caribbean

Both the exemplars described below currently have inactive or inaccessible websites, so they may be examples of ceased initiatives. They are included

8.2.2.1 Little Cayman Education Centre [LCEC], Cayman Islands

LCEC is the smallest establishment of the Cayman Islands Department of Education Services, with just four students on roll currently. Situated on the idyllic Little Cayman, primary age students follow the full national curriculum and operate out of a specialist facility with a full time teacher and

teaching assistant. Increasing use is made of ICT to link with other schools both within Cayman and other parts of the world to enhance the teaching and learning experiences for students.

8.2.2.2 Trinidad and Tobago E-Classroom, Trinidad and Tobago

The aim of the Trinidad and Tobago E-Classroom is two-fold — to facilitate educators in managing and promoting learning and to encourage learning in students. Trinibagoeclassroom.com is an online learning management system which makes it easy for an educator to deliver content on a web-based platform where students can watch a video, or do an exam or quiz which is scored immediately. It can be used to conduct full online courses, as well as to augment face-to-face courses. Teachers and students don't need to be web-savvy to take advantage of the technology. Although similar technologies are available at universities, this programme is engineered to target secondary and primary school students. The website contain a very large deployment of hundreds of thousands of students. trinibagoeclassroom.com is facilitated with activity modules such as forums, databases and wikis to build richly collaborative communities of learning around their subject matter. The programme is free to all schools, but there is some doubt as to whether it is currently fully functional - the website may not be working.

8.2.3 Islands of the Indian Ocean

There are **NIOS** virtual school study centres in the Andaman and Nicobar Islands

8.2.3.1 Madagascar Virtual School, Madagascar

The Madagascar Virtual School (Madagascar), as part of the Africa Virtual School (AVS), was founded in February of 2008 as the first regional school of the World Virtual School, in order to serve students of all backgrounds with the highest quality online courses, at the lowest cost possible.

The goal of AVS is to offer equitable, quality education to all students, regardless of age, race, gender, ethnic, religious, or cultural background, via the internet so that they may join the global social, cultural and economic environment. The World Virtual School is a subsidiary of the Hawking Institute, Inc., a US non-profit NGO. It is also a partnership project with the Personal Learning Center, International, LLC (dba PLC/i EDU) which is incorporated as a Limited Liability Corporation within the State of Illinois in the United States and has official offices in Cordova, Illinois, USA.

There is no evidence, though, from the website, of what is actually being run in the country.

8.2.4 Islands of the Atlantic Ocean

There appears to be a branch of the **Calvert School** operating in the Bahamas.

There is some use of distance learning in the school systems of both the Falkland Islands and St Helena, but the island populations are too small to justify calling either an exemplar. However it does show that even small islands can use distance learning, which makes the apparent lack of such approaches in Oceania harder to understand.

8.3 Notable examples of virtual colleges found on islands

Only countries with identified virtual colleges are listed. The full entries for each of these can be viewed on the wiki – see http://virtualcampuses.eu/index.php/Category:VISCED

8.3.1 Islands of the Caribbean

8.3.1.1 Las Americas Institute of Technology, Dominican Republic

The Las Americas Institute of Technology is located in the Dominican Republic. As a leading institution in the field of technology training, Las Americas Institute of Technology makes extensive use of new technologies. For this reason it has created the Department of Educational Technology (DTE) that has several initiatives that support its strategy of distance education and educational application software.

8.3.1.2 Samuel Jackman Prescod Polytechnic, Barbados

Samuel Jackman Prescod Polytechnic offers a number of its courses online. It notes that "Open and flexible means that you do not need to come onto campus for your lectures, but can study in the comfort and convenience of your home or some other place." Courses are offered online within each of the Polytechnic's programmes and delivered fully online.

8.3.2 Islands of the Indian Ocean

8.3.2.1 Mauritius College of the Air (now part of Open University of Mauritius)

The Mauritius College of the Air was established in 1971 as an organisation under the Ministry of Education. It was re-enacted in 1985 to provide for the merger of the Audio-Visual Centre of the Ministry of Education. It is defined as a tertiary education institution under the schedule of the Tertiary Education Commission Act of 1988. The MCA is administered by a Board which is advised by an Advisory Council. The object of the college is to promote education, arts, science and culture generally through mass media and distance education methods. It is now part of the Open University of Mauritius but there is still a department of the OU delivering sub-degree programmes (see http://www.open.ac.mu/index.php/en/component/content/article/2-uncategorised/25-employability-skills). It still has its own web site but currently this is under development - http://www.mca.ac.mu/default.htm and note http://www.mca.ac.mu/advert/procurement/Draft%20of%20Notice1.pdf

9 Next steps

Following the end of the project we will continue to fill gaps on the wiki, both within and beyond Europe. We suspect that there may be numbers of virtual schools that we have not yet identified in Europe, especially in eastern Europe and former Soviet bloc countries and Turkey. As the text indicates, we have found very few examples in Asia, especially China, and if resource levels permit, we will undertake additional research there and encourage other researchers to continue populating the wiki.

Annex: List of exemplars

This table lists all the exemplars mentioned in the text of this report, together with other virtual schools, colleges and initiatives listed on the project wiki.

Key to table: S = virtual school; C = virtual college; IN = notable initiative.

	Name	*Country*	*S*	*C*	*IN*
	21st Century Cyber Charter School	USA	x		
	@urora	Italy			x
A	ACE Digital Academy	USA	x		
	ACHIEVEk12	USA	x		
	AGVI Academy for Gifted Youth	USA	x		
	APS Online	USA	x		
	ASCIT	USA	x		
	ASPIRA Bilingual Cyber Cyber School	USA	x		
	AZ2020 Online Academy	USA	x		
	Académie en ligne	France	x		
	Academus	England	x		
	Academy Online High School	USA	x		
	Acadin.nl	Netherlands			x
	Accipio Learning	England	x		
	Achievement House Cyber Charter School	USA	x		
	Acre	USA	x		
	Advanced Academics Online School	USA	x		
	Africa Virtual school	Africa	x		
	African Virtual School	West Africa	x		

	Agave Distance Learning	USA	x		
	Agency for the Consolidation of Technology in Education (ACTE)	Gabon			x
	Agora Cyber Charter School	USA	x		
	Air and Correspondence High School	South Korea	x		
	Akron Digital Academy	USA	x		
	Alabama ACCESS Distance Learning	USA	x		
	Alaska Virtual School	USA	x		
	Alaska's Learning Network	USA	x		
	Alberta Distance Learning Centre	Canada	x		
	Alchevsk Virtual School for Handicapped Children	Ukraine	x		
	Alice Springs School of the Air	Australia	x		
	American Community School of Amman	Jordan	x		
	American Embassy School of New Delhi	India	x		
	American International School Dhaka	Bangladesh	x		
	Andover eCademy	USA	x		
	Anoka Hennepin Compass On-Line	USA	x		
	Another Choice Virtual Charter School	USA	x		
	Apex Learning High School	USA	x		
	Appleton eSchool	USA	x		
	Argyll Centre	Canada	x		
	Argyll College UHI	Scotland		x	
	Arizona Connections Academy	USA	x		
	Arizona Connections Academy	USA	x		
	Arizona Virtual Academy	USA	x		

	Arizona Virtual School	USA	x		
	Arkansas Virtual High School	USA	x		
	Armenian Virtual College	USA		x	
	Audentes e-Gymnasium	Estonia	x		
	Aula Aragon	Spain	x		
	Aylesbury College	England		x	
B	Bachillerato a Distancia Colegio de Madrid	Spain		x	
	Bangladesh Open School	Bangladesh	x		
	Barking & Dagenham College	England		x	
	Basehor-Linwood Virtual School	USA	x		
	Beacon Academy of Nevada	USA	x		
	Bednet	Belgium	x		
	Belgrade Metropolitan High School	Serbia	x		
	Belgrade Open School	Serbia			x
	Bethel Online Academy	USA	x		
	Blue Sky Online Charter School	USA	x		
	Blueprint High School	USA	x		
	Botswana College of Distance and Open Learning	Botswana		x	
	Boulder Universal	USA	x		
	Branson School Online	USA	x		
	Brentwood School, Los Angeles	USA	x		
	Bridge21	Ireland	x		
	Brigham Young University Independent Study	USA	x		
	Brisbane School of Distance Education	Australia	x		
	Briteschool	England	X		

	Broken Hill School of the Air	Australia	x		
	Buckeye On-Line School for Success	USA	x		
C	CCSD Virtual High School	USA	x		
	CEAC	Spain	x		
	CESDE	Colombia		x	
	CEVADD	Chile		x	
	CIDEAD	Spain	x		
	CK Online Academy	USA	x		
	Cairns School of Distance Education	Australia	x		
	California Pacific Charter Schools	USA	x		
	California Virtual Academies	USA	x		
	Calvert School	Bahamas; Taiwan	x		
	Cambridge English Online	England		x	
	Cambridge Regional College	England		x	
	Camden Haven High School	USA	x		
	Campus NooA	Norway		x	
	Canon Online Academy	USA	x		
	Capistrano Connections Academy	USA	x		
	Capricornia School of Distance Education	USA	x		
	Cardington-Lincoln Local Digital Academy	USA	x		
	Carnegie College	Scotland		x	
	Central California Connections Academy	USA	x		
	Central Pennsylvania Digital Learning Foundation	USA	x		
	Centre For Distance Learning and Innovation	Canada			x
	Centre for ICT in education	Norway			x

	Centre national d'enseignement à distance	France			x
	Centro Nacional de Educacion a Distancia	Uruguay		x	
	Charleville School of Distance Education	USA	x		
	Charters Towers School of Distance Education	USA	x		
	Chester Area Cyber School	USA	x		
	Chesterfield County Public Schools Online	USA	x		
	Chicago Virtual Charter School	USA	x		
	Chignecto Central Virtual School	USA	x		
	Christa McAuliffe Academy	USA	x		
	Cincinnati Virtual High School	USA	x		
	City of Angels Virtual Academy	USA	x		
	cl@ssi 2.0	Italy			x
	Classroom 2000	Northern Ireland			x
	Cobb Virtual Academy	USA	x		
	Coleg Sir Gâr	Wales		x	
	Colégio Militar de Manaus	Brazil	x	x	
	Colegio Virtual	Panama		x	
	Colegio Virtual Marco Tulio Salazar	Brazil		x	
	College of Business Administration	Latvia		x	
	College of North West London	England		x	
	College on the Net	England		x	
	Colorado Community Colleges Online	USA	x		
	Colorado Connections Academy	USA	x		
	Colorado Cyber	USA	x		
	Colorado Distance and Electronic Learning	USA	x		

	Academy				
	Colorado Online Learning	USA	x		
	Colorado Virtual Academy	USA	x		
	Columbia Virtual Academy	USA	x		
	Commonwealth Connections Academy	USA	x		
	Comunidad de Aprendizaje (SENA)	Colombia		x	
	ConnEct Home Learning	England	x		
	Connecticut Virtual Learning Center	USA	x		
	Connections Academy	USA	x		
	Continental Academy	USA	x		
	Cook County Sheriff's Department Virtual High School	USA	x		
	Coopersale Hall School	USA	x		
	Cornwall College	England		x	
	Credenda Virtual High School & College	Canada	x		
	Cyber High School	South Korea	x		
	Cyber Home Learning Space	South Korea			x
	Cyber Home Learning System	South Korea	x		
	Cyberschool Jamaica	Jamaica			x
D	Danes Worldwide	Denmark	x		
	Delta Academy On Line School	USA	x		
	Delta Cyber School	USA	x		
	Denver Online High School	USA	x		
	Derby College	England		x	
	Deutsche Fernschule	Germany	X		

	Devoirs.fr	France			x
	"Digital textbooks available on virtual learning environments"	France			x
	Distance Education Centre Victoria	Australia	x		
	Distance Education Institute	Thailand			x
	Distance Education Support Unit	Australia	x		
	Distance Learning Television Station	Thailand			x
	DoDEA Virtual High School	USA	x		
	Dubbo School of Distance Education	Australia	x		
	Dunlap Leadership Academy	USA	x		
	Duval Virtual Instruction Academy	USA	x		
E	E-Campus Alberta	Canada	x		
	E-sy.info	England			x
	EBS Internet Service	South Korea			x
	ECADEMY	USA	x		
	ELCA Online Learning Academy	USA	x		
	ELSA eLearning Project	Austria			x
	ELearning Ontario	Canada	x		
	ELukio	Finland			x
	ENO-Environment Online	Finland	x		
	Enciclomedia	Mexico			x
	EV Online Learning	USA	x		
	EdVisions Online High School	USA	x		
	Центр дистанционного образования «Эйдос» (Eidos)	Russia			x
	El Surco Escuela Virtual	Argentina	x		

	Elika Virtual School	Bulgaria	x		
	EMINUS	Netherlands			x
	Ensino a Distância para a Itinerância	Portugal	x		
	Epysteme	Spain	x		
	Escola Técnica Aberta do Brasil	Brazil		x	
	Escuela Porvenir	Bolivia	x		
	Escola virtual	Portugal	x		
	Escuela 2.0	Spain			x
	Escuela 20 Uruguay	Uruguay	x		
	Escuela Virtual de Caldas	Colombia	x		
	Etäkoulu Kulkuri	Finland	x		
	EVESP Escola Virtual de Programas Educacionais, São Paulo	Brazil	x	x	
	Evanston Virtual High School	USA	x		
	Excel High School	USA	x		
	EXite	England			x
F	Fairbanks B.E.S.T. Program	USA	x		
	Fairborn Digital Academy	USA	x		
	Falcon Virtual Academy	USA	x		
	Findlay Digital Academy	USA	x		
	First Bulgarian Online School	Bulgaria	x		
	First College	Wales	x		
	Flexible Open and Distance Education (FODE)	Papua New Guinea		x	
	Florida Distance Learning Consortium	USA	x		
	Florida Virtual School	USA	x		
	Francis School	USA	x		

	Franklin University PSEOP	USA	x		x
	Freshwater Education District Virtual School Consortium	USA	x		
	Fundação Bradesco Escola Virtual	Brazil		x	
	FÁS eCollege	Ireland		x	
G	GLBTQ Online High School	USA	x		
	GLOW	Scotland			x
	GOAL Academy Online	USA	x		
	GOAL Digital Academy	USA	x		
	Georgia Cyber Academy	USA	x		
	Georgia Virtual School	USA	x		
	Georgia Virtual Technical College	USA	x		
	Giant Campus	USA	x		
	Giant Campus Academy	USA	x		
	Giant Campus of Washington	USA	x		
	Globalskolen	Norway	x		
	Gloucestershire College	England		x	
	GoEnglishGo.com	Poland	x		
	Graham Digital Academy	USA	x		
	Grampians Virtual School	Australia	x		
	Greater Ohio Virtual School	USA	x		
	Greenways Academy	USA	x		
	Greenways Academy of Washington	USA	x		
	Gwinnett Online Campus	USA	x		
	Gymnasiet i Petalax	Finland	x		

H	Hamilton County Virtual School	USA	x		
	Hanse Cyber High School	South Korea	x		
	Hatfield Christian Online School	South Africa	x		
	Hawaii DOE E-School	USA	x		
	Hawaii Technology Academy	USA	x		
	Hawaii Virtual Learning Network	USA	x		
	Hawaii Virtual School	USA	x		
	Highbury College	England		x	
	Highland Theological College UHI	Scotland		x	
	Homeschooling Kak Seto	Indonesia	x		
	Homeschooling Logos	Indonesia	x		
	Homeschooling Primagama	Indonesia	x		
	Hoosier Academies	USA	x		
	Hope High School Online	USA	x		
	Hope Online Learning Academy	USA	x		
	HSH@Network (Hospital School Home)	Italy			x
I	IDEAL-NM	USA			x
	IEARN	Spain	x		x
	IES Francisco Salinas	Spain	x		
	IES Isaac Peral	Spain	x		
	IES J. Ibanez Martin	Spain	x		
	IES Jose L. Castillo Puche de Yecla	Spain	x		
	IES Juan Carlos I de Murcia	Spain	x		
	IES San Juan de la Cruz – Caravaca de la Cruz	Spain	x		
	INCAP	Colombia		x	

	INSPIRE Connections Academy	USA	x		
	IQ Academy	USA	x		
	IQ Academy Arizona	USA	x		
	IQ Academy Kansas	USA	x		
	IQ Academy Minnesota	USA	x		
	IQ Academy Washington	USA	x		
	IQ Academy Wisconsin	USA	x		
	ISchoolAfrica	Africa			x
	ISBerne Online	Switzerland	x		
	IScoil	Ireland	x		
	ISucceed Virtual High School	USA	x		
	Idaho Connects Online	USA	x		
	Idaho Digital Learning Academy	USA	x		
	Idaho Distance Education Academy	USA	x		
	Idaho Virtual Academy	USA	x		
	Illinois Virtual High School	USA	x		
	Independent Learning Centre	Canada	x		
	Independent Study High School	USA	x		
	Independent Study High School India	India	x		
	Indiana Connections Academy	USA	x		
	Insight School of Colorado	USA	x		
	Insight School of Kansas	USA	x		
	Insight School of Minnesota	USA	x		
	Insight School of Washington	USA	x		
	Insight School of Wisconsin	USA	x		

	Insight Schools	USA	x		
	International Correspondence Schools	Scotland		x	
	International Training Institute	Papua New Guinea		x	
	Institucion Educativa Publica del Callao	Peru	x		
	Instituto Nacional de Educação a Distância [INED], Brazil	Brazil	x	x	
	InterHigh School	Wales	x		
	Interactive Design Institute	Scotland		x	
	International Virtual Learning Academy	USA	x		
	Internet Academy	USA	x		
	Inverness College UHI	Scotland		x	
	Iowa Learning Online	USA	x		
	Iowa Online AP Academy	USA	x		
	Islands in Network (Scuole in rete)	Italy			x
J	JEDI Virtual High School	USA	x		
	Jackson Hole Connections Academy	USA	x		
	Janesville Virtual Academy	USA	x		
	Jeffco's 21st Century Virtual Academy	USA	x		
	Jefferson County JCPSeSchool	USA	x		
	Junior College	Belgium		x	
	Junior Language School, Lupàcova	Czech Republic			x
K	K12 International Academy	Singapore	x		
	Kalgoorlie School of the Air	Australia	x		
	Kansas Connections Academy	USA	x		
	Kaplan Academy	USA	x		
	Kaplan Academy of California	USA	x		

	Kaplan Academy of Oregon	USA	x		
	Kaplan Academy of Washington	USA	x		
	Kaplan University High School	USA	x		
	Kaplan Virtual Education	USA	x		
	Karabar High School Distance Education Centre	Australia	x		
	Kartelo	Croatia	x		
	Karval Online Education	USA	x		
	Katherine School of the Air	Australia	x		
	Keewaytinook Internet High School	Canada	x		
	Kendal College	England		x	
	Kenosha eSchool	USA	x		
	Kent Digital Academy	USA	x		
	Kentucky Virtual Schools	USA	x		
	Keystone Online School	USA	x		
	Kiel eSchool	USA	x		
	Kool.sd73.bc.ca	Canada	x		
	Korean Air & Correspondence High School	South Korea	x		
	Korrenspondensgymnasiet i Torsås	Sweden	x		
	Kyungbock High School	South Korea	x		
L	Lakewood Digital Academy	USA	x		
	Lancaster Digital Academy	USA	x		
	Las Americas Institute of Technology	Dominican Republic		x	
	Latvian Business College	Latvia		x	
	L'Éspace Numerique de Travail (ENT)	France			x

	Le Service de L'Enseignement à Distance	Belgium			x
	LearnDirect	UK		x	
	Learn Quebec	Canada	x		
	Learn at My Pace	USA	x		
	LearnNowBC	Canada	x		
	Learning² eSchool of Wichita	USA	x		
	Lehrer-online	Germany			x
	Lews Castle College UHI	Scotland		x	
	Little Cayman Education Centre	Cayman Islands	x		
	Lo-net and Virtuelles Gymnasium Sonthofen	Germany			x
	Longreach School of Distance Education	Australia	x		
	Louisiana Virtual School				
M	MPS Online	USA	x		
	Madagascar Virtual School	Madagascar	x		
	Mahoning Unlimited Classroom	USA	x		
	Manitoba Education Distance Learning	Canada	x		
	Maryland Virtual School	USA	x		
	Massachusetts Online Network for Education	USA	x		
	Massillon Digital Academy	USA	x		
	Mauritius College of the Air	Mauritius		x	
	Mercury Academy of Southern California	USA	x		
	Mercury Online Academy of Arizona	USA	x		
	Mercury Online Prep	USA	x		
	Mesa Distance Learning Program	USA	x		
	Miami Dade I-Prep Academy	USA	x		

	Miami-Dade Online Academy	USA	x		
	Michigan Virtual School	USA	x		
	Midwestern Regional Virtual Charter School	USA	x		
	Minnesota Online High School	USA	x		
	Minnesota Transitions Schools Minnesota Connections Academy	USA	x		
	Minnesota Virtual Academy	USA	x		
	Minnesota Virtual High School	USA	x		
	Mississippi Virtual Public School	USA	x		
	Missouri Virtual Instruction Program	USA	x		
	MoLeNET	England			x
	Monroe Virtual High School	USA	x		
	Monroe Virtual Middle School	USA	x		
	Montana Digital Academy	USA	x		
	Monte Vista Online Academy	USA	x		
	Moray College UHI	Scotland		x	
	Morning Star Academy	Indonesia	x		
	Mount Isa School of the Air	Australia	x		
	Move Up Program	USA			x
	Myerscough College	England		x	
N	NAFC Marine Centre UHI	Scotland		x	
	NCSSM Online	USA	x		
	NEPAD e-schools Initiative	Africa			x
	NESA Virtual School	Asia; Near East; Middle East	x		
	NETschool Bendigo	Australia	x		

	NIOS	India	x		
	NHK Academy of Distance Learning	Japan	x		
	NKI Nettstudier	Norway	X		
	NKS Nettstudier	Norway		x	
	NTI Skolan Distans	Norway	x		
	Nagoya International School	Japan	x		
	Namibian College of Open Learning	Namibia		x	
	National Extension College	England		x	
	National Network of Digital Schools	USA			x
	Nettilukio	Finland	x		
	Nettiperuskoulu	Finland		x	
	Nevada Connections Academy	USA	x		
	Nevada Virtual Academy	USA	x		
	New Brunswick Distance Learning	Canada	x		
	New Zealand Virtual School	New Zealand	x		
	Newark Digital Academy	USA	x		
	Newcastle College	England		x	
	Nisai Virtual Academy	England	x		
	North Carolina Virtual Public School	USA	x		
	North Dakota Center for Distance Education	USA	x		
	Northeast Wisconsin Online Network	USA	x		
	Northeast Yucai Oxford International Senior High School	China	x		
	Northern British Columbia Distance Education School	Canada	x		
	Northern Territory Open Education Centre	Australia	x		

	Northwest Allprep	USA	x		
	North Highland College UHI	Scotland		x	
	Notschool.net	England	x		
	Nova Scotia Virtual School	Canada	x		
O	ORT Campus Virtual	Argentina	x		
	ORT Aviv Virtual School	Israel			x
	OTEN	Australia		x	
	Odyssey High School	USA	x		
	Ohio Connections Academy	USA	x		
	Ohio Distance And Electronic Learning Academy	USA	x		
	Ohio Virtual Academy	USA	x		
	Oklahoma Virtual Academy	USA	x		
	Oklahoma Virtual Charter Academy	USA	x		
	Oklahoma Virtual High School	USA	x		
	Oklahoma Virtual School	USA	x		
	Olympia Regional Learning Academy iConnect	USA	x		
	Omaha Public Schools eLearning	USA	x		
	Online College of Art and Design	England		x	
	Ontario Catholic eLearning Consortium	Canada	x		
	Ontario eLearning Consortium	Canada	X		
	Open Access College	Australia	X		
	Open College of the Arts	England		x	
	Open High School	Australia	x		
	Open High School Turkey	Turkey	x		
	Open High School of Utah	USA	x		

	Open Polytechnic of New Zealand	USA	x		
	Open Primary Education School	Turkey	x		
	Open School BC	Canada	X		
	Open School Ontario	Canada	x		
	Open Vocational High School	Turkey	x		
	Oregon Connections Academy	USA	x		
	Oregon Virtual Academy	USA	x		
	Oregon Virtual Education	USA	x		
	Orkney College UHI	Scotland		x	
	Otava Folk High School	Finland	x		
	Ottawa Carleton e-School	Canada	x		
	Otwarta Szkola	Poland			x
	Oxford College	England		x	
	Oxford Home Schooling	England	x		
	Oxford Open Learning	England		x	
	Oxford Virtual Academy	USA	x		
P	PA Distance Learning Charter School	USA	x		
	PA Learners Online Regional Cyber Charter School	USA	x		
	Pacific View Charter School	USA	x		
	Palmetto State E-cademy	USA	x		
	Pamoja Education	England	x		
	Papua New Guinea University of Technology	Papua New Guinea	x		
	Park City Independent	USA	x		
	Pembrokeshire College	Wales		x	
	Pennsylvania Cyber Charter School	USA	x		

	Pennsylvania Leadership Charter School	USA	x		
	Pennsylvania Virtual Charter School	USA	x		
	Periplus Home Education	England	x		
	Perth College UHI	Scotland		x	
	Pinnacle Online High School	USA	x		
	Polska Szkola	Poland			x
	Port Hedland School of the Air	Australia	x		
	Primavera Online High School	USA	x		
	PROCEFET	Brazil			x
	Project Ceibal	Uruguay			x
	Projeto Bem Receber Copa 2014	Brazil			x
	Provo eSchool	USA	x		
	Provost Academy Colorado	USA	x		
	Provost Academy South Carolina	USA	x		
	Prépaly	Francophone Africa			x
Q	Quaker Digital Academy	USA	x		
R	REA college	Netherlands		x	
	Red Comet	USA	x		
	Red Escolar	Mexico			x
	Rede SENAI de Educação a Distância	Brazil		x	
	Richard McKenna Charter High School	USA	x		
	Rīgas Komercskola Tālmācibas Vidusskola	Latvia	x		
	Rīgas Tālmācibas Vidusskola	Latvia	x		
	Riverside Virtual School	USA	x		

	Rocky Mountain College of Art + Design	USA	x		
S	SCHOLAR	Scotland			x
	SEAD (Colegio de Bachilleres)	Mexico		x	
	SENA	Colombia		x	
	SIDE	Australia	x		
	Sabhal Mòr Ostaig UHI	Scotland		x	
	Samuel Jackman Prescod Polytechnic	Barbados		x	
	Sanquira Virtual	Peru	x		
	Saskatchewan Distance Learning Course Repository	Canada	x		
	Saskatoon Cyber Catholic School	Canada	x		
	School of the Air	Australia	x		
	Scottish Association for Marine Science UHI	Scotland		x	
	Scuola B@rdi	Italy			x
	Serviço Brasileiro de Suporte à Micro e Pequena Empresa (SEBRAE)	Brazil		x	
	Serviço Social da Indústria (SESI)	Brazil		x	
	Shankar Mahdevan Academy	India	x		
	Sheffield Online College	England		x	
	Shetland College UHI	Scotland		x	
	Silver State Charter Schools	USA	x		
	Slavic Christian Academy	USA	x		
	Sofia Distansundervisning	Sweden	x		
	Somerset College	England		x	
	Sotunki Distance Learning Centre	Finland		x	
	South Carolina Connections Academy	USA	x		

	South Carolina Virtual Charter School	USA	x		
	South Carolina Virtual School Program	USA	x		
	South Carolina Whitmore School	USA	x		
	South Dakota Virtual School	USA	x		
	South Essex College	England		x	
	Southern Cross Distance Education Centre	Australia	x		
	Southwest Licking Digital Academy	USA	x		
	Spokane Virtual Learning	USA	x		
	Spring Lake Park Online	USA	x		
	Spurgeons College	England		x	
	St. Johns Virtual School	USA	x		
	Stichting Digibeter	Netherlands			x
	Stonebridge Associated Colleges	England		x	
	Sunchild E-Learning Community	Canada	x		
	Super English Language Virtual High School	Japan	x		
	SusQ-Cyber Charter School	USA	x		
	Sydney Distance Education High School	Australia	x		
	Szkola Online	Poland	x		
T	TAFE NSW	Australia		x	
	TAFE Open Learning Queensland	Australia		x	
	TAFE Tasmania	Australia		x	
	TAFE Training WA	Australia		x	
	TRIO Wolf Creek Online High School	USA	x		
	Take Off	Belgium	x		
	Tasmanian eSchool	Australia	x		

	Te Kura (The Correspondence School)	New Zealand	x		
	Telecentre.org	Mexico			x
	Telesecundaria	Mexico	x		
	Tempe Union Online Learning	USA	x		
	Texas Connections Academy @ Houston	USA	x		
	Texas Virtual Academy	USA	x		
	Texas Virtual School	USA	x		
	Tropical North Queensland TAFE	Australia		x	
	The American Academy	USA	x		
	The Bahamas Learning Channel	Bahamas			x
	The Bridge Academy	England	x		
	The Cloud School	England	x		
	The Edufax virtual classroom	Netherlands			x
	The University of the Highlands and Islands	Scotland		x	
	The Virtual College	England		x	
	The Web School	England	x		
	Think Academy International Virtual School	Chile	x		
	Treca Digital Academy	USA	x		
	Trinidad and Tobago E-Classroom	Trinidad & Tobago			x
	Телешкола (Teleschool)	Russia	x		
	Tunisian Virtual School	Tunisia	x		
U	UK Open College	England		x	
	Under the Kapok Tree	Guinea			x
	Universidad del Trabajo de Uruguay	Uruguay		x	
	University of California College Prep	USA	x		

	University of Guadalajara Virtual School	Mexico	x		
	University of Oklahoma High School	USA	x		
	Utah Electronic High School	USA	x		
	Utah Tech High	USA	x		
	Utah Virtual Academy	USA	x		
V	VOISE Academy High School	USA	x		
	VUC Flex	Denmark	x		
	Vancouver Learning Network	Canada	x		
	Verkkoperuskoulu	Finland	x		
	Vermont Virtual Learning Cooperative	USA	x		
	Vilas Online	USA	x		
	Virta	Finland			x
	Virtual Century College XXI	Colombia	x		
	Virtual College of Texas	USA	x		
	Virtual Community School Of Ohio	USA	x		
	Virtual High School	Israel	x		
	Virtual High School (Ontario)	Canada	x		
	Virtual High School Global Consortium	USA	x		
	Virtual High School Nova Scotia	Canada	x		
	Virtual Learning Academy Charter School	USA	x		
	Virtual Learning Centre	Canada			x
	Virtual Music School	Netherlands			x
	Virtual Virginia	USA	x		
	Virtual Women's Further Education College	Northern Ireland		x	
	Virtuelle Schule	Germany			x

	Vision2learn	England	x		
	Värmdö Distans	Sweden	x		
W	WOLF School	USA	x		
	Wapaskwa Virtual Collegiate	Canada	x		
	Washington Online School Network	USA	x		
	Washington Virtual Academies	USA	x		
	Wereldschool	Netherlands	x		
	West Central Learning Academy II	USA	x		
	West Highland College UHI	Scotland		x	
	West Virginia Virtual School	USA	x		
	Westwood Cyber High	USA	x		
	WiloStar3D-Epic Academy	USA	x		
	Wilostar3D	USA	x		
	Wisconsin Connections Academy	USA	x		
	Wisconsin Virtual Academy	USA	x		
	Wisconsin Virtual Learning	USA	x		
	Wisconsin Virtual School	USA	x		
	Wisconsin eSchool Network	USA	x		
	Wolsey Hall	England	x		
	Wyoming Switchboard Network	USA	x		
	Wyoming Virtual Academy	USA	x		
	Wyoming e-academy of Virtual Education	USA	x		
X	Xsel	Australia	x		
Y	Yo Aprendo	Chile	x		