

**OECD STUDY ON DIGITAL LEARNING RESOURCES  
AS SYSTEMIC INNOVATION**

**COUNTRY CASE STUDY REPORT ON NORWAY**

Final

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## 1. INTRODUCTION

This is one in a series of country reports prepared as part of the study on Digital Learning Resources as Systemic Innovation being conducted by CERI/OECD during 2008. It focuses on three case studies of systemic innovation in the Norwegian school system and draws on:

- background information provided by Norwegian officials on three case studies and
- meetings and interviews conducted during a study visit to Norway that took place on 5<sup>th</sup> – 9<sup>th</sup> June 2008.

The visiting team consisted of Ferry de Rijcke from the Ministry of Economic Affairs in the Netherlands; Christian Wang, ICT-department at University College Lillebaelt in Denmark; Sang Min Whang, professor of psychology at Yonsei University, South Korea; Katerina Ananiadou, analyst at the OECD/CERI Secretariat; Beñat Bilbao-Osorio, analyst at the OECD/CERI Secretariat, Francesc Pedro senior analyst at the OECD/CERI Secretariat; and Jan Hylén, consultant to the OECD/CERI Secretariat. During the visit the team met with a number of stakeholders involved in the case different studies selected by the national coordinator for detailed study in the context of the project. A complete list of participants' details is given in Annex 1.

The overall aim of the study is to review and evaluate the process of innovation involved in policies and public as well as private initiatives designed to promote the development, distribution and use of digital learning resources for the school sector. In so doing, the activity will bring together evidence of:

- how countries go about initiating ICT-based educational innovations related to digital learning resources, the players and processes involved, the knowledge base which is drawn on, and the procedures and criteria for assessing progress and outcomes;
- what factors influence the success of policies aimed at promoting ICT-based educational innovations, particularly those related to the production, distribution and use of digital learning resources including user involvement in the production process and new actors such as the gaming industry and media companies;
- user-driven innovations related to digital learning resources, carried out by learners and teachers, such as innovative production and use of digital learning resources, and how the educational system responds to such innovations.

Accordingly, instead of focusing on discrete institutional innovations, this activity aims at a better understanding of how the process of systemic innovation works best in relation to digital learning resources, and of which factors, including governance and financing, influence its development.

The definition of systemic innovation adopted here is: *any kind of dynamic, system-wide change that is intended to add value to the educational processes and outcomes*. The aim is to analyse innovation systems and strategies regarding the production, distribution and use of DLR by bringing together evidence of the drivers for systemic innovation in the five Nordic countries: Denmark, Finland, Iceland, Norway, and Sweden. All countries participating in the study have selected at least three case studies of recent DLR innovations for in-depth analysis by the expert team.

This introductory section provides a brief overview of information and communication technologies (ICT) in the Norwegian educational system followed by a short description of the different case studies selected for the study. As these form the main focus of this report they are described and discussed in more depth in later sections of the report. The cases were selected by Norwegian officials, in collaboration with the OECD/CERI Secretariat.

## **2. CONTEXT**

With a population of 4.5 million and a GDP per capita of USD 78 000 Norway is a rather small but wealthy nation. Internet penetration in households is high. Education is free.

In 2002 the Norwegian Government launched eNorway 2005. This programme gave an overall policy responsibility for the whole ICT area to the Ministry of Government Administration and Reform (then Ministry of Commerce). This policy document, and later eNorway 2009 in addition to ongoing reports, brings together overall strategies on ICT, covering different ministries including the education sector. These documents are oriented towards stimulating the private market for technology-driven innovations, towards changes on different levels within the public sector and towards citizenship, participation and challenges in a digital society.

The Norwegian education system has a long tradition of being unitary and centralized. However, as established by recent educational reforms, the trend is for local school authorities to play a central role in decision-making at the local level, such as adapting curricula to local conditions. This also relates to strategies of ICT implementation in schools.

An important focus of public education in Norway is on teacher education, both in service training and teacher training colleges, which are also promoted by the Norwegian Minister of Education and Research. This is mainly due to the results reported from PISA study (2007), which let the Norwegian government to conclude that one of the reasons why Norwegian students score low is due to lack of teacher competences.

Knowledge Promotion is the latest reform in the 10-year compulsory school and in upper secondary education and training. It introduces certain changes in substance, structure and organization. The goal is to help all pupils to develop fundamental skills that will enable them to participate actively in our knowledge society. The reform took effect in the autumn of 2006 for pupils from primary to upper secondary school (1st to 13th grade). Under Knowledge Promotion, schools are to prioritize the cultivation of basic skills in all subjects. This is an important foundation for all other learning. These basic skills are as follows:

- the ability to express oneself orally
- the ability to read
- the ability to do arithmetic
- the ability to express oneself in writing
- the ability to use digital tools

These basic skills have been incorporated into the subject syllabuses for all subjects. Among other things the reform also introduced more freedom at the local level with respect to work methods, teaching materials and the organization of classroom instruction.

## **2.1 ICT in Norwegian Education**

Throughout the 1970s, 1980s and early 1990s, a series of committee reports and recommendations, parliamentary reports, and other official documents addressed the issue of computers in education. Various trial projects to introduce the new technology into a few select schools were also implemented.

The important change came in the mid-1990s with the white paper initiating the present strong government promotion of the use of computers in education, namely *Information technology in education* (Ministry of Education, Research and Church Affairs, 1994). This, in turn, laid the basis for several successive government action plans, starting with the year 1996. The last decade can be divided into three main phases. These phases indicate the overall national agenda for scaling up activities using digital media in Norwegian schools. The three phases are also expressed in specific action plans from the Ministry of Education. The first phase, from 1996 until 1999, was mainly concerned with the implementation of computers into Norwegian schools. There was less interest in the educational context. In the next phase, from 2000 until 2003, the focus was more on whole school development with ICT and changing learning environments. The phase we are in now, from 2004 until 2008, places more emphasis on digital literacy to be acquired among students, and what learners do with technology, which opens future perspectives on technology and education. These initiatives are formulated in a national strategy called “Programme for digital literacy 2004–2008”.

By defining ‘the ability to use digital tools’ as a basic skill throughout the new national curriculum, the Ministry of Education and Research has placed a strong emphasis on ICT as part of learning activities in schools. ICT should be an integrated part of learning activities among all students, at all levels of primary and secondary education and in all subjects. The way in which the use of ICT is implemented for the promotion of learning differs between the syllabuses. The major change from former plans on ICT in education is the demand for specific educational use of ICT in different subjects.

The ”Programme for digital literacy” mentions four focus areas to accomplish ‘digital competences for all’. These are:

1. Infrastructure
2. Development of competences
3. Digital learning resources, curricula and learning practices
4. Research and development

As regards DLR the programme defines a great need to develop more and better digital learning resources within all subjects in order to stimulate teachers and students to use ICT more actively in their learning activities. Such resources are said to be closely linked to curriculum content and working methods in schools. One challenge is to better coordinate and make available what already exist. A national portal

called Utdanning.no has been developed for this purpose, and also to make it possible for schools to share digital content they make themselves.

Regarding the current practice of using ICT in teaching, research shows that Norwegian teachers do not use available computers much in their own teaching (Erstad et al. 2005; Arnseth et al. 2007). The tendency so far has been that teachers mainly use computers and the Internet for preparing their teaching and not actually in the classroom.

### **3. CASE 1: UTDANNING.NO**

This case was chosen to present a general picture of DLR in Norway and to identify the potential impacts and actors for the development and use of DLR in Norway. There are four main actors for this DLR project: government officials, publishers, operational personnel, and the general users of Utdanning.no, which include school teachers, students and any citizen looking for educational information for career development or any other purpose. This case report will summarize the nature of Utdanning.no.

#### **5.1 Case description**

Utdanning.no is a national educational portal with three components: a course description depository, a learning content metadata repository, and a learning content publishing framework. Since it does mostly provide links to DLR collections hosted elsewhere, and no actual resources itself, it is sometimes referred to as a “referatory”. It targets all user groups, including those in and outside the formal educational system and all educational levels and stages.

The portal Utdanning.no was established by the Ministry of Education and Research in 2003. It is open to all users and contains links to other relevant portals and websites. One central aim of Utdanning.no is to support the educational system in its efforts to innovate and develop using ICT. The portal now contains relevant content in regard to all levels of training, starting from compulsory school to adult education.

Utdanning.no is one of two major Internet portals that are important for the organization and management of the DLR used in Norwegian basic education. Most of the resources located elsewhere are linked to Utdanning.no, and some resources for specific themes and areas can be found at [www.skolenettet.no](http://www.skolenettet.no). Skolenettet is the Directorate of Education’s website for teachers, learners and parents. It contains, among other things, the curriculum and linked DLR related to the latest reform in compulsory school, called the Knowledge Promotion. Utdanning.no is harvesting Skolenettet among others, and all resources (links) from Skolenettet’s collection are found at Utdanning.no.

As a result of the infrastructure objective in the Programme for digital literacy 2004 – 2008, a working group was formed in order to prepare a proposal for a unified strategy for portals regarding the educational sector. This work resulted in the report ‘Culture for Sharing’ (*Kultur for deling*) and the recommendation was, among other things, to establish what is now called SANU, managed by Utdanning.no.

SANU (Co-ordination Committee for Websites in the Educational Sector) was established by the Ministry of Education in 2005 and works on questions regarding web sites in the educational sector. SANU is interested in two areas: coordination of content and coordination of technical solutions. Their aim is to ensure better user friendliness, utilization of resources, standardisation and sharing of assignments. The Committee seeks to avoid overlap of contents between different educational portals and to provide complete information to users.

Utdanning.no is currently making efforts to discontinue old functions and to include Web 2.0 elements in its operations, such as having ratings, comments and contribution of resources from end-users. In addition, it tries to bring other commercial players on board while supplying metadata/data to other websites and collections. It expects to have more collaboration from end users while connecting the repository to international federated search projects.

Utdanning.no offers a learning content publishing framework with their external editorial groups. The editorial boards consist mainly of teachers. Their ambition is to make the content so comprehensive that it could replace the traditional book. The content is partly produced by teachers and partly by publishing companies and is available at Utdanning.no.

## **5.2 Assessment**

### **1. Infrastructure**

The main responsibility of Utdanning.no is to provide information related to school education and career development both for teachers and students. It has tried to collect as much information as it could through the channels of publishers and other information agencies and to function as an information brokerage portal. However, despite these efforts, the apprehension of the team of OECD experts is that Utdanning.no seems to experience difficulties in finding its own authentic role.

In an effort to redesign the service, Utdanning.no initiated several new strategies, such as being open to ratings and comments by users, and bringing other commercial players on board. However, all these efforts ended up confusing the identity of this portal. Currently, the operation of Utdanning.no simply represents the identity and norms of the Norwegian education system which reflects the long tradition of being unitary and centralized. The future trend in Norway is for local school authorities to play a central role in decision-making at the local level, such as adapting DLR & the related curricula to local conditions. It is now up to Utdanning.no to adjust to this new educational practice.

For the last five years the Government has focused on an increased use of ICT both in initial and in-service teacher training. Utdanning.no has tried to have metadata and data for “all” teaching aids in Norway, in addition to functioning as a tool for the publication of teaching aids. It tried to be a national portal for this purpose, and also to make it possible for schools to share their digital content they themselves made. However, the co-operation was voluntary. Utdanning.no has no governing authority, nor does it provide specific reasons for users to participate.

The other problem of Utdanning.no is related to its physical location. It might not be an issue for users, but it seems to be one of main constraints for it to function with current goals. . For face-to-face meetings a flight of 2000 km both ways is needed, with a frequency of once a week. This is not helping

Utdanning.no to relate directly to other parties in national policy-making and implementation. To the OECD expert team Utdanning.no seems to be ‘in exile’.

## 2. Effects of digital developments

In the last couple of years the technological developments have brought about new perspectives on handling digital content. In a recent speech at a national conference on digital developments within Norwegian schools, one of the State Secretaries within the Ministry of Education and Research expressed the view that the traditional approach of building up portals and online sites has not been as successful as expected among teachers and students. This might be due to the developments of Web 2.0, social software and sites such as Wikipedia. The content available at such sites has grown enormously. It is necessary to reorient the whole system in terms of developing, distributing, using and re-using digital learning resources.

## 3. Summing up

Utdanning.no started as a response to a critical OECD report (2002) to improve the availability and accessibility of digital resources. From the start there was criticism from market parties. Utdanning.no tried to avoid the criticism by making materials available and by creating a market place for other producers. This was not easy to do. It implied dependence from other parties for materials and constant awareness not to take away responsibilities from others. Utdanning.no therefore had difficulties to get a clear profile, which is essential in reaching users. Utdanning.no is primarily harvesting, not producing sources and materials. These by definition then can be found elsewhere as well, which makes Utdanning.no ‘avoidable’. In short, the team of OECD experts would like to question if Utdanning.no at the moment is successful as a national hub for DLR?

There is a strong central policy push, of which the creation of Utdanning.no is a pivotal example, but the actual power in Norwegian education is with the regional authorities. The geographical nature of the country has led to big regional differences. This makes it difficult for Utdanning.no to make clear choices as to who their customers are. As they themselves told us: we are learning the hard way to meet the requirements of the Ministry as well as those of schools and teachers. These are by no means always easily compatible.

Ambiguity of government policy: emphasis on the market or on offering free materials? The government seems to prefer the market, and to want to concentrate funded efforts on niches. However, this is not always a clear distinction in a small education market as the Norwegian.

There is also an ambiguity in the fact that Skolenettet and Utdanning.no exist next to each other. What are the functions exactly and why they are both needed is not clear to the OECD expert team.

## 5.3 Recommendations

Utdanning.no provides a place for teachers and learners to interact with each other and also functions as a gateway to information. However, the information brokerage is not sufficient to attract people to this site. The originally plan was to develop a national common gateway for providing easy access to educational information, but the resources to do this was allocated to other projects by the Ministry. The focus of

Utdanning.no should have been on the people, not data or metadata. It should be redesigned to adopt the spirit of Web 2.0 in its own way, allowing for user ratings and the sharing of user generated content. It is necessary to involve several contributors to develop 'good practice' projects (development projects), promoting variation of DLR's and to exploit the already existing competency. Furthermore an appropriate model of cooperation between the public and the private sector need to developed and implemented. A close collaboration between national authorities and The Norwegian Association of Local and Regional Authorities is vital to make this work.

## **4. CASE 2: ASCEHOUGH PUBLISHING**

### **4.1 Introduction**

Ascehough Publishing is among the biggest traditional publishing houses for school textbooks in Norway, and Lokus.no is the company's main publishing platform for digital teaching and learning content.

Ascehough started to build a platform for its publications in 2001 financed by the company itself and with seed money from a DLR-initiative funded by the Norwegian Ministry of Education. This repository is being expanded on a continuing basis with new titles and is supplemented by additional user services. The portal itself is separated into two sections, one dedicated to teachers and the other to students.

Since 2001, Ascehough has developed its digital knowledge and its use of platform technology and digital content/materials. The content is primarily based on Ascehough's wide range of textbook titles, and the textbooks and digital content are designed within the same structure. The platform uses open software tools and is based on in-house development. The publisher hosts the platform in-house, and all content on **Lokus.no** is aimed at upper secondary schools.

The business model is based on a licensing model sold directly to regions, municipalities, local school authorities and schools. In addition, personal licenses are sold to teachers and students.

More than 33 titles in Norwegian have been made available through Lokus.no with all content tied to textbooks. Lokus.no is a 24/7 service, giving teachers and learners anywhere, anytime access. Approximately 60% of all Norwegian upper secondary schools are registered users of Lokus.no and in 2007 the total revenue was EUR1.5 million.

Lokus.no features separate sections for teachers and learners. All teacher resource books have been developed and are now available digitally. Development of Lokus.no is based on systematic and structured feed-back based on user surveys of more than 30.000 teachers. One limitation of Lokus.no could be said to be that its content is not searchable by search engines such as Google.

### **Observations by Ascehough Publishing:**

Ascehough have identified a number of challenges to be met for its content to be more widely used. These include:

- The establishment of a common national single sign on system to simplify access
- The development of common quality criteria and standards for DLR that will provide a framework for future content production
- A need to proscribe (and increase) a proportion of school budgets to DLR and rationalize the number of DLR projects to secure support for leading products
- To put in place a clearer framework for teacher ICT and DLR competences and support these through more in-service training for teachers.
- To provide more opportunities for teachers to share their DLR experiences and expertise through allocation of time.
- To provide clear guidance, support and encouragement for the use of DLR
- To encourage teachers to use Ascehough's content rather than to create content of their own
- To develop policies to develop DLR demand by teachers
- The continuing requirement for teacher training in use of DLR and the development of a strategic view of procurement and use of DLR for school managers.
- Utdanning.no initially provided a platform for Ascehough's products. However more recent developments suggests that a meta-portal not promoting or facilitating the products of Ascehough is in development.

Ascehough declared that their strategy is to sell digital content associated with textbooks. They understand that schools are keen to buy consistent paper based *and associated* digital content. In schools there is a strong tradition among teachers and learners of using textbooks. The seed money provided by the Ministry of Education has provided a good start in the move towards DLR although it is not certain that the impact is sustainable. Greater investment and commitment is required to ensure that the project's successes are persistent and can be built upon. Before introduction of Lokus.no the average spent on learners' text books was NOK 500 per Year per pupil/student. Due to cost cuts the average spending per learner is now NOK 250 per year.

A teacher interviewed about his use of Lokus.no noted that teachers simply need good quality content for teaching. "A high quality DLR development is extremely important and must be funded". Schools are required to implement the national ICT-plan. However, in his view, the national plan doesn't work at school level. Despite significant funding, the initial teacher training does not include any specific ICT or DLR –elements, which are seen as a major obstacle to widespread DLR use.

A student interviewed about her use of Lokus.no argued that she was most motivated to learn when allowed communicating and gathering information through the Internet and through Lokus.no. At school, she said, some services such as Facebook and Youtube are blocked. However, she had her own laptop paid for herself together with some additional funding.

## 4.2 The future

Ascehough plans to continue expanding content and increasing the number of titles for upper secondary school level, and plans to find ways to create a business model for digital content for primary and lower secondary levels as well. One possible development might be partnership with LMS-providers, using their LMS-system(s) as distribution channel(s).

Ascehough wants a free DLR-market with normal competitive drivers based on a normal demand and supply balance.

One of the main worries/threats for the future DLR-business of Ascehough is the growing amount of free teaching and learning content on the Norwegian market today. Due to this, Ascehough want to see what happens in the near future on the Norwegian DLR-market before making any further investments in new DLR-market segments.

## 4.3 Experts comments and reflections

Lokus.no by Ascehough Publishing is a very good example of a successful and innovative product within the DLR publishing business in Norway. It is a DLR-platform providing digitized textbook style content for upper secondary schools in Norway – focusing on the teachers and the students as main user groups. The fact that Ascehough Publishing has developed the platform, edited and produced digitized content for the platform, and has more than 50% of the Norwegian upper secondary schools as customers and users, makes it an innovative success for the company. This work has created a vital and strategic in-house know-how on DLR and digital technologies – giving the company great opportunities in the future to further developments in DLR.

The content is – due to business model reasons and other priorities by the publisher - based on a strong national tradition of textbooks, and the platform maintain the editorial concepts from the textbooks regarding the content structure and the roles of the users. In this aspect it is not likely that Lokus.no to a large extent will contribute to the renewal or changing of teaching and learning styles and outcomes.

On the other hand there is no doubt that Lokus.no has created significant changes and innovations in the processes behind and the production lifecycle of titles – both textbooks and DLR.

It will be interesting to see what avenue Ascehoug and Lokus.no will take in the future. Will it be:

- An increase or upscale of the “pay for a license” business model to other market segments and levels – maintaining the textbook tradition in a digital version?
- Building partnership with LMS-providers to strengthen the market position?
- Building partnership with other publishers to reach critical mass on the DLR-market?
- Mixing “not for profit” (funded/sponsored?) and “for profit” products?

One crucial parameter - regarding effects on the “DLR systemic innovation” level - will be Lokus.no’s ability to create flexible and modularized content that enable the users (teachers and students) – to

personalize, recompose and reuse teaching and learning content that covers curriculum and as well as matches the demands of modern digital-media-skilled students.

Another important parameter will be the future development of the “not for profit” DLR-market in Norway. It seems that the introduction of free DLR on the Norwegian market have created some degree of disturbances or worries among the publishers and providers, which might call for some kind of top-level decision, initiative or guidelines for the future sustainable business models on the DLR-market.

A challenge for Ascehough, and for all players in the DLR-business, is the fact that to make digital content available and useful in the classrooms it is necessary to establish distribution channels directly to the desktop of the users. This might call for a national solution, where a national Single-Sign-On service could be the first step in this direction. A national Single-Sign-On system would be beneficial for Lokus.no, as well as for many other services, players and users of DLR in the Norwegian school system.

## **5. CASE 3: YOU DECIDE**

### **5.1 Case Description**

Norway has a Personal Data Act, which emphasises that the responsibility for protecting personal data is mainly down to each individual. It is therefore considered crucial to encourage all members of society to reflect and engage in debates about the relevant dilemmas relating to protection of personal data. Knowledge of the subject is a condition for being able to start taking responsibility.

The programme *Du bestemmer* (You decide) intended to help young people to take this responsibility. The campaign was an initiative of the Norwegian Data Inspectorate, in cooperation with the Directorate for Education and Training and the Norwegian Board of Technology<sup>1</sup>.

The campaign was specifically designed to:

- a) *Increase young people's knowledge of personal data protection,*
- b) *Increase their awareness with regards to how they should handle their own and others' personal data both on the Internet and other places in society.*

The key message of the campaign is that young people should take a substantial degree of control over their own personal data, and secondly that it is important to respect other people's choices.

The rationale behind using the slogan “You decide” for the campaign was the idea that it is each individual student’s responsibility to take the message to heart by making their own decisions and taking responsibility for the consequences.

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<sup>1</sup> The Data Inspectorate, [www.datatilsynet.no](http://www.datatilsynet.no), Norwegian Directorate for Education and Training, [www.udir.no](http://www.udir.no), The Norwegian Board of Technology, [www.teknologiradet.no](http://www.teknologiradet.no)

The primary target group of the campaign were students aged 15-16 years. As secondary target groups were considered students in lower secondary school (13-16) and upper secondary school (16-19), principals and teachers and the broader population.

The rationale for selecting students aged 15-16 years as the primary target was pragmatic but based on research that said young people (11-20 years) were particularly vulnerable and in need of knowledge regarding data safety.<sup>2</sup> However, it was – and still is - a campaign goal to broaden the target audiences to include several age groups.

The campaign objectives were threefold:

1. The main purpose of the campaign was to encourage 15 and 16 year old students to review their knowledge of data protection.
2. Secondly, the campaign was designed to motivate the target audience to take responsibility for data protection - both their personal and friends' data - when using digital media.
3. Thirdly, the campaign was designed to encourage principals, teachers and other key persons in schools to actively get involved in the issue.

The campaign used a number of instruments to achieve these goals.

### *Brochure*

A brochure was published and widely distributed. It addresses three topics:

- a) Individual's right to remain anonymous
- b) Young people's "editorial" responsibility when publishing information about themselves or others on the Internet
- c) Young people as part of a society subject to an increasing degree of surveillance.

The sections on these topics can be used in conjunction with each other or as separate sections while teaching. Each of the main sections contains real-life examples and discussion topics as well as factual information about the subjects.

### *Teacher guidance manual and multimedia presentation*

Here was no teacher manual developed for the campaign. Instead a letter was sent to the schools which, together with the brochure gave all the necessary information.

### *Short films*

Three short movies were made, each of them serving as an introduction to the three different sections in the brochure. The films can be found on the website (see below) and are also available on a DVD.

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<sup>2</sup> The Data Inspectorate (2005), available at <http://www.toi.no/getfile.php/Publikasjoner/T%D8I%20rapporter/2005/789-2005/789-2005.pdf>

In addition, media students at the Lillehammer University College were given the task of making a film about personal data protection and digital bullying. Students from the local upper secondary school wrote scripts based on situations from their own day-to-day experiences and then produced the films with the help of a director from the university college. This resulted in two films. Feedback from the teachers highlighted that the films worked very well as a starting point for discussions in the class room. Clearly scripts made by students in the relevant age group (15-16 year olds) could work very well and provided different perspectives than films made by adult professional adult filmmakers.

On the campaign website a number of films can be found with English subtitles on the website: [www.dubestemmer.no](http://www.dubestemmer.no) .

### *Wall posters*

Three different wall posters were designed for classroom use.

### *Website*

On the website [www.dubestemmer.no](http://www.dubestemmer.no) all campaign tools are available for download, accompanied by supplementary information. Some of the materil on the website is available in English, e.g. the brochure. All of the films have English subtitles.

### *Student film script competition with Harald Zwart*

The popularity of the short movies led to the idea of a *short film script competition* for all Norwegian colleges that offers media studies.

Protection of personal information is already a part of the curriculum, and the student film competition was tied into the curriculum in a number of separate subjects such as for example social sciences, history, media and communications, film and TV.

Harald Zwart, a Norwegian director active in America, was selected as the jury leader. Thus, the project also enabled media teachers to get in touch with people within the film industry for professional input.

The six best entries were selected by Harald Zwart to participate in a film-directing workshop with the Norwegian movie actor Ane Dahl Torp. The students were given a couple of months to produce their draft film materials with advice from professional filmmakers. At the end of the production period, the students were invited to a finalist weekend workshop where they were given 24 hours to polish the film clips with the assistance of professional film cutters and sound technicians – followed by a Launch Party the next day. Upon completion, the short films were published at [www.dubestemmer.no](http://www.dubestemmer.no) in addition to other relevant media channels.

In addition, the movies will be distributed to all lower secondary schools in Norway in autumn 2008 to drive attention to the issue and motivate the students to take a stand.

The Amandus film festival, a festival for film directors under the age of 20, was identified as a partner and the short movies was entered into the script competition in 2008. The festival offers a great range of activities for children, young people and adults with an interest in film, and the goal is that the film will increase young people's awareness of the need to protect their own and other people's personal information.

### *Tactics to get media attention*

The campaign aimed to create as much media attention as possible to evoke an interest and a demand for the relevant educational materials amongst youngsters, teachers, parents and other members of society.

With this in mind, *a small scale survey* was carried out to identify young people's experiences with publishing personal information on the Internet. The survey demonstrated that as many as 4 out of 10 girls worry that pictures they are not in control of circulate on the Internet. Many young people have published films showing other people without getting their consent before publishing the film. The survey achieved huge media interest, which helped to draw attention to the campaign throughout.

The campaign was launched publicly on the 29<sup>th</sup> January 2007 via a press conference, and media were contacted on an ongoing basis throughout the entire campaign period.

## **5.2 Assessment**

The campaign addresses topics that come up whenever someone gets online. In many programmes and campaigns on Internet safety the emphasis is on protection from the less agreeable materials and persons on the Internet. *Du bestemmer* chooses a different track. It is not just what others do on the Internet that may be harmful: everyone should be aware that you might do the most damage to yourself. The second topic of the campaign is equally important: respect the rights and privacy of others as well as your own.

The campaign has evidently struck a sensitive issue. The response from schools has been massive with 180.000 brochures distributed.

Why has this campaign been successful?

Firstly, a survey has been carried out in advance of the campaign, which showed there actually was a low awareness of privacy matters. The great demand did not come as a surprise.

The campaign has involved the target groups from the beginning and throughout the programme. A *project task force* with teachers and movie directors was established. An *extended project task force* that included students was also established to ensure the methods and tactics chosen would appeal to the age group that was the primary target group. The material for the brochure was tested on two separate focus groups consisting of students from the target age group on two separate occasions. At the beginning to ensure that the most interesting topics were chosen, and before finalisation to ensure that the content and format would appeal to the target group.

The parallel use of different media has been a good choice. Digital material is excellent for some purposes and can help to reach large audiences, however, for a classroom discussion a printed brochure is more helpful than materials that put pupils in front of a computer screen. Films have been a good choice. The medium appeals to students and the possibility to produce movies themselves has activated a large number of students and their teachers.

The materials also have been designed to supplement and reinforce one another. This is the case for instance with the three short movies and the brochure.

The campaign has been focussing on active involvement of students. This of course is important in the light of its central message: you are responsible. It also has turned out to have a great appeal to students.

It is a real topic; teachers and students see it happening. The films invoke other stories from children, similar things that have happened to them or to people they know.

Teachers have no choice but to do something with it, once they have been made aware of it.

All are called upon to learn, teachers as well as students.

The model of storytelling is a lot stronger than just the presentation of information.

Maybe the most important factor in the success of *Du bestemmer* is the subject of the campaign itself. This is a subject that directly appeals to children and to teachers, because it is happening in their lives. They were more or less aware of it and the campaign brought it to the forefront and made it possible to do something with it. The issue is closer to home and easier to deal with than the environment, poverty or peace issues.

Surfing, communicating, producing and publishing on the Internet requires a number of skills that are easily acquired by most children. What they usually ignore (as well as most adults) is knowledge of what happens with information provided on the Internet. These are digital skills that have to do with a new domain of human behaviour. The first step is knowing what happens technically when you go on the Internet. It is not just about risks, but also about codes of behaviour, about intellectual property rights and legitimate use of sources, as well as about new opportunities.

The programme has gathered a great deal of information on responses and has involved user groups. In terms of evaluation, however, the enthusiastic responses do not provide solid information on the ways teachers and students actually use the materials. Unfortunately, there is as yet no information on the effects on student behaviour. Also there is no evidence available on whether students' knowledge of rights, laws, as well as their awareness of the effects of Internet behaviour have improved.

The campaign organisers are considering a follow-up of the 2006 survey to help answer these questions.

The ideas and materials of the campaign could very well be used in other countries. The project has been presented internationally in the context of the European Schoolnet (EUN) and the materials have been ordered by a number of countries.

In November 2007 the project was awarded with a special mention in the European Seminar on Best Practices in Data Protection by the Data Protection Agency of Madrid.

### **5.3 Recommendations**

As pointed out above it is recommended that the effects of the campaign on students' knowledge of rights, laws, as well as their awareness of the effects of Internet behaviour be properly evaluated. As things stand now, it is clear that enthusiasm about the campaign is widespread, but it is essential to know whether it really affects behaviour.

The materials of the campaign have also been used for age-groups they were not originally designed for. It seems a similar campaign, especially for younger students, would be very helpful for these students, their parents and teachers. This would require reconsidering the available material and developing new materials that are suitable for younger children.

A campaign like this should not stop after a relatively short period of time. This is not only because new generations will probably encounter similar problems in the future, but also, because the continuous technical developments in ICT may involve new risks and the campaign materials may therefore require updating.

## **6. GENERAL CONCLUSIONS AND RECOMMENDATIONS**

During the last 10 years or so, the Norwegian government has launched a number of ambitious programmes and policies. The idea of including digital proficiency and a basic skill in the curriculum clearly shows the interest these issues evoke in Norwegian educational policy. The promotion of a national digital commons, where people can share digital resources for non-commercial purposes for free, is similarly inspiring.

Equally, the campaign You Decide is an evidence of the importance Norwegian government agencies lay on making Norwegian education more digital and thus, taking precautions against misuse and educate young people in necessary skills for a future information society.

Although a bit hesitant, due to previous commercial failures, the Norwegian publishing houses also seem to move ahead and offer a growing number of DLR to schools.

Furthermore, teachers and students interviewed during the 3-day visit by the OECD team showed great willingness to renew their working methods. In short, Norway has taken a number of initiatives and invested both time and money in producing and distributing DLR to the school sector. It seems there are great interest, potential and motivation by many of the players in the DLR-field.

The OECD-team also observed a number of hindrances to further developments. These need to be addressed to prevent them from turning into dilemmas that become more difficult to solve over time.

The first topic, which is not directly related to DLR but will have impact on DLR issues, is that of the relationship between national policy and the roles of the regional authorities. Norway has a unitary and centralized tradition in education. In the last years regional authorities have been given a stronger role in decision-making. For a country of Norway's size and given the differences between regions, this seems a good choice. It does however have consequences for national policy-making that do not seem to have been quite put into effect. As decisions on the regional level will more and more take a place next to national policy, or interpret national policies for the regional situation, the impact of national actions will diminish. The way to move forward, then, can be consultation between national and regional policy-makers in which the boundaries between common objectives and regional autonomy are drawn. The main consequence is, that the education system will be less homogeneous and must be governed with this in mind.

The second friction the team noticed was that between a commercial market for DLR and the increasing amount of free content available to schools and learners. It is understandable, that publishers are not happy with competition from resources that are (partly) government-funded. On the other hand, a small market for education materials like the Norwegian might need public support in one form or another. If the decision-making power is to be shifted to the regional and school level, it seems most appropriate to channel that support through schools and regional authorities. In this light it is not helpful, that the average spending on learning resources seems to have dropped considerably in the last years.

There seems, however, another issue behind this. Technology, especially the development of web 2.0 applications, more and more enables individuals, as well as school teams, to produce materials of their own. This will happen regardless of government involvement, and calls for a rethinking of the business models that were valid in the educational market in the past. Publishers can play a substantial role in this. They rightly state, that teachers appreciate materials that help them to implement the curriculum. This does not mean that they will for all times continue to want textbooks or textbook-related materials only. They also will want easy access to pre-sorted information, to modules they can process and apply in ways that fit their own needs and ambitions, to flexible testing tools, to practical tips, to good examples, to communities with other teachers, etc. Publishers could provide a new and different range of services and thereby remain as crucial on the education market as they have traditionally been.

The position of Utdanning.no could be reconsidered in this context as well. It has already begun to be a platform for users of DLR and other materials, allowing for comments and ratings to be posted. The fact that Utdanning also continues its role providing access to learning materials seems to confuse its identity. The organization should find its unique selling point amidst the services by [www.skolenettet.no](http://www.skolenettet.no) and services provided by commercial publishers. This could consist of a role as platform for all those involved in education practice to exchange ideas and experiences. Such a platform could have great value as a means for evaluation and validation of educational materials by practitioners. It would gradually provide quality criteria for DLR and other resources, based on input from the day-to-day practice in schools. Such a focus would imply a more loose connection to the national ministry as well as to the providers of DLR.

The suggestions made above would have consequences for the role of the national ministry of education. Based on the observations and comments the team gathered, there are three major issues for the ministry to address.

One: infrastructure and other conditions for a DLR market.

Both schools and publishers have asked for the introduction of a national single-sign-on-system. As evidence from Denmark shows, such a system could facilitate the development of a vivid commercial DLR market. It should be considered in the context of other conditions that cannot be provided by another party than the national authorities, such as networks and standards.

Secondly: in addition to the suggestion stated above to have Utdanning.no organize evaluation of DLR by practitioners, systematic evaluation of the impact of innovations in learning resources is needed. These evaluations should include assessment of the impact of policy-decisions, both on the national and regional level.

Finally, the ministry might play a role in organizing meetings between the many players in the field of education and of DLR in particular. These could result in more clarity on the contributions of schools, regional and national authorities and industry in building a national DLR-strategy, that combines diversity and synergy.

## **ANNEX A**

### **List of Participants**

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#### **ITU**

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#### **Data Inspectorate**

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#### **The Norwegian Board of Technology**

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#### **Aschehoug Publishing House**

Mr. Atle Skilbrei

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