IT **IN SCHOOL**

Access to computers in Swedish schools is growing fast, and the development of digital learning aids has been given a real boost in recent years. However, the use of IT in teaching is not increasing at the requisite rate. One reason is the lack of digital skills among teachers. Vittraskolan Telefonplan's head teacher, Jannie Jeppesen, calls the digitisation of school a "democratic issue".

> A revolution is taking place in communications and it is ultimately about influence, both in society and over our own lives. If you don't understand the digital world, it is difficult today to make decisions and participate in society as a citizen. Consequently, digitisation is the democratic duty of Swedish schools," says Jannie Jeppesen.

Every three years, the Swedish National Agency for Education conducts a survey that monitors IT use and IT skills in schools. In the most recent report (IT-användning och IT-kompetens i skolan, Stockholm, 2013), a quarter of pupils state that they have not been taught to be careful about what they write and publish about themselves online. A large proportion of pupils also say that they have never learned to assess or critically examine information they find online.

"Do all social science teachers really know how things are developing? Can they understand and explain concepts such as Anonymous, Wikileaks and social media? If the teachers lack the knowledge, it is hard for them to educate children and young people about the world we are actually living in," says Jannie.

The need for skills development and support

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for teachers and head teachers, both technically and educationally, is clear in the report from the Swedish National Agency for Education. In Swedish primary, secondary and upper-secondary schools, over 70% of staff state that they lack adequate educational IT support. As the Swedish National Agency for Education's mandate in relation to digital skills is relatively

limited, much depends on the schools themselves and on the enthusiasm of individual teachers.

"The school system is so slow, while IT is all-embracing and fast-moving and affects the very essence of how society functions. Schools have a vast amount of ground to cover," says Jannie Jeppesen.

Peter Karlberg, head of a sub-division at the Swedish National Agency for Education, gives Sweden a mark of 5 out of 10 for digitisation of schools and making IT an integrated part of learning.

"We rank highly when it comes to the material prerequisites, computers, etc. But when it comes to using the equipment, we are no higher than the EU average. Both marks are increasing, but the material prerequisites have developed much faster than their use."

Peter Karlberg agrees that it all comes down to enhancing skills and understanding – both about the digital world and about how schools and teachers should use digital tools to develop and improve learning. Just handing out computers is not enough.

"You risk creating situations in which the digital tools are just considered a nuisance and concentration evaporates. The tools must be

used in an informed way by both pupils and teachers. There needs to be adequate commitment to the task. And this must of course be generated through good teaching and good teaching aids on the new platforms," says Peter.

The digital teaching aids currently being launched in the market have every chance of increasing IT use in schools and making it more varied. At present, IT is mostly used for writing tasks and searching for information online. However, educational solutions allow computers to be used more productively as a more natural part of teaching.

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"Children and young people use computers, tablets and smartphones a great deal at home. In many cases, apps or games are used to develop reading, writing or maths. But these digital teaching aids have been absent from schools, creating a discrepancy between the use of technology at home and at school. Schools need to catch up," says Tina Barnden, one of HiQ's experts in this field.

Developments have now accelerated thanks to the "one each initiative", in which pupils are given use of a computer each, and thanks to a clearer mandate from the Swedish National Agency for Education regarding digital skills. More book publishers are launching digital learning aids and a lot of time is being spent on developing educational support for teachers and manuals in an aim to overcome the skills hurdle.

"Digital teaching aids are developing fast in schools, and research shows that IT has a positive impact on learning. One finding is that pupils write longer sentences in Swedish and are better at maths when they have access to a computer or iPad. Pupils also find schoolwork more fun and this makes them committed and motivated. They spend more time on their homework and this helps improve their results," says Tina Barnden.

The new technology also makes it possible to reach pupils with different approaches to learning or special educational needs, supporting them with text, images, audio, video or animations. One of the major benefits of

digital tools is their ability to vary the learning process and thus reach all pupils. At Vittraskolan Telefonplan in Stockholm, the older pupils each have their own computer or tablet, and the school works to a digital skills matrix in which IT is a natural part of teaching.

"I would like to see an end to references to digital tools. We don't say 'pen and paper' teaching either so it seems strange to define school or learning according to the tools we use," says the head teacher, Jannie Jeppesen.

Tina Barnden agrees that the issue of definition must not be allowed to take over. It is essentially about education and giving children

and young people the skills and knowledge to manage in society.

"Books have been around for 500 years or more and we now have a new way of learning. Instead of asking whether books are the best way, people question digital learning aids. But perhaps they are the right way? I am completely convinced that, in a few years, digital learning will be as mainstream as all other types of learning thanks to educational digital teaching aids and more support and training for teachers, so that they can manage and use the technical solutions in the best possible way," she says. ∎

THE KEY TO SUCCESS?
There's a lot happening in the area of digital teaching aids in schools, and research shows that IT has a positive impact on learning.

In "Qnoddarnas värld" all pupils have their own log-in details and can furnish their "stump", which is their own home in the program. When the pupils log in they see new exciting tasks that their teacher has activated, everything from exercises with letters to narrative texts or geometry – all in an inspiring and educational setting.

Qnoddarnas värld is a Swedish learning aid that feels like a game and has been produced directly for iPads. The content follows Lgr 11 (the curriculum for compulsory schooling, preschools and leisure time centres) and the basis for assessment issued by the Swedish National Agency for Education. Qnoddarnas värld is quality-assured for its educational value and currently contains everything required for teaching Swedish and mathematics to pupils in years 1–3. HiQ is helping the publisher Natur & Kultur with the development.