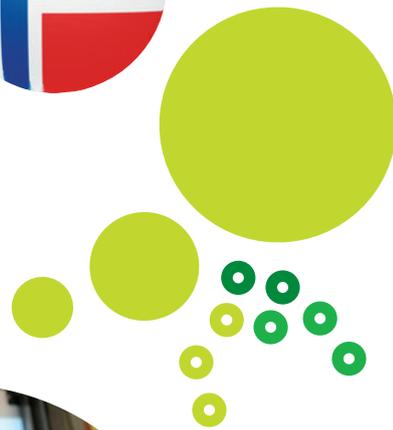




Living
Schools
Lab

Observation Case Studies

Norway



Introduction

With the participation of 15 partners, the two-year Living Schools Lab project promoted a whole school approach to ICT use, scaling up best practices in the use of ICT between schools with varying levels of technological proficiency. Visits to the project's Advanced Schools in 12 countries were carried out to observe school's best practices leading to a report and recommendations on developing and mainstreaming of whole school approaches to ICT.

In addition to this, twelve case studies present the evidence gathered as part of the school observation visits to two Advanced Schools in each of the 12 countries: Austria, Belgium, Cyprus, Czech Republic, Finland, France, Ireland, Italy, Lithuania, Norway, Portugal, and the United Kingdom. Alongside the case studies, each Link Observation Visit was detailed in a blog post, along with useful links and practical ideas to try in the classroom: <http://isl.eun.org/observation-visits>.



A framework of eight main questions was used to develop the case studies:

1. What types of technologies and resources are available in the Advanced Schools?
2. Are there recent national initiatives that have had an impact upon whole school development of ICT?
3. Who leads the decisions about the development of ICT?
4. What types of training and professional development are available to teachers?
5. How is ICT being used in different subjects?
6. What kinds of research and development are the teachers engaged with?
7. Are the Advanced Schools engaged in any partnerships or networks?
8. Are there particular areas that could be mainstreamed or replicated?

All case studies contain information that has been reviewed by National Co-ordinators. The studies outline evidence gathered as part of the Link Observation Visits and throughout the Living Schools Lab project. Further information is available on each school website about the individual school, although this may be in the home language.

All of the school visits were undertaken by Diana Bannister MBE, University of Wolverhampton. These case studies should be read in conjunction with the project's Link Observation Visits final report available at <http://fcl.eun.org/isl>.

Observation Case Studies: Norway

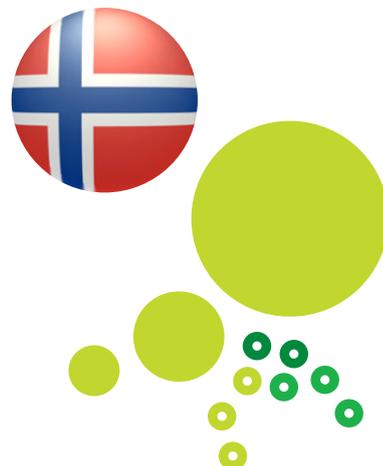
June 2013

Skjelnan School | Tromsø | Norway

Number of students	250
Age group of students	6–13 years
School website	http://skjelnan.tromsokolen.no/
Name of principal	Rune Torsteinsen
LSL project Lead Teacher	Anders Rasmussen

Tromstun School | Tromsø | Norway

Number of students	1198
Age group of students	11–19 years
School website	http://thelearningbank.co.uk/shireland
Name of principal	Sir Mark Grundy
LSL project Lead Teachers	Kirsty Tonks, Lewis Moore





1. What types of technologies and resources are available in the Advanced Schools?

Skjelnan School has Internet access in all classrooms and there is a wireless network across the whole school. Several classrooms have their own computers. The school has a digital platform for parents and students for communication, involvement and collaboration. All plans are digital and available on the Internet. The school use social media as mean of communication. Twelve months ago, the school invested in a class set of iPads that can be reserved by the teacher using an online calendar. The school uses GPS in geocaching activities.

At Skjelnan School, the city council has recently given some extra funding and this has been used to buy PCs; several classrooms now have four or five PCs at one side of the room.

The school uses Mobil Skole¹ to send SMS messages to parents and they can send texts back to the headteacher. One parent in each class is included in the parents' union and they can send texts to the other parents.

The headteacher believes that the implementation of iPads allowed the teachers to become personal users of technology because they took ownership. The iPads have then been implemented into the classroom. The next stage is for the teachers to allow the students to make some of their own decisions about what they learn.

Tromstun School is a new school which opened in 2012. Each classroom is equipped with an interactive whiteboard and a lectern with a PC for the class teacher. Students in year 9 have access to individual laptops. In September 2013, a regional development began to equip all year 8 with their own laptops to use throughout school. In the classrooms, storage cabinets are available to charge the devices and students are not allowed to use them during breaks.

In Tromstun School, the ICT coordinator demonstrated how she is able to operate a paperless classroom. Students do not need to do any work in exercise books.

2. Are there recent national initiatives that have had an impact upon whole school development of ICT?

In Norway, TromsØ has a National Centre for ICT. The leading teacher suggested that the Living Schools Lab project has allowed the National Centre to play a more significant role in schools because of the expectation to develop a regional hub. There are 40 schools in the municipality and this project has the potential to help them to collaborate better. The national centre does have a lab for teachers to visit but it is difficult to access in school time.

In Norway, there is technical support provided by three teachers from city hall. These teachers specialise in ICT and work across all forty schools within the region. For example, there is training in the use of iPads, spreadsheets, communication and collaboration, and SMART Boards. There is a technical centre and an online service desk with technicians. This is a free service. As a school the

advisory training and support can be booked to provide specific training. They come into school to do this for ten hours per term during the academic year and usually provide support to the whole staff, but sometimes to specific groups of teachers.

There is a national plan for ICT and a regional plan that the schools are able to follow. This clearly outlines for the schools what they need to achieve for each age group. It defines the learning goals for the students and the software that they should use. The challenge for the schools is to connect the ICT plan to the whole school vision. It is important to ensure that all teachers know the content of the plan. There are examples of activities and then three different levels for what students should achieve.

1 www.mobilskole.no

3. Who leads the decisions about the development of ICT?

In Skjelnan School, the headteacher has been at the school since 1996. Teachers got their own computers in 2001. The school was one of the first in the area to get its own computer lab. It was the first school with SMART Boards four and a half years ago.

As an Advanced School, the headteacher says that the Skjelnan School has a 25% turnover in the equipment each year, to ensure that it stays up to date.

Parents have helped to finance additional technology resources; for example, the Parent Teacher Association contributed towards the funding of iPads. The school has provided one evening for parents on netiquette and an evening on e-safety for three hours.

All the ICT Co-ordinators in Tromsø meet every other month at a regional level to discuss new technologies and applications.

4. What types of training and professional development are available to teachers?

At Skjelnan School the headteacher has had a strong focus on training for all of the staff. Pedagogical change has been encouraged through training and workshops. Whole staff meetings are used for staff to showcase practice. The headteacher does not observe lessons, but he does have conversations with the teachers and with the students about their learning.

The interactive whiteboard is an important tool that the teachers feel they cannot live without. The headteacher believes that the iPad has “allowed the learning to become more personalised.” This is because the teacher can take it home and continue learning in their own time, enabling them to think about the individual needs of their own students.

This year the school has identified a single focus on mathematics. 16 teachers out of 22 will take a course to provide support to address student learning needs in mathematics. Teachers will do the training on line and use staff meeting time to do it. They have to do 50 hours.

The school has a close network with five other schools. They host workshops for the other teachers and the headteacher has provided some consultancy for those schools. The school can receive training and support from pedagogical experts who are based at a regional level. These teachers will come into school.

In Tromstun School, the ICT co-ordinator is responsible for delivering the training and goes in to deliver lessons with the students so that the other teachers can watch. The principal and the headteacher observe lessons once a year and give the teachers feedback. The principles for the observation are agreed prior to the visit.

The staff have participated in workshops in the school and at the National Centre for ICT in Education. Two teachers have participated this autumn in the iTEC project (Innovative Technologies for an Engaging Classroom) at European Schoolnet.

5.

How is ICT being used in different subjects?

Skjelnan School has been working with implementation of SMART Boards in all the classrooms for the last 2.5 years. Teachers use SMART Boards in their everyday teaching. The school has had a computer lab since 2001. The school publishes the students' weekly schedule on the website. It makes it easy to follow the class curriculum and the assessments for every week.

During the observation there was evidence of carousel activities where students moved through four activities in one hour and some of these involved the student having individual use of a PC or iPad with headphones. At Skjelnan School the classroom rotation is significant because this allows the students more time to access the technology with focussed tasks.

The 12-13 year olds compete in the First LEGO League each year and use Robolab and LEGO Mindstorms to demonstrate their computer programming skills.

At Tromstun School, all students use ICT on a daily basis, in every subject. They show evidence of benefits through student-to-student courses and a high level of presentation skills. Students can access their own school documents from their home computers at any time. All plans are digital and available on Internet. The school use social media such as Facebook to communicate news from the website and general information.

They have access through their user account to several resources which contains software used to personalise their learning. Students make presentations of their work both on PC and tablets. Students use educational software relevant to their curriculum.

Students get feedback though digital media, i.e. texts, audio and instantly through use of digital white boards. Tromstun has been focussing on methodology for the students and setting targets.

6.

What kinds of research and development are the teachers engaged with?

In Norway, the leading teacher commented that he is undertaking his Master's degree on the implementation of iPads in school. This was for his personal professional development. He had recognised the need to undertake the research on a current topic within his own school.

The school is already in an existing project which provides experiences which it shares through the National Centre for ICT in Education's blog. In addition to this, there are four teachers working along with the headteacher regularly to showcase ICT in several subjects.

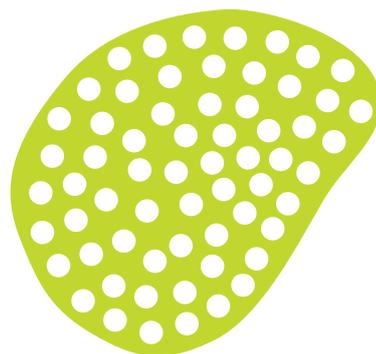
7.

Are the Advanced Schools engaged in any partnerships or networks?

There is no tradition of working with commercial partners in school. The secondary school does work with the University.

8. Are there particular areas that could be mainstreamed or replicated?

- The eTwinning project exploring students writing fairy tales and developing animations.
- There are monthly meetings with the ICT co-ordinators to look at current developments.
- At Skjelnan school, the developing physical space for creativity, science and technology could be replicated at either primary or secondary level. Rather than a computer lab with just PCs around the edge, the room has space to have science equipment, LEGO, and the use of tablet devices.
- Engaging with national competitions gives the students a real brief to work to.



Observation Case Studies

Norway

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