SUCCESS FACTORS – interim version

VISCED
A Transnational Appraisal of
Virtual School and College Provision

Education and Culture DG
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Abstract	This deliverable describes the process of selection of Critical and Key Success Factors for virtual schools and provides evidence from VISCED case studies to support the selection.
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Executive summary

This report outlines the approach and working methodology used to develop a set of Critical and Key Success Factors which can be applied to European virtual schools.

The conceptual model used for developing Critical and Key Success Factors is explained, and the allocation of responsibilities between project partners is described. EFQUEL leads the work package and receives input from Sero and ATiT in the development of success factors.

The definition of Critical Success Factors is described, together with the process of initial selection and subsequent refinement. The same process is followed in identifying Key Success Factors and relating these to Critical factors.

Throughout the report we stress that the factors identified are tailored for European virtual schools: virtual schools elsewhere in the world (especially the USA) operate in a variety of different social and political environments, where other factors are likely to have greater significance. Colleges are generally much larger in size than European virtual schools and appropriate Critical and Key Success factors for virtual colleges are much closer to those for universities and higher education institutions.

There are two Annexes:

1. detailed evidence from the VISCED European Case Studies supporting the Critical Success Factors
2. a copy of the *aide memoire* to enable European virtual schools to identify those Key Success Factors that are critical for them in their particular social and political environment.

1. The brief

This is Deliverable 4.2 of Work Package 4. The Deliverable Title is "*Success Factors – Interim version",* part of work package 4 entitled: "Success Factors". The work package runs from month 12 (December 2011) until the end of the project (December 2012).

Deliverable 4.2 is summarised in the work plan as follows:

This Deliverable will be an interim version of a spreadsheet of Critical Success Factors and Key Success Factors presented in the style of other EFQUEL projects in related areas, and embedded in an adaptation of a pre-existing wider EFQUEL-approved scheme of benchmarking and quality.

According to the work plan three partners take part in this work package:

- **EFQUEL** leads the work package and coordinates the input from previous EFQUEL projects. As member organisation of EFQUEL, KU Leuven is seconded to carry out the work in this work package.
- **Sero** coordinates the input from the Re.ViCa success factors outcomes and coordinates input from the views of the UK Ministries and agencies (in particular Becta) and from other benchmarking experts world-wide, including Stephen Marshall (eMM), ACODE, E-xcellence (EADTU), etc.
- **ATiT** assists with the interpretation of Re.ViCa success factors and coordinates the input of VISCED potential Critical Success Factors from WP3.

After the initial work plan had been written, but before the project started, the UK government abolished Becta and government ministries have been reluctant to comment on issues related to virtual schooling. The deliverable therefore relies on the collective knowledge and experience of the partners, together with valuable inputs from the International Advisory Committee.

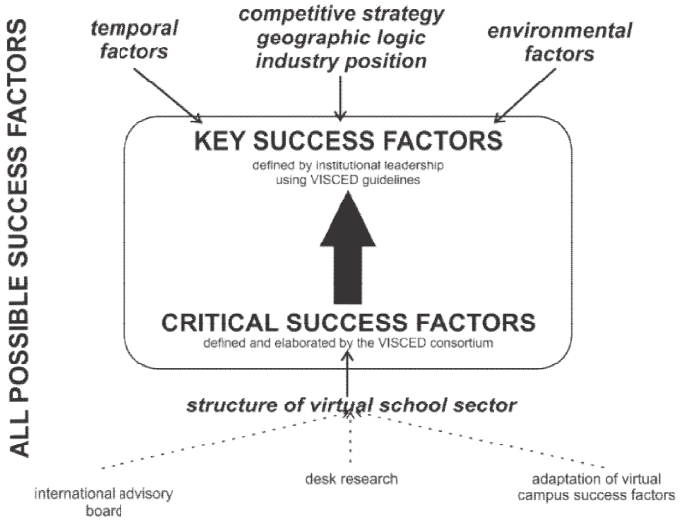
The original work plan described this deliverable as a demonstration / prototype of the benchmarking tool and web interface to be finalised in D.4.3. Following discussion amongst the partners, it was decided that it would be more informative to describe the selection process in report format, rather than produce a half-finished spreadsheet.

2. Introduction

Work Package 4 within the VISCED project was tasked with creating a set of Critical Success Factors and Key Success Factors applicable to virtual schools and colleges.

In Deliverable D.4.1 "Success Factors – Scoping document" the procedure envisaged for isolating, elucidating and defining critical and Key Success Factors, through a process of reflection, research and consultation was described. It clarified the definition of success factors, outlined the source material, and described in detail the process that was going to be followed.

The diagram gives a conceptual overview of the whole process:



In this Deliverable D.4.2 "Success Factors – Interim Version" we present in a detailed manner both the different steps taken and the outcomes of the process of selecting the Critical Success Factors. We have differentiated between Critical and Key Success Factors. To illustrate the working of the Critical Success Factors that were in the end selected, we refer back to evidence drawn from the VISCED Case Studies (D.3.7 from WP3) to give readers a concrete idea of what those factors mean in the daily practice of virtual schools and colleges. Secondly, a step-by-step approach is presented that can help support individual institutions to define Key Success Factors applicable for their own institution.

It should be emphasised that the Critical and Key Success Factors described in this report are applicable primarily to European virtual schools; for virtual schools in the USA they will be different and this may well apply to other parts of the world. Finally, the success factors for virtual colleges are more likely to resemble the Pick&Mix list for higher education: most European virtual schools are relatively small in size, whereas colleges (particularly in the public sector) operate on a scale which more resembles universities than the European virtual schools.

3. Defining Critical Success Factors

A Critical Success Factor describes an area of operation which every virtual school needs to perform effectively in order to ensure sustainable success.

When looking for success factors, a number of elements can be considered. The work on Critical Success Factors was therefore started with a long list of all possible success factors drawn from a number of various sources and elements, including extensive desk research and the input from the VISCED International Advisory Committee.

Four essential sources were used in this process:

- Re.ViCa Critical Success Factor list, created for virtual campuses in higher education: http://virtualcampuses.eu/index.php/Critical_Success_Factors
- Pick&Mix benchmarking scheme: http://www.matic-media.co.uk/benchmarking/PnM-2pt6-beta3-full.xlsx
- INACOL national standards: http://www.inacol.org/research/nationalstandards/index.php
- Various university quality and benchmarking schemes (UNIQUe, ECBCheck, ACODE Benchmarks, etc.)

The process of selecting the Critical Success Factors was done as follows:

Step 1: Master list of Success factors

The work package leaders first composed a master list of Success factors based on the Pick&Mix scheme elaborated with comments from the Re.ViCa Success factors list. At this stage, a group of experts from EFQUEL assessed each of the Success factors against SMART criteria, i.e. refining each criterion to ensure it is:

- Specific
- Measurable
- Attainable
- Realistic
- Time-Bound

Following this evaluation, a shortlist of Critical Success Factors was composed, consisting of Success factors matching each of the SMART indicators. For each of the selected Success factors, project experts assessed whether the criterion needed rewording in order to apply to the virtual school sector.

Important feedback was also collected during several consultations, both at partner meetings and with the VISCED International Advisory Committee. Outcomes from those various meetings were recorded and success factors mentioned during those gatherings were considered strongly in the final selection of Success factors.

Step 2: Commenting and contributing factors

This shortlist was then circulated among all WP4 partners for commenting and for refining the contributing factors, with particular attention to the measurement of the success factors and the level of achievement within them. The applicability of each factor was considered, as well as any requirements for new ones. The ultimate selection and rephrasing of the Critical Success Factors was done in consultation with the whole consortium during the fourth project partner meeting.

Step 3: Final list of Critical Success Factors

This process led to a refined list of eight Critical Success Factors which are considered specific to the whole European virtual schools sector, and which can be used in defining monitoring indicators and performance benchmarks within institutions. It should be noted that the Critical Success Factors created are Europe-oriented, rather than reflecting the different situation in the USA, and that they are better suited to European virtual schools, which are generally relatively small organisations recently established, rather than colleges, which are often longer established and more akin to higher education in their structures and size. They are expected to be useful both in monitoring internal processes as well as benchmarking institutional performance against other actors in the field.

As a final check, the list of 8 Critical Success Factors that were eventually selected (presented in the next paragraph) were cross-checked against policies from successful virtual schools. In Deliverable D.3.7 case studies of European virtual schools are described in detail:

- Bednet (Belgium)
- Ensino a Distância para a Itinerância (Portugal)
- Interhigh (Wales)
- iScoil (Ireland)
- Nettilukio -Otava Folk High School (Finland)
- Riga Distance Education Secondary School (Latvia)
- Sofia Distans (Sweden)
- Wereldschool (the Netherlands)

We have examined the evidence drawn from these case studies in both compiling and testing our list of Critical Success Factors. Significant evidence supporting the inclusion of each success factor was found across the cases. The examples in Annex 2 illustrate this approach, through immediate reference to the case study material. Given the focus of

VISCED on European virtual schools, we have only used material from the European case studies, all of which appear to be of schools that are both successful and demonstrate sustainability.

VISCED Critical Success Factors

The process described above lead to the following final list of eight Critical Success Factors:

	Critical Success Factor	**Description (highest level)**
1	Leadership in e-learning	The capability of leaders to make decisions regarding staffing, student issues, and virtual school administration is fully developed at all levels of management.
2	Market research	Market research (to assess demand for virtual schooling) is done centrally and updated annually or prior to major programme planning.
3	Relationship management	Effective processes are designed to achieve high credibility with relevant government and public agencies.
4	Technical infrastructure	The technical infrastructure is reliable and fault tolerant (in terms of availability and backup) and support is readily available to the system users.
5	Usability	All systems (for supporting students, teachers, and others involved) are usable, with internal evidence to back this up.
6	Professional development	Appropriate professional development is available to staff (subject matter, pedagogical principles, teaching tools which they are utilising for instruction, as well as in understanding the specific nature of students involved).
7	Learning outcomes	All teaching has clearly defined learning outcomes, which are assessed for purposes of certification and progression. Learning outcomes and their assessment are uniform for equivalent units throughout the institution.
8	Understanding the regulations	Students have a clear understanding of the school/college regulations.

4. Defining Key Success Factors

As explained above, to qualify as a Critical Success Factor, a criterion needs to be essential to the effectiveness and sustainability of a virtual school. On the other hand, Key Success Factors can be thought of as management- and school-specific Success Factors, built upon the sector-wide ones. They are those factors that might be critical but only to some types of virtual schools and not all. As an add-on to the Critical Success Factors, Key Success Factors can thus be defined for individual institutions. Due to the fact that there are a number of factors which are different for each virtual school, institutions will need to identify and define those Key Success Factors themselves. This approach allows the institutional management to coordinate the definition of additional success factors with their institutional goals taken into account.

As indicated in the scheme above, these could be the competitive strategy of the school, the geographic location (the type of community the school is in), environmental factors, temporal factors (e.g. strategies set by the government). Once defined, they achieve the same status as Critical Success Factors and at that point there is no difference between Key and Critical Success Factors in terms of importance. The only difference is in the degree of universality of the success factors.

In Annex 3, a template/questionnaire is provided which can help institutions in the process of defining Key Success Factors for their own organisation. The template proposes a step by step approach which institutional leaders can follow in order to find those success factors adapted to and specific for their own school or college:

Step 1: Identifying institutional objectives.

Which objectives are important for the progression and development of the institution in the short term?

Step 2: Refining institutional objectives.

Are the objectives specific enough, are they in conflict with any of the Critical Success Factors (and therefore not qualified as Key Success Factors), are they short-term and achievable, etc.? Going through a number of these questions will lead to a set of objectives that can be worked with.

Step 3: Turning objectives into indicators.

A procedure is outlined, by which measurement benchmarks are set for each of these objectives. These can then be reflected as Key Success Factors benchmarks.

Step 4: Order objectives.

Ordering the objectives in terms of priorities will finally result in a list of minimum 3 and maximum 7 Key Success Factors.

The Key Success Factors that come out of this process can be added to the set of Critical Success Factors, so that an institution ends up with a list of in between 11 and 15 Success factors which will allow virtual schools and colleges to better outline, benchmark and monitor the own policies.

Examples of Key Success Factors

In the process of looking for the Critical Success Factors, the consortium came across success factors which they did not regard as critical but possibly as key factors for at least some virtual schools and colleges. A few examples of such Key Success Factors or 'good practices' are presented here.

E-learning strategy

Regularly updated distance e-learning strategy in place, integrated with all teaching and learning strategies, and subject to a clear implementation (and budgeting) plan.

A complete commitment to e-learning is core to the rationale of the virtual school or college and not only does it define the school or college as being different, but it is also fundamental to how it operates. Arguably without the e-learning aspect, many of the virtual schools and colleges we investigated simply would not exist. E-learning provides the means and the basis for the Success of the school; the strategy may be implicit, rather than explicit and frequently operates on a pragmatic basis – the strategic elements relate to usability and accessibility.

Quality assurance & evaluation

Regular evaluation of all processes, particularly learning/teaching processes and curricula, using a variety of measurement techniques including feedback from all stakeholders, and involving outside agencies where appropriate. Clear implementation procedures for QA feedback to be acted on in place.

Given the highly innovative nature of the virtual schools and colleges that were encountered, it is hardly surprising to note that most of them are engaged in the regular evaluation of all their processes, particularly learning/teaching processes and curricula. They tend to use a variety of different approaches, including feedback from stakeholders and involving outside agencies where appropriate; often evaluation is conducted implicitly and informally, completely unlike the formal processes in universities and large colleges.

Digital learning resources

All students have available digital learning resources which are appropriately embedded within their curriculum.

Some virtual schools and colleges create their own digital learning resources while a few either buy in commercial materials or use a mix of both. What is core to all is the accessibility of the material and the extent to which it meets the curriculum needs. There

is an increased interest (from a very low base) amongst this sector in Open Educational Resources (OER) and some are now implementing systems based on OER principles.

5. Conclusion

This deliverable, including the annexes has outlined in detail the approach and working methodology that was applied for creating a set of Critical and Key Success Factors for European virtual schools. These can serve as a basis for such institutions to benchmark their achievements and identify areas for improvement. The examples drawn from the case studies allow virtual schools to compare their own status against the master list of Critical Success Factors.

Annex 1: Critical Success Factors: evidence from the case studies

The list of 8 Critical Success Factors that were selected (to be found elsewhere in this deliverable) were cross-checked against policies from Successful virtual schools. In work package 3, case studies of European virtual schools are described in detail:

- Bednet (Belgium)
- Ensino a Distância para a Itinerância (Portugal)
- Interhigh (Wales)
- iScoil (Ireland)
- Nettilukio (Otava Folk High School (Finland)
- Riga Distance Education Secondary School (Latvia)
- Sofia Distans (Sweden)
- Wereldschool (the Netherlands)

We have examined the evidence drawn from these case studies in both compiling and testing our list of Critical Success Factors. Significant evidence of each Success factor was found across the cases. The text below illustrates this approach, through reference to the case study material.

1. Leadership in e-learning

The capability of leaders to make decisions regarding staffing, student issues, and virtual school administration is fully developed at all levels of management.

Many of those involved in virtual schools and colleges are pioneers, comfortable with overcoming challenges and breaking down barriers. Most have strong beliefs when it comes to topics like equity in education and the importance of lifelong learning and it is clear that strong leadership skills and beliefs and a value-system that enjoys overcoming challenges are vital components when it comes to creating Successful virtual schools and colleges. These leaders also need to be able to make clear decisions regarding staffing, student issues, and virtual school administration which command support across the organisation. All of the European case studies show significant evidence of strong leadership, which has clearly contributed to their sustainability.

iScoil grew from the UK online learning model notschool.net, the brainchild of Prof. Stephen Heppell. There have been two clear phases in its development so far. In the first phase, 2007 – 2009, the model was developed and implemented in partnership with Notschool.net UK and was known as Notschool.net Ireland. Then in 2009, following a period of reflection and consultation, an independent model was established known as iScoil which continues to this day. At the moment iScoil is managed directly under the auspices of the Presentation Sisters

in Ireland. However, there are advanced plans in place to set up iScoil as a separate company with registered charitable status. This means that while the Presentation Sisters will still play an important role, iScoil will have more autonomy and independence. To this end, a business plan and a fund-raising strategy are being prepared.

Interhigh was established in 2005 by Paul and Jacqui Daniell. Paul Daniell started as a teacher Physics and IT. In the classroom, he experienced many of the frustrations commonly voiced by teachers and experienced how the needs of individual children often failed to be met by mainstream education. When the internet started to take off, the idea came to him of launching an online school. He thoroughly researched the concept and found that while there were online schools in America nobody at the time was offering this type of education in the UK. Like all pioneers, InterHigh has faced an uphill battle to gain acceptance from the establishment. While it operates like a school, it is currently not officially recognised as being one, though they really would want themselves to be registered as a school and be subject to inspection just like any other.

Bednet was set up in 1993 on the initiative of radio/TV presenter and politician Kathy Lindekens. It soon received support from the Flemish Ministry of Education. Since then Bednet is carrying out pioneering work with its highly integrated solution for children with long term diseases. While there are a lot of hospital schools and services providing schooling for chronically and long term ill students, the approach taken by Bednet is quite unique and different given its focus on connecting the student with its 'normal' school in an effort to not only provide pedagogical support to the student but also the very important social aspect. Bednet has the ambition to offer a service to approximately 500 Flemish students on an annual basis and is therefore currently working on a strategic plan to reach this number and is also pursuing its strategy to become a fully integrated - and therefore fully supported – ministry service.

2. Market research

Market research (to assess demand for virtual schooling) done centrally and updated annually or prior to major programme planning.

Often, there is still too little systematic tracking of potential students for virtual schools and colleges though several schools already make their own projections of pupils' numbers and demographics. The demand for virtual schooling is obviously there and doing more market research can be vital in order for schools to expand significantly.

Ensino a Distância para a Itinerância (ED) is already well known within the circus and fairs communities and therefore families usually autonomously ask for their enrolment in the project. However, children who could participate in the project are also directly involved by the Ministry of Education and Science through a general register which permits the identification of itinerant students and drop outs.

Advertising and promotion are important for ***InterHigh***. Word of mouth and recommendations, as well as advertising and online marketing, have seen InterHigh increase the number of children on its roll every year since it opened.

In Finland, competition to get students is tough and each school has to market their own school and courses. Constant development and new ways of studying also need to be promoted towards potential students. In Nettilukio (***Otava Folk High School***) students are attracted through different channels: events and seminars, Google marketing, Facebook, Twitter, blogs (opeblogi), newsletters, action reports, videos and other recordings.

Bednet has the ambition to offer a service to approximately 500 Flemish students on an annual basis. No hard figures currently exist for the number of children who could need its services but this is an estimate that Bednet has made based on other data.

3. Relationship management

Effective processes designed to achieve high credibility with relevant government and public agencies.

For virtual schools and colleges, it remains necessary to identify and build relationships with influential players, e.g. local councils, government ministries, etc., but also to manage relationships with (public and private) investors and to seek networking and collaboration possibilities with other actors in the field.

After years of steady growth, ***InterHigh*** leaders felt they had reached a “crossroads” in early 2010. 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 they could offer each child. Instead, they took the decision to grow laterally by launching three new business divisions, the aim of which were to form joint ventures with local authorities and individual schools in the public sector, independent schools and tuition businesses. Under this new policy, local authorities are now able to use InterHigh’s unique online teaching platform under licence to develop a supplementary or ‘top-up/catch-up’ education service to cater for children in need of additional support.

Riga Distance Education Secondary School (RTV) is a private school with private finances. However, the Ministry of Education and Science of the Republic of Latvia provides support for the salaries of teachers. RTV is acknowledged and accredited as a private school within the Latvian education system.

iScoil is still relatively new and does not yet officially have a status in terms of the Irish Education System. The very concept of the virtual school is new in the Irish system and so there is a lack of precedent in Ireland for this type of school. However, the school is known amongst senior officials and respected by many agencies and was specifically mentioned in the recent Programme for Government as an innovative initiative in terms of tackling the problems of early school leavers in Ireland. The closest relationship that iScoil maintains with

the state is with the National Education Welfare Board (NEWB) which refers students to iScoil. The NEWB is aware of all students who are enrolled in iScoil. Efforts are being made by iScoil to be formally recognised by the NEWB as a non-recognised or private school.

Ensino a Distância para a Itinerância (ED), developed from a national initiative of the Ministry of Education and Sciences, is currently organised through partnerships with a public school. The initiative also has the support of some private institutions concerned with its social goals (e.g. foundations, editors, etc.). The initiative has established and reinforced partnerships with schools, educational organisations and institutions (i.e. Vodafone, the National Reading Programme, Live Sciences Centres).

Nettilukio (***Otava Folk High School***) reports to educational authorities like any other official upper secondary school in Finland. Official statistics are also produced and delivered annually to educational authorities. The school receives a state grant for each student (the Upper Secondary School Act). The Otava Folk High School is a Mikkeli city-owned company. The city has granted the school freedom of action and an independent role. Sustainability is ensured by continuous development and finding new potential recourses and funded projects as well as by constantly widening co-operation networks.

Sofia Distans was established on request of the Swedish Agency of Education. The school has a high level of autonomy. In Sweden schools get public money which can be freely used to run the school according to the curricula and the laws (as long as the students reach their learning goals). Students are funded, approximately 40 % from the state, 40 % from fees and 20 % from the municipalities.

Bednet is a recognised support service, supported in part by the Flemish Ministry of Education. Currently, 50% of the funding received by Bednet comes from the Ministry and the other 50% is private funding coming from a mix of donors and sponsors. It appears to be relatively autonomous although it has the strategic objective of becoming a fully integrated (and therefore fully supported) service of the Ministry of Education which will by definition lessen its level of autonomy. Apart from this close relationship with the Ministry, regional networking is also important. The Bednet employee builds a regional network to enlarge the impact of the project for all persons involved (children, parents, school groups, pedagogical advisory organisations, CLBs (centres for student counselling), hospitals, patients' organisations, …).

The ***Wereldschool*** is recognised as a school by the Ministry of Education. The 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.

4. Technical infrastructure

The technical infrastructure is reliable and fault tolerant (in terms of availability and backup) and support is readily available to the system users.

To be Successful, virtual schools and colleges need a robust and reliable technical infrastructure that is extremely dependable. For many the quality of the technical support needs to be particularly high when it comes to dealing with users as they are generally not technically expert and may require sensitive management when it comes to their local technology set-up.

Ensino a Distância para a Itinerância is now hosted by one school in the Lisbon Region, which provides the logistics and organisational infrastructure for the virtual school. Teachers work all together from the same space in this hosting school. This condition favours continuous exchange, dialogue and peer learning among teachers and the establishment of a support team building around the single student and the classroom. Students can study from home but in order to avoid isolation and promote interpersonal competencies, itinerant students are also encouraged to take their laptops to the resource centre in the school nearest to where their families are working at that moment and access the virtual platform from there.

While the original idea of ***iScoil*** was to operate entirely online, this has been broadened to include a blended learning centre-based element. Students have access through a private broadband service (which is filtered at source, as a child protection measure) to this virtual learning environment where they are introduced to their mentor online. They also have contact details for the central team and have access to forums which are available online for support and general interest. Furthermore, they can instant message each other or adults if they need help or for social contact. Telephone support, technical support and face-to-face support through home visits and workshops is also available.

Bednet is a tailor-made system with a personal approach: when a child with a long term or chronic disease is registered at Bednet, a regional Bednet employee prepares the procedure for this student together with his school, the hospital school, his/her parents and, if applicable, a charity involved. The Bednet staff includes two IT support staff who prepare and install the computer sets, who manage a help desk service for child and class, and who provide technical support to the staff.

In ***Otava Folk High School*** the emphasis at first was in producing eLearning material that students could use while taking the upper secondary school courses. Over the years the emphasis moved towards learning platforms and Nettilukio developed its own learning platform (Muikku). The new learning platform was developed to support studies and evaluation. Tools (Learning platform, Ning, Adobe Connect, instant messaging, e-mail, Skype, Google tools, social bookmarking, etc.) vary course by course and teacher by teacher and also student wishes are taken into account.

Teachers and personnel of ***Riga Distance Education Secondary School*** (RTV) have technical support available. Older students sometimes have problems how to upload a test or install a program for mathematics. To resolve these problems, a technical support group is always ready to help and explain how to work with a computer.

5. Usability

All systems (being used to support students, teachers, and others involved) usable, with internal evidence to back this up.

The systems being used to support students, teachers and others involved and the technical infrastructure that virtual schools and colleges put in place, have to meet very high standards of usability, even though the technology employed may be relatively old and simple. There are many different systems in place, sometimes tailor made by the schools themselves, including a wide variety of online learning platforms and video or web conferencing systems. No one system dominates the market and practically all the schools and colleges that were investigated use a mix of synchronous and non-synchronous with a blended approach being the dominant learning model. Whatever the system, the extent to which it is user-friendly and fit for purpose is a key consideration.

In addition to its FirstClass learning platform, ***Sofia Distans*** also send books and DVDs (with most of the online material) to their students. Reflecting the history of the institution and the wide geographic spread of its students (with limited internet access, networking speeds and reliability issues with PCs and printers in some tropical locations), it is probably not surprising that Sofia Distans still finds it necessary to supply printed instructional texts and multimedia DVDs to each student location.

Usable and reliable IT is very important at ***InterHigh***. The virtual classroom is built around an interactive whiteboard, with customised web and video conferencing software provided by Voxwire, an American reseller, which has proved to be both user-friendly and reliable from day one. Through their headsets, every child can hear what the teacher says and ask or answer questions. Teachers and pupils can also communicate by typing text messages, which everyone in the class can see. In addition, there is a separate messaging facility so that teacher and pupil can text each other privately. All that is needed to access this way of teaching and learning is a PC or laptop and an internet connection.

A key to the Success of ***Bednet*** is the relative simplicity and ease of use of the system that is used. In terms of the Bednet service and the actual technology provided, staff members acknowledge that the current system may require some updating given that it is essentially the same service as was developed in a pilot version almost 5 years ago. However they are insistent that any further enhancements or changes must remain just as user-friendly and streamlined as the current service which works well for everyone concerned. The Bednet IT staff are expected to manage the IT support that is provided in a user-friendly way making

sure that all support given is provided in a very practical way, making sure to avoid any overly technical explanations.

Ensino a Distância para a Itinerância (ED) uses a Moodle platform. There the chat is the main instrument used for teacher-students and students- students interaction during lessons. As already mentioned, teachers rely on web learning resources which they import to the platform or direct the students to combining them with their own learning resources. The school has a resource centre with all the material produced so far, from where teachers can select to prepare their lessons. All these resources and tools are combined according to the sequence designed by the teacher to take the students into the concept and help them in practicing and mastering it through different activities. A blog is used for project work and cross curricula activities and students and also encouraged to use other online resources, such as YouTube. They have been experimenting with videoconferencing (using Adobe Connect) to improve teaching of subjects such as foreign language and maths, however they have not yet been fully integrated it into daily teaching practice. Students connect to the virtual school through USB internet keys. However in some regions the connection is very bad hindering regular school activities

6. Professional development

Appropriate professional development available to staff (subject matter, pedagogical principles, teaching tools which they are utilising for instruction, as well as in understanding the specific nature of students involved).

Many of the job roles in virtual schools and colleges are multi-faceted and complex, demanding a mixed set of skills and competences as well as high levels of empathy and understanding related to the specific nature of the students involved. Virtual schools and colleges have to identify and recruit staff that bring together not only professional skills and empathetic attitudes but also strong technical skills and competences. The most Successful approach used by those charged with recruitment seems to be to choose staff with the relevant professional background and experience and to provide on-the-job training and support in respect to the technical aspects. Appropriate training policies and regular updating of skills is very important for most schools and colleges who often depend on a high level of peer support amongst staff.

There are about 20 skilled teachers at ***Sofia Distans*** and every student also has a parent or tutor at their location. When recruiting, Sofia Distans first looks for flexibility and computer knowledge for all categories of staff. Furthermore, they use in-service training. As distance schooling is discouraged, except in special circumstances, there is no special training for virtual schooling available in Sweden. Therefore, they have to train their own staff while developing their own methods.

The ***Wereldschool*** has 10 primary teachers, 35 secondary teachers and 12 support staff, all working part-time. 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 thus combine their work at Wereldschool and a traditional physical school. Wereldschool does not specifically recruit teachers for their ICT skills, but seeks good teachers who are willing and capable to adapt to new techniques. All teachers 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.

Riga Distance Education Secondary School (RTV) teaching staff includes 29 teachers who give lectures every fourth Saturday. Twenty of them also work with students through the Internet. RTV imposes specific requirement for teachers: in addition to professional qualities, teachers have to be interested and available to always help students whenever they have time for studies. Interestingly, students themselves are allowed and encouraged to suggest teachers from different schools across Latvia to be approached to teach in RTV. RTV financially supports professional development of their staff. For example, extra courses of study, personality development seminars, etc. In addition, extra funds are allocated monthly for recreational activities of staff.

Otava Folk High School consists of the actual Folk High School, upper secondary school, Nettilukio (virtual upper secondary school) and Nettiperuskoulu (virtual basic education). Several staff members work in different sections and their working hours are divided between these sections. There are 23 part-time teachers at Nettilukio who live around the country (or even around the world) and usually teach their subject alongside their other permanent job. Nettilukio strongly supports staff development of both teachers and other staff. Pedagogical further education at the moment is a two-year project, in which the whole work community is participating. It consists of monthly workshops, team syllabuses and development tasks to be done. Workshops (with expert lecturers) take place once a month and they are directed towards both the staff as well as outside participants. There is always both pedagogical and technical support present and when an individual needs training for a certain area, he/she can search for an appropriate course inside or outside school. Orientation of new employees is also organised, depending on the role of the new employee. Finally, the school has a FAQ wiki where concrete instructions and operation models are stored.

There are currently about 12 people working (full or part-time) for ***Bednet*****.** None of them are actually teachers but they include several coaches who work in the schools and with the

children either in hospital or in school to make arrangements that best suit the needs of the child and the requirements of the school. Bednet has a very specific recruitment policy related to the sensitivity of the context in which staff work. Staff members (regional employees) come mostly from a human sciences background and include staff with teaching and nursing backgrounds. All are recruited on the basis of their maturity and ability to handle the complexity of the emotional and often highly charged environment in which they have to work. This focus on sensitivity and maturity extends to the IT staff who are expected to manage the IT support that is provided in a very user-friendly way. Staff development is a core concern of Bednet and a one day meeting is organised every month for all day staff that includes a training component and support and exchange opportunities. Topics addressed during these training days can vary from being highly practical and related to IT issues to training in areas to do with intercultural relations culture and the management of terminally ill children.

As it has expanded, ***InterHigh*** has recruited highly qualified, experienced teachers who have worked in both the state and private sectors. The school currently has more than 20 members of staff, including 10 subject teachers and two designated pastoral care officers. Interhigh supports strongly staff development, both for teachers and all other staff. Orientation of new employees is also organized, depending on the role of the new employee.

iScoil staff are made up of Mentors, Subject Specialists and Central Team Members. Staff members are recruited on the basis of normal recruitment policies, equal opportunities, etc. They also are required to have appropriate ICT skills. iScoil also requires staff to have an appreciation and understanding of the situation of early school leavers as well as good communication skills. Teachers recruited as mentors and subject experts work on a part-time basis. Staff members are supported through a continuous programme of staff development and regularly take part in in-service training days. This includes a significant amount of training and support in IT.

7. Learning outcomes

All teaching has clearly defined learning outcomes, which are assessed for purposes of certification and progression. Learning outcomes and their assessment are uniform for equivalent units throughout the institution.

Given the fact that many virtual schools and colleges provide learning opportunities for individuals who do not for various different reasons fit into the main stream, it is logical that learning outcomes are receiving considerable attention. The case study schools place strong emphasis on clearly defined learning outcomes and development goals, which can be assessed, where appropriate, for purposes of certification and progression.

Students at ***Sofia Distans*** follow the Swedish course plans, mark criteria and curriculum, and are assessed during their courses. Sofia Distans has fewer traditional tests than an ordinary school in Sweden. They use all kinds of media and provide assignments to test the students, but also self-checks and quick quizzes. The school also has the national tests in Swedish, English and mathematics which are sent to the tutor who ensures the student does the test.

Lessons at ***InterHigh*** are very similar to those taught at any typical English or Welsh secondary school. In Years 7, 8 and 9, pupils follow Key Stage 3 of the National Curriculum and sit internal exams to assess their progress. The students receive the same depth and quality of learning that they would receive anywhere else. In Years 10 and 11, students are formally assessed by International GCSEs (IGCSEs) exams, which are equivalent to GCSEs but differ in that they are 100% exam based (that is, no assessed coursework is involved) – this makes them much more suitable for use by virtual schools.

All programmes at ***Riga Distance Education Secondary School*** are accredited for six years. The certificate is comparable with other physical schools in the Republic of Latvia and school graduates are students of Latvian and other EU universities. Examinations are the same as in any other secondary school in Latvia.

The main goal of the ***Wereldschool*** is to (re)integrate students into their home-nation school system. 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 and practice.

Learning outcomes for the ***Bednet*** students are exactly the same as for their peers in the normal class. The examination and testing regimes are also the same for Bednet students while taking into account the child's illness and the extent to which they are able to take exams. All such decisions are made by the child's normal teacher in consultation with the parents. The school remains responsible for the child's schooling rather than Bednet staff who describe themselves as facilitating the student's education rather than as providing or being responsible for it.

The ***Distance learning project for itinerant children and adolescents*** is mostly based on the Portuguese national curriculum and follows the traditional school approach, being based on classrooms, subjects, time-table, assignments and grades, including transcripts at the end of the school year. The underpinning approach and pedagogy is however adapted to the needs of the specific target group and the mean adopted. In normal conditions there are no significant differences in learning outcomes with respect to physical schools.

iScoil has been recognised as a provider within the Further Education and Training Awards Council (FETAC) system since September 2010 and the first round of FETAC accreditation took place in December 2010. FETAC is the statutory awarding body for further education and training in Ireland. FETAC makes quality assured awards that are part of the National Framework of Qualifications (NFQ) from levels 1-6. The FETAC system is a modular one. Each

module is made up of units and each unit outlines a number of Specific Learning Outcomes (SLOs). iScoil offers Level 3 FETAC accreditation opportunities in core subjects. iScoil also has in place an in-house accreditation system which is strongly linked to this external accreditation process and which gives students Certificates of Achievement (CoAs).

In Nettilukio (***Otava Folk High School***) there are no examinations or testing regimes. In most of the physical schools those are an important part of evaluation, when in Nettilukio evaluating individual tasks is the key point of assessment. If and when a student aims to matriculation examination, The Matriculation Examination Board´s instructions and regulations are used.

8. Understanding the regulations

Students have a clear understanding of the school/college regulations.

Everyone involved in virtual schools and colleges needs to have a clear idea of the rules governing the school, the different progression options offered by different learning pathways and of the relationship of the curricula to national or state requirements, especially as many do not cater for what can be considered main stream students. Clarity of the organisational system underpinning the operation of the virtual school or college is important. All of the Successful schools and colleges investigated make very explicit what students can expect in terms of achievement and progression and set meaningful goals based on these projects on an individual basis.

Distance learning is the core teaching method at ***Sofia Distans***. The school sends the planning, paper books and material needed for the course via mail and then the teacher and the student have contact through the platform. Interaction can be synchronous but is usually asynchronous. The school guarantees answers within 24 hours. Despite the pedagogy being fundamentally asynchronous (thus no fixed timetabled virtual classes), students still have study cards and elements of a timetable, in order for them to plan their study patterns. Every student has a tutor assigned to them who helps them to structure the day and to follow the study plan. However, students are responsible for managing their studies on time. They can choose to follow the timetable or organise their study themselves in their own time and when they want during the school year.

Students of the ***Wereldschool*** 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 the materials and use web technologies to contact their teachers for support. There are clear agreements on how and when the teaching staff should give feedback (e.g. respond to messages within 48 hours, correct tests within 5 days,

give stimulating feedback, etc.) The parents are encouraged to act as mentors. The students periodically have to take online tests, which are supervised by the parents. The student or parent then 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.

One of the keys to Success in the ***Bednet*** service is to have good and explicit agreements between everyone concerned. These agreements need to cover aspects such as what subjects the student will follow. Agreements can be either verbal or agreed in simple written contracts drawn up between everyone involved.

iScoil offers an individualised online-learning programme. Whilst learners agree upon a learning plan with their mentor, they are also encouraged to be self-directed and pursue topics that interest them.

At ***RTV***, the academic year is divided into 2 terms. Every term students have to do an end-of-term test in every subject. Students are grouped into classes by grade and programme. Every class has a schedule appointed by RTV. Every month students have to do 3 tests in 3 different subjects. In case a student does not feel ready to do the test or because of personal reasons, it is possible to change the date. Many of the students however are professionals meaning that they have their personal schedule that is accepted by RTV.

At ***Interhigh*****,** lessons are held every weekday morning during term time, starting at 9.30 am and finishing around lunchtime. On most days, pupils will study no more than two subjects. The timetable has been so designed in order to consolidate learning, leaving the afternoons largely free for students to take on self-directed tasks: to complete their homework, to work on projects together or to take part in extra-curricular activities.

Transparency and trust were the guiding ideas from the beginning at ***Otava Folk High School***. Nettilukio trusts its students and one of the basic assumptions is that students understand that they are studying for themselves and for life - not for the school and examinations. Therefore, there are also not official and exact follow-up systems. Students can choose from three different ways to accomplish courses - or they can freely combine these options between different subjects and during their studies. These three ways are non-stop-courses, collaborative courses and phenomenon based learning. All starting students belong to a student guidance group (the 25 most recent beginners form one group and they take as a group a student counselling course. The group exists as long as even one student belongs to it). During the studies each student may be an individual learner or belong to a subject group. This depends on the chosen options for each student and each subject. Normally classes are not timetabled and students are self-directed learners. Of course in collaborative courses and phenomenon-based learning there are some timetables in order to get the work done.

The school organization of the ***Distance learning project for itinerant children and adolescents*** is very similar to physical schools, with classrooms, timetable and school years phases. Students are grouped into classrooms according to their age and level and follow a timetable with lessons and activities based on subjects. They have to be online according to that timetable organized by year/class, interacting synchronously with their teachers and other students through chats and forums for analysis and discussion. Presence is recorded and accounts for admission to the following year. Learning takes place online, during synchronous classes, where students access each subject interacting with the teacher, and also in an asynchronous way when they are free to use ICT tools (e.g. YouTube, blogging, etc..) and other digital resources are available. In order to accompany the schoolwork that students are asked to perform outside of the classes, other synchronous tutoring activities are provided. Doing that, teachers are able to follow and track each student in a more close and individualized way, allowing as well a closer relationship between the school and students' families. The students' timetables include the subjects of the national curriculum, cross-curricular areas and tutoring periods. Students have to respect the classroom schedule, which is only to a minor extent personalized and not à la carte as the aim is to attend a full path of compulsory education as in a normal school. Learning is highly learner-centred but strongly directed and accompanied by teachers and framed within a rather tight organization of activities (i.e. lessons schedule). This choice is motivated by the specificities of these students who are in need of rather structured and tight schedule as opposed to the flexibility and irregularity of their daily life. Experience has taught that these students appreciate to be guided in a rather tight path as they feel more secure against the degree of instability of their life. Also for this age it is reckoned not appropriate to use the same level of flexibility and self-regulate learning as for adults, but rather personalization and strong attention to the learner as the centre of the teaching process. In that respect flexibility is rather an instrument and an approach of teachers (than of students) to adapt their activities to the different profiles of their pupils.

Annex 2: Defining Key Institutional Success Factors: questionnaire

A tool to help and guide virtual schools and colleges in the process of defining Key Success Factors, can be found in the following questionnaire. It aims at providing a step by step method that institutional leaders can follow in order to find those success factors adapted to and specific for their own school or college.

Step 1: Identifying institutional objectives

List your operational institutional objectives:

No.	Objective
O1.	
O2.	
O3.	
O4.	
O5.	
….	

Do you have any additional short-term objectives?

No.	
O6.	
O7.	
O8.	
O9.	
O10.	
…	

Are any factors in your overall environment (government policies, changes in technology, funding priorities, competition, industry pressure etc...) causing you to set additional objectives whether formalised or not?

No.	
O11.	
O12.	
O13.	
O14.	
O15.	
...	

Step 2: Refining institutional objectives

A1. Of the objectives you described above, are any of them considered low priority in the next period (usually year)?

Low Priority Objectives:	O___ , O_____

A2. Do any of the objectives condition other objectives (in its simplest form, this means "does Successful completion of Objective B require Objective A to be met?")?

A2_1: Objective	**A2_2: Objectives it Conditions**

A3. Do any of your objectives mirror the VISCED Critical Success Factors?

Objectives mirroring CSFs	O___ , O_____

Step 3: Turning objectives into indicators

B1. For all objectives except those you listed in A1 and A3, define a statistical indicator:

Objective	**Statistical Indicator**	**Is the indicator (practically) measurable in your institution?**
O_____		Yes / No
O_____		Yes / No
O_____		Yes / No
O_____		Yes / No

Step 4: Order objectives

Make a list of objectives as follows:

1. Objectives listed in B1 as YES and in A2_1 (those with the highest number of objectives they condition at the top)
2. Objectives listed in B1 as YES and not mentioned in A2_1 or A2_2
3. Objectives listed in B1 as YES mentioned in A2_2 (those mentioned most often in A2_2 should be at the bottom)

No.	Objective

O__.	
O__.	
O__.	
O__.	

The list above is a list of your Key Success Factors, ordered in approximate level of importance from highest to lowest. The final list of Key Success Factors is subjective, and therefore depends finally on the institution. Using the list above, consult with the rest of your institutional management team, and using the information above, make a final list of Key Success Factors – minimum 3 and maximum 7:

KSF.	No.	Objective
KSF1	O__	
KSF2.	O__	
KSF3.	O__	
KSF4.	O__	
KSF5.	O__	
KSF6.	O__	
KSF7.	O__	

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