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*Where technology has made an impact on learning outcomes*

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## Western and Northern Europe

### Case Study 8: Slättgardsskolan School (6-15), southern suburbs of Stockholm, Sweden

#### Success factors

- Strong leadership
- Engagement of teachers in transformation approach
- Learning from past mistakes
- Redesigning the use of devices
- High level of pedagogical support for teachers
- Technical support, reliable devices and good internet access
- Teachers working together to find innovative ways to use devices in teaching
- Students encouraged to take responsibility and ownership of their learning

#### About the school

The school has 550 students from low educated, low income families. The school ranks at 169 in Sweden's socioeconomic index (the highest is 200). Students are from a wide ethnic mix, with around 34 languages spoken. Most students are second generation but they do not have Swedish language support at home where their mother tongue is usually spoken.

#### School achievement

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*Slättgardsskolan is a well-functioning school where there is a will for development, insight into the school's goals and results: the school is characterised by peace and quiet, order and reason. Report from Swedish school inspectors (translated from Swedish)*

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The school has an excellent reputation: it aspires to and is very successful in getting students into high school – this year the success rate was 96%. Students are encouraged to take responsibility and ownership for their learning and to own their actions. This has been achieved by developing a closeness between staff and students. Teachers are deeply involved with their students, identifying their individual needs. The school has a large staff of 102. 45 teachers are supported by support pedagogues with three years of university training who work after school with students or in classrooms to support both teachers and students. There are 5 special needs pedagogues, 2 speech therapists, a counsellor and 3 social welfare providers who help resolve conflicts and support teachers in conflict situations and in talking to parents.

#### Use of digital technologies

Until 2 years ago and before the appointment of a “tech savvy” deputy principal, the school was an iPad 1-1 school but the technology lacked a supportive infrastructure. Many machines had broken;

teachers struggled with technical issues and there was a lack of procedures in place for repairing the machines. The teachers tried to do their best with the devices in the classroom but there was no common view of how best to use them. Teachers were not collaborating on developing a structured digital pedagogy and it was impossible to measure any improvements in learning.

The school board and the new deputy principal redesigned the thinking about how to use iPads in classrooms. The school decided to hire an IT technician and took back all the iPads from students and teachers and started again. There is now a notable difference just two years after the restructure which is described below. Students have a working iPad which they use all the time. Now if the network goes down teachers have problems as they have become integral to classroom practice.

### Technology infrastructure and devices

The school trialed laptops but failed as the infrastructure wasn't there and they found the iPads to be more reliable. The younger classes use iPad minis and there are spares of all devices so nobody is left without one if a device fails. Students can take their iPads home from 4<sup>th</sup> grade (10-11).

The school took control of the iPads and decided to lock them down so students could not change the settings or download any apps. Teachers control what students have access to. Teachers can request new apps to be added by the IT technician. Through the school's MDM (mobile device management) system. The school also improved the infrastructure and wireless access across the school.

Teachers use the Showbie iPad app to support and collaborate around a lesson. Students can access all the resources and videos that the teachers create. Digital books are used particularly in mathematics, and the school had relatively few print books. All teachers have an iPad and each teaching team has shared computers. They can borrow a laptop if they need it. Each classroom also has a data projector which all students can use to share their work. Smartphones are not used in school as there is no perceived need for them in the 1-1 environment.

### Digital pedagogy

The deputy principal made teachers decide together what role the iPad could play and when students should use the iPads or not and how they might redesign their classrooms. She started the staff from scratch and learning from the mistakes. They now use mind maps, videos and collages, etc. with the students so that they can visualise knowledge in other ways. The teachers now value that there are "fun ways to learn how to learn". For example, every class worked in groups to produce films and selected the best ones to go into the school's film festival. The 7 year olds won by producing a film that used stop motion.

Student engagement and motivation has improved with better access to reliable technology. There are no restrictions on internet searching and students can use the whole internet and own their own personal space. The school has an acceptable policy and every year the school has a meeting with students to discuss how to use the iPads and topics such as the dangers and possibilities of social media. Discussion takes place about how to respect one another online.

Once the teacher has finished a lesson introduction, students continue to work on their learning tasks. The teachers' role is important for structuring the learning. Some classrooms have "stations" - one where the teacher talks to a class, one where students go who are clear about their task, and one for students who need more support.

The school has moveable classroom walls for grades 4-6 and the plan is to combine classes, integrate different subjects and team teach.

Currently there is no specific computing curriculum and it is not taught separately but integrated across subject areas. There are to be curriculum changes in summer 2018 when programming will be introduced in mathematics and technology and it will be mandatory in mathematics and science. The school currently use visual coding apps but will need to introduce robotics after the changes. Media information science is important, such as understanding how web searches work.

#### Teacher professional development

Teachers self-rate their digital competence and all rate themselves high, but the focus tends to be on their own use of technology and not about how to use technology to support learning.

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*Teachers need to know how complex it is to set up a good lesson in the classroom*

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Professional development is about developing creativity in the use of digital technology in the classroom and sharing knowledge as well as developing the skill of using technology to manage their professional life.

There was a significant improvement in learning outcomes after the first year, which was achieved by the deputy principal working with each teacher on a 1-1 basis and showing them what could be achieved. The school holds conferences where teachers share examples and they also work closely together helping each other to find innovative ways to use the technology.