

SURF

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02

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MENNO SMIDTS:

'WE FIRST HAVE
TO SOW THE SEEDS'



SMALL PROJECTS WITH HUGE IMPACT

ICT HELPS STUDENTS WITH FUNCTIONAL DISABILITIES

A dyslexic student submits his report verbally via webcam. A chronically ill student follows a lecture from his bed via streaming video. ICT media can often be easily applied to make education accessible to students with a functional disability. However, many higher education personnel are unaware of this. The IMPULS Digitaal project has managed to bring about a change.

In 2007, seven higher vocational education (HBO) institutions and four universities participated in IMPULS Digitaal (ID). This is an initiative of the SURFfoundation and 'handicap + study', in which the personnel and students at higher education institutions apply ICT media to make their courses digitally accessible to students with a functional disability. A total of 135 projects were submitted. The aim of ID was to create awareness amongst people at grass roots level of the obstacles and the related, often easily implemented solutions. The project has now been rounded off. "IMPULS Digitaal" was a great starting point for putting this subject on the map,' Ria Jacobi of the SURFfoundation remarked. 'Teachers are often not aware of students with functional disabilities. It is a good thing that attention is being drawn to this subject in this way.'

FUNCTIONAL DISABILITY

Currently there are almost 600 thousand students engaged in higher education in the Netherlands. About 16 percent, approximately 95 thousand students, have a functional disability such as dyslexia, a sensory (e.g. blindness or deafness) or motor limitation (e.g. cerebral palsy), a chronic

illness (e.g. MS), or a psychological disability (e.g. autism, ADHD). More than half of these students experience problems with studying, for instance with group work, the availability and use of printed material, or attending lectures. Access to ICT is essential to be able to study effectively. The availability of a lecture (audio or streaming) or a structured Blackboard course makes education so much easier for students with a functional disability. 'It is often just a question of small adaptations which will allow these students to study along with other students. They really do not want to be regarded as problem cases,' Ria Jacobi explained. 'The advantage is that they can follow the lectures at their own speed. Furthermore, making teaching materials more accessible is also convenient for students without functional disabilities.'

LOW THRESHOLD

The aim of IMPULS Digitaal projects is to introduce ICT into education in a simple way. Personnel and students develop low threshold, small-scale educational projects with the use of ICT,

which carry a reward such as money or goods. For Roel Martens of the Fontys PTH (Technical Teacher Training College), the low threshold nature and the reward were sufficient motivation to participate in ID.

'Access to ICT is essential to study effectively.'

He devised the project 'Self-reflection with a webcam by dyslectic students'. It is often difficult for dyslectic students to write reflection reports. Roel therefore hit on the idea that they could also submit their reflections on video. 'A final year student approached me with his report. He was very motivated but dyslectic, and his report was full of spelling errors,' Roel explained. 'His problems with the language distracted attention from the content.' Speaking in front of the camera brought results. In this way, a student can concentrate entirely on his reflection report without having to worry about the spelling. 'Reflecting with the aid of video recording is a good supplement to a written report, but will not

replace it. Writing is still important for learning the language,' Roel commented.

BEST PROJECT

Fontys College provided IMPULS Digitaal with a total of 15 projects, and held its own competition for the best project. Roel Martens was elected the winner, and his prize is a study trip to the conference 'Computers Helping People' in Austria in July. 'The ID project stimulates people to think about ICT applications; there is a problem, so how are we going to solve it?' Roel explained. He installed a webcam to put his project into practice, and found free software for it on the Internet. He then wrote a step-by-step format that students could follow to carry out their video reflection. 'Both students and colleagues are very enthusiastic,' Roel commented. He thinks it is a very good thing that IMPULS Digitaal pays attention to students with functional disabilities. 'It is also satisfying to be able to provide a tool that will help someone.'



Pleun Schaeffer

MORE INFORMATION AT:

 WWW.SURFFFOUNDATION.NL



INTERVIEW



PHOTO: DIEDERIK VAN DER LAAN

DYNAMIC PROGRESS TOWARDS THE MOBILE FUTURE

In connection with the joint SURFnet/Kennisnet Innovation programme, the starting shot for an ambitious 2-year exploration of mobile applications in education was fired in 2007. 'Project Mobile', a joint undertaking financed by the Ministry of Education, Culture and Science, is to outline the possibilities and impossibilities of mobile learning. During the SURFnet Company Days, the three leaders of the project sat down together for their first mid-term review.

The threesome that sat down on the sun-drenched terrace next to the drive of the congress centre De Leeuwenhorst on 14 May in Noordwijkerhout, consisted of Joni Wagner (Kennisnet), Roel Rexwinkel (SURFnet), and project leader Menno Smidts, who earlier that day had explained the project he is leading to a hall-full of people. 'At the moment we are running on faith,' was one of the expressions he used in his address.

A THOUSAND FLOWERS

Roel Rexwinkel appears to agree with Menno's portrayal. 'We have an idea that mobile technology will be important for education,' he said. 'We have a hunch that it could have added value. We are going to try and prove that by exploration, research, picking up new things, and asking the education sector, "Try this, what could you do with it and how would you use it?" In fact, this is the approach we always use. Our role consists of

creating the conditions for new developments and stimulating them under the motto "Let a thousand flowers bloom". We do not pretend to know how education should be designed. That is what our clients, the affiliated institutions, can do much better.'

MAKING YOURSELF SUPERFLUOUS

Menno Smidts explained: 'As far as we are concerned, if we do our job well and the thousand flowers actually bloom, we have become superfluous. That is our intention. But before that can happen, we first have to sow the seeds. Pilots are one example. We have a budget of 500,000 Euros for this two-year pilot. We will try to divide this into as many portions as possible, so that we can do as much as possible with it, and not in an exclusive way where everything is run by us, but also by involving people in our project who are already working on mobile education applications elsewhere in the country. For instance, the Waag

Society is already doing some very interesting things in the mobile field (Frequency 1550, a mobile city game using GPS and UMTS technology which allows basic education pupils at HAVO (senior general secondary education) to actively experience history, edit.). There are more examples of this type of application. The literature research we have done has already demonstrated this. But however interesting these applications may be, it is still too early to declare that they actually provide added value for education. That is what we will be examining during this project. Does it help children and young people to learn more in a shorter time, or help them to acquire other knowledge? Does it help to make the teaching process cheaper or more efficient? These are the questions that have to be answered. At the end of the day, we want to be able to say, "This is the position where mobile learning is concerned. These are the facts, and that is fiction."

NO STUMBLING BLOCKS

The aim of Project Mobile is to define the currently still rather vague and shifting contours of

At the end of the day we want to be able to say, 'This is the position where *mobile learning* is concerned.'

mobile learning. However, one issue already appears to stand firm, namely that the new teaching applications must operate on standard hardware such as mobile telephones, notebooks, PDAs (Personal Digital Assistants, edit.), or game consoles, rather than on equipment specifically developed for educational purposes. As far as Joni Wagner of Kennisnet is concerned, it is important that the hardware can be accessed by the broadest possible group. Applications that require the purchase of new end-user equipment will not gain her vote. 'The hardware for applications such as interactive mystery tours must have GPS and UMTS facilities,' she stated. 'This may become standard for mobile telephones eventu-

ally, but you have to be careful not to create financial stumbling blocks with the things you introduce.'

HOMELESS PEOPLE

One of the applications of mobile technology that is already proving itself is the use of PDAs as a kind of voice-box in class. Amongst others, it appears to encourage the active participation of pupils who would rather not draw attention to themselves by putting their hand up. Menno Smidts remarked, 'I think the application developed in England by m-learning.org, which is also the name of their website, is even more inventive. They started offering homeless people educational games on their mobile telephones, which a remarkable number of them seem to own. In this way, it has often been possible to interest members of this group in regular education again. In Scotland, a pilot has been started at a school where they provide arithmetic tests in the form of games on PSP (Play Station Portable, edit.). Instead of confiscating the PSPs when the pupils came into the classroom as they used to, teachers are now saying, "Bring them with you". Applications such as this match the pupils' life style perfectly. It's their thing. It seems as if they are more advanced in England than we are, but perhaps it is more a question of things that are already happening here being invisible. This is another matter we hope to change with this project.' ■ ■

Joost Mulder

MORE INFORMATION AT:

■ WWW.MOBIELEONDERWIJSDIENSTEN.NL

WIM LIEBRAND
 MANAGING DIRECTOR
 SURFFFOUNDATION

A BOYS' OWN BOOK

A marvellous book has been published, a book in the 'must read' category. More than that, it is a real boys' own book. It is a story in which time and again, the heroes run the risk of total failure. However, this does not happen after all, and in the end a noble purpose is achieved. Think of Arendsoog (Eagle Eye), The Bourne Identity, or The Good, the Bad and the Ugly. I have read or seen these stories many times without exception. Real boys' own books always have a happy ending. If the ending is not a happy one, it is not written about, or it is literature.

This is the history of twenty years of networking in the Netherlands

This boys' own book is about the pioneers of the Internet. It actually begins in World War II with scientists such as Vannevar Bush and Konrad Zuse. Thereafter however, it is not a simple story of continuing to develop technical concepts. No, it was a war waged after the Second World War, in which scientists, technicians and commercial parties fought for attention, standards and market interests. Today's Internet was ultimately born of that war. It is now a living multimedia communication environment which we cannot do without for a moment, and which extends from e-mail via YouTube and Facebook to virtual cuddle environments, from hard as nails transactions with your bank to linking receivers that are spread over a number of football fields, and which then imitate a telescope. The Netherlands has performed so exceptionally in this 'war zone' that it has become a 'world class leader'. Why is that? Well, read the boys' own book, about the adventures of the 'gang of four', about a government minister against whom you probably protested at the time, and a defiant university director. As descriptions of boys' books often advertise, this is 'a book that grabs you by the XXXXX [censored!!!]'. This is the history of twenty years of groundbreaking networking in the Netherlands.

Read about the creation of SURFnet in 'SURFnet 1988-2008. Twenty years of networking' on the SURFnet website under publications.

Wim Liebrand

OPEN ACCESS CAN NO LONGER BE HALTED

KNOWLEDGE HAS TO BE FREE

Thanks to the Internet, we can now find information at lightening speed, however science is not profiting from this sufficiently. Open Access must put a stop to this undesirable situation.

'I am a disciple of Eve,' Leo Waaijers proclaimed. 'She was the first human being who not only hungered for knowledge, but also wished to share that knowledge with others. This is precisely what higher education is about, and why we need Open Access.'

For years, Leo Waaijers has devoted himself at SURF to making 'open access' to scientific publications possible. For this is not a matter of course. In the Nineties, university libraries were confronted by publishers with annual price increases of twelve percent. They were forced to cancel an increasing number of subscriptions to journals. The situation was even more serious outside the universities. Medical research financed by British taxes appeared to be inaccessible to most British doctors, as they or their hospitals could not afford the subscriptions for the journals in which the results were published.

This is a strange state of affairs, especially now that it is increasingly easy and cheap to disseminate information via the Internet.

REPOSITORIES

The universities' answer was public 'repositories', i.e. digital storehouses for their staffs' publications which are accessible to anyone who wants to read them via the Internet. As Leo Waaijers remarked, 'You saw them popping up all over the world, but they all did it off their own bat, and they each did it a little differently.'

The Netherlands was the exception. With Waaijers as the driving force, the universities here opted for joint standards, for instance for 'metadata' to describe the publications. This meant that it was possible to open all the Dutch repositories via a single portal, DAREnet, with a joint interface. In one year, DAREnet grew by more than a hundred open publications per day. The fact that all the universities set to work at the same time had even more advantages according to Waaijers. 'They exchanged their experiences and helped each other, and we agreed joint deadlines. Achieving

them became a sport. However, the most important thing was that people understood the importance of open access and really wanted to achieve it.'

OIL STAIN

For this success, Leo Waaijers received the SPARC Europe award last April, the annual prize awarded by 110 European University Libraries. DAREnet did not go unobserved outside our country. 'It has become a European example,' Sijbolt Noorda, the European chairman of VSNU explained. The European Commission decided to create an international system of repositories based on the DAREnet guidelines.

The endeavour to create Open Access was also supported by the European University Association. At the end of March it published a declaration in which it advised its members to not only set up a repository, but also to ensure that all new publications are immediately included in it. As Sijbolt Noorda, who chaired the relevant EUA steering committee remarked, 'Two years ago, about six countries were actively involved with Open Access. It has now spread like an oil stain.'

SELF-INTEREST

It probably comes as no surprise that Open Access is one of the spearheads of the SURFfoun-

'Many still have cold feet'

ation. It is now going to devote itself to 'enriched publications', in which not only the text of a scientific article is published, but also the data files, models, etc. that were used. In this way, the progress of science can be speeded up enormously.



PHOTO: DIEDERIK VAN DER LAAN

Leo Waaijers (left) receives the SPARC Europe Award from Bas Savenije, Librarian of the University Library, Utrecht.



Naturally, this is conditional on researchers being willing to make their work publicly accessible. This already applies to the normal ‘un-enriched’ publications on DAREnet; but many still have cold feet. One wonders whether the publishers agree with ‘their’ articles being placed on the Internet for free.

Clear answers to this type of question can be found on the SURFfoundation website (www.surffoundation.nl/auteursrechten). From this, it appears that authors can maintain much more control over their work than they often realise. Placing information in a repository does not have to be a problem. ‘It is also in your own interests,’ Noorda emphasised. ‘If you make your work inaccessible to large groups by having a restrictive contract with the publisher, you will be the one who is the big loser.’

LORENET

According to Jos Willems, collegian of Zuyd College, what applies to scientific articles, also applies to teaching materials. ‘I think that Open

Access to teaching materials is an inevitable development. Institutions sometimes shrink from it because they do not realise that the most important value is not represented by the materials, but by the support they provide and the diplomas they bestow. If people on the outside want to use your teaching material, this can only strengthen your position.’ However, a pre-requisite is that publication is done well. As Jos Willems remarked, ‘People have to be able to find exactly what they are looking for. With a portal such as DAREnet, things are made truly accessible.’

In the meantime, DAREnet has gained an education companion in the shape of LOREnet. Based on the same principle, an HBO (higher vocational education) knowledge bank has been set up. These are all steps along the way towards an ideal that is gaining increasing support. According to Leo Waaijers, ‘Open Access is not a revolution, but an evolution that cannot be halted.’  

Aad van de Wijngaart

HIGHER EDUCATION EXPERIMENTS WITH VIRTUAL WORLDS

The future of the virtual world 'Second Life' may be uncertain, but many are convinced that similar worlds will soon become common property. It is for this reason that higher education is very interested in experimenting with virtual worlds.

During the last academic year, SURFnet started a pilot with virtual worlds by offering Active Worlds (AW) to higher education institutions in the Netherlands on its own servers. In this protected and screened environment, the institutions can become acquainted with Active Worlds and garner new ideas regarding educational applications.



POSSIBILITIES FOR HIGHER EDUCATION

How can a virtual world be significant for higher education in the Netherlands? For students and teachers, a virtual world is a stimulating and inspiring learning environment, in which it is possible to experiment with various applications to one's heart's content.

The virtual world stimulates cooperation, and the possibilities are endless. Teachers and students have their own identities in the digital world, as well as their own environment in which they can meet each other, regardless of where they happen to be in reality. They can exchange ideas, work on tasks together, or the teacher can give a lecture to a large group of students. Teachers can also bring reality closer to home by imitating certain situations or environments. One example is a language village in which students on a French Teacher Training course can 'run' a travel agency

in France where secondary education students have to book a trip. The communication possibilities in virtual worlds such as voice chat, also offer educational applications. They make it easy to communicate with one another.

PILOT EXPERIENCES

During the pilot, educational institutions experimented with, amongst others, building objects, showing streaming video files, and the use of effects and scripts. People are very enthusiastic about the possibilities that Active Worlds offers, especially the interaction between students and teachers, and amongst students themselves. It became clear that writing your own 3D software takes time. SURFnet is therefore now busy with developing instruction material to help institutions get underway.  

Mariëlle Schipper-Heesters

INTERESTED?

 WOULD YOU ALSO LIKE TO EXPERIMENT WITH SURFNET'S VIRTUAL WORLD? IF SO, CONTACT SANDRA PASSCHIER AT SANDRA.PASSCHIER@SURFNET.NL.