

Education and open learning resources

Summary

A perfect moment

Parliament's request to the Education Council to produce a recommendation on digital learning resources and ICT in education comes at a special moment. After three decades of investment in ICT, almost all educational establishments now have computers, broadband internet access and educational software. The basic infrastructure is therefore already in place. The willingness of teachers and lecturers to deepen their knowledge of the subject has also increased in recent years. The discussion on 'free' school books in secondary education has given extra impetus to the debate on the digitisation of learning resources. In short, there is an increased awareness of the importance of ICT in education. The important task now facing education is to leverage opportunities to improve the quality of education across the board.

There are countless opportunities for ICT to support education. Just think of some examples of web 2.0 applications, such as Hyves, Second Life, Facebook and Google Maps. Even communications equipment such as smart phones, PDAs and ultra-mobile PCs (UMPCs) offer interesting opportunities for cooperative learning and for tying formal and non-formal learning together. ICT can help teachers to create a powerful learning environment in which they can address the needs of pupils with differing learning needs and preferences at the same time. The internet represents a relatively unlimited platform for storing and exchanging data and offers countless opportunities to provide education with digital support.

More than their predecessors, new generations of school pupils and students will take many ICT applications for granted and even expect them to be used in teaching. These applications closely match the way in which current generations of school children learn certain things and process certain information. More importantly, school pupils can use these applications to practice what they will need to be able to do in the future: working together with others, supported by digital technology, to find solutions to complex problems. Finally, our present, highly digital society places demands on the ICT knowledge and skills of school pupils. Innovation will increasingly be dependent on digital opportunities.

Open learning resources against the background of ICT developments

In these recommendations, the Education Council is highlighting the importance and the great potential of open learning resources against a background of experiences so far with ICT in education. A key observation made in this report is that while schools already have a great deal of experience with ICT in education, opportunities to use ICT to improve the quality of education have not always been grasped. Constant and regular use in all classes and at all educational establishments across the board is certainly not yet evident. In fact, it appears that there is an ever-increasing gap between ICT opportunities and their actual deployment by teachers and schools. If this trend of the last ten years continues, it will take another ten to fifteen years before *all* secondary school teachers make optimum use of ICT in their lessons.

If school pupils and students are confronted with education that fails to make sufficient use of ICT opportunities, there is a significant chance that they will be demotivated as a result. ICT-deficient education will also be detrimental to pupils' future participation in the labour market. As already mentioned, society is already highly digitised. But use of ICT resources is also greatly important in developing creativity and innovative capacity. Our digital society therefore places demands on educational establishments. Future workers need to be properly equipped.

It is possible to intensify efforts to leverage the many opportunities offered by open learning resources. In fact, it is imperative that we intensify these efforts. When speaking of open learning resources, we mean resources that are freely available and accessible and which the teachers can arrange themselves in cooperation with others. Specifically, the Education Council is thinking of methods of self-arrangement which place strong demands on the subject matter knowledge and the professional expertise of the teachers. This will make it possible to 'customise' the teaching, make it more motivating, more interactive and more relevant. Open learning resources also offer

opportunities to involve teachers more closely in their teaching materials and in the lessons. All these factors contribute to better learning materials and, consequently, to the quality of the teaching process.

An essential condition for having teachers and schools arrange their own learning resources is that good quality educational content must be available and accessible. Creative Commons licensing offers interesting opportunities to regulate intellectual property rights in self-developed or self-arranged materials.

Recommendations to Parliament

Based on our analyses and findings, the Education Council makes three recommendations.

Teachers as arrangers

The Education Council recommends that Parliament directs the responsible minister to encourage teachers and schools to be more pro-active in arranging and developing their own digital learning resources, and at the same time to foster the realisation among schools that arranging (and developing) open learning resources is an important way of improving the quality of education.

Self-arranging learning materials provides a perfect opportunity to fine-tune a lesson or series of lessons to a teacher's or school's own pupils or students and their specific needs and circumstances. In doing this, schools and teachers can use existing digital learning materials; they can then package these materials in an attractive and, often, interactive way.

This way, digital learning materials help improve the quality of the learning process. Self-arranging learning materials also places demands on the professional expertise of teachers. At the same time, the sharing of experiences among teachers will offer further opportunities to improve quality.

The Government can support this process in at least three ways. Firstly, by providing tried and tested working models for teachers and schools to self-arrange their learning materials. Secondly, by ensuring that an entire course or module in a given subject is digitised as a demonstration. This could be for Dutch language or for mathematics, for school children aged four to eighteen. Thirdly, the government could encourage successful implementations to be actively showcased at schools as examples of best practice.

Writing a business case

Open standards, open content and open source software are developments that demand a business case. The Education Council recommends that Parliament directs the responsible minister and state secretaries to prepare a business case for the development and maintenance of open learning resources, at least for primary education, secondary education and secondary vocational education.

It is the Education Council's view that a business case would be a highly effective tool to demonstrate the cost and benefits of open learning resources at the national level. The business case would need to offer insight into the cost and benefits of open learning resources in the longer term. It would then provide the basis for future investment decisions by government and by private parties. It would also bring all investments made by the government since 1980 into perspective. Private parties could cause dramatic movements in the market by targeting their offering directly towards school pupils, their parents or students, either through the schools or outside the schools.

Establishing a joint working group

The Education Council recommends that Parliament urges the responsible minister to be much more active in supporting teachers and school in the development and maintenance of open content, open standards and licensing forms. This effectively means demonstrating the importance of open content and open standards; encouraging open licensing forms, such as Creative Commons; legal support with the use of learning resources developed by others; licensing support with the distribution of self-developed learning materials; clarification of the economic status of the school; and support with business models for the self-arrangement of learning materials.

The Education Council believes that a Joint Working Group for Open Learning Resources should be given a key directing and supporting role. The working group should represent the teachers' professional organisations, organisations such as Kennisnet, and experts in the field of intellectual property rights, business economics and education. The Joint Working Group for Open Learning Resources is intended to drive forward and promote the use of open content, open standards and open source software in education. This is not an objective in itself, but a means to take the quality of education and teaching expertise to a higher level. The Joint Working Group will therefore need to take a proactive approach, forging alliances with the relevant parties.

Conclusion

The Education Council strongly believes that we should not lose the momentum in digitising state-funded education. We note that the government should take more control in order to give more impetus in the coming five years, and that teachers need to make much greater use of the digital opportunities offered – in particular by open learning resources – when optimising their teaching. In this context, the Education Council invites Parliament to consider appointing one of its members as a *rapporteur* in order to provide oversight for the propagation of the business case and the Joint Working Group, and to report on the achievements in the further digitisation of education and open learning resources.