

Working and Teaching Strategies at Strömstad Gymnasium (1:1 laptop school)

Ilka Andersson
Strömstad Gymnasium, Sweden
ilka.andersson@stromstad.se

Abstract. At Strömstad Gymnasium all the students and teachers are equipped with computers, laptops or netbooks. We realized quickly that is not enough to hand the students a computer and tell them to use it instead of pen and paper or to sometimes research a matter on the internet. Therefore we formed an IT-group and designated two of its members as IT-pedagogues to support and inspire the other teachers. We try to prepare our students for their future and explore new ways of teaching, but are of course also faced with new challenges and problems every day.

Keywords: 1:1 laptop school, TEL

1 Introduction

In Sweden it has become common to equip some classes or all the students with laptops or tablets. The idea is to prepare the learners for the future with at least contemporary tools. Most of the schools are aware of the fact that a computer does not solve problems on its own but that it has to be accompanied by certain teaching strategies and methods. Strömstad Gymnasium is one of these 1:1 laptop schools trying to keep up with the pace of technological development and technology-enhanced learning.

2 The School's Equipment and Attitude

At Strömstad Gymnasium all the students and teachers are equipped with computers, laptops or netbooks. What kind of computer they are working with depends on which year the students are in. Each year the school buys a new set of laptops/ netbooks for the students enrolling. The computers are selected based on an evaluation of the ones already in use e.g. after having realized that 9” netbooks are lightweight and handy but too small to work with effectively, we decided on 12”. Moreover, every classroom is furnished with a projector and speakers which can be connected to the teachers' or students' computers. Several wireless routers distributed across the building allow excellent access to the internet regardless of which room you are in.

We realized quickly that is not enough to hand the students a computer and tell them to use it instead of pen and paper or to sometimes research a matter on the internet. Modern technology in school has to augment teaching and learning and finally lift it on a new level, otherwise it is useless. Thus, we organize IT-days several times a year. These days are used especially for further education within computer programs and technology-enhanced learning/ teaching. We want the new technology to be more than a substitute for perfectly working tools like pen, paper and blackboard. It has to open new paths, new tasks and a new way of teaching, so we can use it to prepare our students for their future and teach them a new way of thinking.

3 Being a teacher at Strömstad Gymnasium

Different computer programs and platforms are part of the daily routines at Strömstad Gymnasium. The teachers register the students' attendance via a platform called *Hypernet*. There we can also register final grades and evaluations of the students' performances which are the basis for meetings with the parents. Even though we have a lot of meetings and discussions in person, we communicate a lot via email, especially in case if we just want to inform the others or need a short answer to questions concerning attendance, grades etc. Some of us, who do not share offices with each other, but like to work together and want to be able to quickly share links and ideas are connected via *Skype*.

Teachers and students are connected via a platform called *fronter*. Here the teachers create a digital classroom which the student can access and download material, discuss and brainstorm in forums, take online tests and exams and of course also hand in texts, presentations, videos etc. Firstly, that way of working requires that our teachers know how to use and operate all (or at least the most important) features that the platform offers, like creating rooms and forums, administrating them, uploading material in an appropriate size and format, programming exams, correcting and commenting on the assignments hand in digitally. Secondly and more important, they need to know how to employ the platform, the computers in general, different programs and not to forget the internet meaningfully in their teaching.

To support our colleagues, who do not all belong to the generation which can be described as digital natives, with these daily digital challenges and inspire them how to use modern media in the classroom, there is an IT support service for serious hard- and software problems and two so-called “IT pedagogues” are available to them. These two teachers, who are especially interested in technology-enhanced learning, are in charge of giving a helping hand e.g. in case a projector doesn't work because of someone having changed the settings, explaining how different computer programs or the platform work and giving tips how to use them. They take part in lectures about e.g. “Computers and New Technology in School”¹ and spread these ideas and in their turn are members of an IT-group. That group, consisting of the headmaster, the school's network administrator and about eight interested teachers from different subjects, meets on

1 Held by Ruben R. Puentedura, Ph.D <http://www.hippasus.com/rpwblog/>

a more or less regular basis to discuss the school's IT-strategies, which means e.g. which programs, online books and computers to buy, evaluation and progress of the students' and teachers' work and performances concerning technology-enhanced learning, how to handle destroyed hardware and whether websites should be blocked or not etc. On the headmasters initiative the group is also responsible for helping to improve and test all the teachers' computer skills, most of all in handling the platform. The level of skills are a criteria for wage increase. Furthermore, the IT.group organizes so-called "IT-days". These days are used for further education in technology-enhanced learning and teaching. Either all the teachers take part in a conference like etc. "fronter användarkonferans" (conference organized by fronter with workshops and seminars), we invite some specialists or people working for e.g. computer programs, online books etc. who give lectures or offer workshops, or we get extra time to discuss and work with the equipment we have and to improve our skills.

4 TEL in the Classroom and Other Places

In order to make sure that the students know how to work with the laptops, there is an introductory period in the beginning of the school year. Usually, the youths know how download games and how to log on to *facebook*, but are quite ignorant of e.g. a word processor or how to save their files in another folder than "my documents". Thus, we teach them the basics about the programs and fronter in the first few days, so that they know how to e.g. use spell-right (and the ones with dyslexia how to use the special programs), create folders and structure them, hand in assignments via the platform, read and handle online versions of the schoolbooks.

In what way the equipment and programs are used in class depends very much on the teacher's skills and creativity. All our teachers use fronter to provide the students with material, links as well as the students are supposed to hand in all their assignments there. On the one hand the students can fast get feedback and also have access to an overview of their performances and on the other hand it is easy for the teacher to see which of the student has not handed in yet and to track how often they actually enter their digital classroom and read, download or upload files.

Most of the teachers use their own laptops and the projectors in the classrooms in different ways to make teaching more vivid. They show pictures, short film clips, animations or instruct the students how they should use a certain program before they are supposed to work individually or in teams etc.

Some teachers try to lift learning with modern media on a new level; they literally experiment with programs and the internet and change the way of teaching and learning. They use the platform's features to let students work on one file together, give each other feedback and so teach them how they later on might work on a presentation for a international project with members being in different countries and not sitting in one room. Often the students are allowed to leave the classroom and find a place in the school (e.g. the cafeteria) or the surrounding where they feel comfortable and want to work. It might be that they still are connected via an add-on to *fronter* called *illuminate*, which makes it possible for the teacher to chat or speak to individuals or the whole class. That program provides a kind of virtual classroom with whiteboard. If the students are logged on, the teacher can give them the rights to write, draw, add pictures etc. on the whiteboard or can distribute smaller groups to different whiteboards in that virtual room. So the whole group can brainstorm, sort ideas or work on a sketch together. The teachers' challenge is to find new tasks that were not possible without the computers and the internet, like e.g. in history: produce a video about an English king/queen (in English), get feedback from your classmates (do they get and understand all the important information?), publish the video on *youtube*, get in touch with people from England and ask them to comment on the video or even start a discussion about it (Do they have the same picture of that king/queen, do they like him/her? Why?). Especially in social sciences, politics or geography we try to break the borders of the classroom and go out into the world: the students might be asked to follow blogs of people living in a special country to find out more about the living conditions or ongoing political discussions – of course we may not forget that the students need a solid basis of facts and knowledge to master tasks like that and that they have to be critical towards the information they get. The teachers simply try out ideas and evaluate them later on together with the students (How they liked it, their impression of how much they actually learned etc).

5 problems and questions

Working in 1:1 classrooms a lot of questions and problems arise.

The question that we discuss most is: what is knowledge today and what are we supposed to teach? Is it facts, facts in context, shear context, know how and where to find facts (in context) and critical analysis – a combination of all of that? Right now we try to give a our students a solid basis of facts and context so they can find their way through the jungle of information on the internet and get through to what they are looking for.

We had a lot of discussion about blocking websites of social communities like *facebook* or *spotify*. The students are tempted to visit these sited instead of working with their assignments, and many give in. We decided against blocking since the students sooner or later have to learn to handle and overcome that temptation. It's better they are confronted with it at school, probably earn some bad grades and then learn to control themselves and their action son the net instead at their future workplace where they might lose the job. Moreover, before we could not control if a student was paying attention, dreaming or watching out of the window either, and why not allow them to log on to *facebook* when they are done or need a break – or actually make use of *facebook* while teaching?

Since the students hand in assignments, they also want feedback, fast. It can become difficult for a teacher to read and comment on all the students' works. It is a lot faster to simply take a turn in the classroom and have a short

look at the e.g. homework and comment orally. We will have to find a way to make sure the workload for the teachers does not increase but decrease.

All the material being digital, the teachers using presentations or sometimes even digital whiteboards leads to the students not taking notes or copying the teachers' sketches any more. Some even stop listening, because they think it is enough to download everything later on – or the night before the exam. Unfortunately, we discovered that the students' reading and also writing skills are decreasing. E.g. It seems to be hard for them to focus on a longer text and extract important information, because they are so used to only scan a website and quickly (which of course also is important). Thus, the following question arises: how do nowadays students learn best and what is the teachers' role?