



At a Glance

What they wanted to do

Rebild Kommun school-IT has to fulfill the following goals:

- Prepare students for a modern globalized society where IT is a basic requirement.
- Strengthen children's development regarding subject matter, and social and personal skills.
- Ensure that children and youth are skilled in information and media.
- Used for knowledge sharing, collaboration and innovation.
- Ensure that skills children and youth already possess as users of online media in their spare time are incorporated in the school.
- Ensure that the teachers receive the prerequisite IT-didactic skills to incorporate IT and media in their teaching.

What they did

- Hired a fulltime Digital Learning Manager.
- Put all managers in the Kommun's ten schools through a 2-day course in the use of Google Apps for Education, Chromebooks and IT-didactics.
- Upgraded the wireless networks on the Kommun's schools.
- Invited managers, teachers and students to access Google Apps for Education from their own devices.
- Purchased more than 3,500 Chromebooks, which can be used by 3,800 students and 450 managers and teachers.

What they accomplished

- Increased learning through a workflow that is characterized by mutual feedback, collaboration and innovation.
- Knowledge sharing and blossoming digital communities between students, teachers and managers and not least across different levels.
- A cloud-based infrastructure with a relatively low Total Cost of Ownership and a high degree of educational value for money.
- The prospect of fulfilling the Kommun's other educational goals.

Rebild Kommun use IT to assist teaching and learning practices

Background

The Digital Learning Manager, Søren Juulsgaard was hired as part of Rebild Kommun's 'Vision and Strategic Plan for IT-didactics and digital learning resources 2013-2015'. The plan put forth seven ambitious goals.

Inspired by a pilot Søren Juulsgaard created in Sofiendalskolen, Aalborg, Google Apps for Education were chosen as the means to reach the educational goals of Rebild Kommun. In addition, Chromebooks and the users' own digital devices were used.

Challenges

Søren Juulsgaard recaps it this way:

"We faced three challenges. We had to get the technology to work. We had to make people use it, but more importantly: We had an educational task to solve. The technology was just a means to an end."

When we talk about cloud computing in a technical sense, a good wireless network is of paramount importance. In a school, many users will access the cloud at the same time. The network has to be able to handle that. A reliable wireless network had to be installed. That was a prerequisite.

Rebild Kommun decided to try Chromebooks, because they are easier than other units to administer and protect against technical difficulties. They boot up in a matter of seconds and are significantly faster than other devices in this regard. Being web-based, they are designed for cloud computing. It is very hard to tamper with the computer's local settings and cause a Chromebook to crash. On a Chromebook, all data is synchronized with Google's servers. If the device is broken, simply replace the Chromebook and log on, and all your data is recovered.

"The advantages of Chromebooks and Google Apps for Education are that technical problems interfere a lot less than previously with the core task of teachers: learning and well-being among students", Søren Juulsgaard says.

Another thing is that the users had to be trained in using the technology. According to the Digital Learning Manager, people have to have a sense of ownership. They have to use the technology on a daily basis – otherwise they will not get to know the infrastructure and exploit the full potential of the technology.

"But the training of school managers and teachers doesn't only take place on a technical level. We have to remember that the task at hand is primarily an educational one. Only when teachers know how to use the technology educationally, can we promote learning and well-being for our students and reach our learning goals", Søren Juulsgaard says.

Solutions

The schools' wireless networks were upgraded in collaboration with the IT-division of the Kommun.

In the pilot on Sofiendalsskolen, Søren Juulsgaard experimented with homemade Chromebooks – PC's that started Chrome OS from a memory-

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—Søren Juulsgaard, Digital Learning Manager in Rebild Kommun

stick. Then he contacted Lenovo and a line of other companies. Lenovo won the bid and delivered the first durable and reliable Chromebooks to the schools in Rebild Kommun.

At present, the Kommun has bought more than 3,500 Chromebooks. 3,800 students use them when they don't use their own devices. The same goes for 450 full-time teachers and managers. Lenovo has equipped the Chromebooks with a Scandinavian keyboard. Besides the robustness of the Chromebooks, the teacher can see from the blackboard whether the students are online or not. A LED-light on the back of the screen reveals if the students are working online when they are supposed to and also allow the teacher to tell students to stop surfing the web when the teaching demands their attention.

Rebild Kommun really "wanted this", according to Søren Juulsgaard. That is why they hired a full-time Digital Learning Manager and arranged two full days of training for the management in the Kommun's ten schools.

"That's a big investment, but also what needed to be done", he says.

Last but not least, the Kommun has fulfilled the learning goals (see info box on the left). That is agreed on by both management and teachers. Even the students are happy.

"I can collaborate with four others on the same document, while we're sitting in different places. It's inspiring", says Tobias, a student at Skørping School.

Advantages

The technical aspects are handled by the Kommun, the Chromebook producers and Google. The Kommun delivers stable wireless networks to the schools and are in charge of the purchase of the Chromebooks. Technically, this is a feasible task. Chromebook producers such as Lenovo deliver the devices, which can stand being dropped on the floor and bootup, immediately fresh and ready, as soon as you press the ON-button ... Google delivers close to a 100% up-time for Google Apps for Education.

"Technically we have minimized the obstacles for learning, because the system is cloud-based, while local devices are designed for school use", Søren Juulsgaard says.

Also worthy of note is that the cloud based solution entails a minimum of extra running expenses for the Kommun and that Chromebooks are cheap to purchase compared to other devices.

"Google Apps for Education is free and without commercials. We have no expenses for software and licenses. In addition, programs like Flash and Java don't have to be updated all the time. There are relatively few expenses for daily operations. Teachers spend time on what they're good at: teaching. Total Cost of Ownership (TCO) is low, while the Educational Value for Money is correspondingly high", Søren Juulsgaard explains.

That Rebild Kommun has gone "all in" on the project to such an extent, has helped existing users to inspire new users. Users are still being trained but gradually they train themselves and each other through knowledge sharing. Children and adults alike develop their IT-skills through Google Apps for Education.

"Managers and teachers share knowledge on Google+. They share educational ideas and experiences. This happens in more groups than I know of", Søren Juulsgaard says.

Furthermore, the use of Google Apps for Education has produced a number of educational advantages, which Søren Juulsgaard explains:

About Google Apps for Education

Google Apps for Education is a suite of free, secure tools that includes Gmail, Calendar, Sites & Documents. Use it for collaboration and communication no matter where you are or which device you're using. Over 40 million students, faculty, and staff in schools around the world have gone Google with Google Apps for Education. You can learn more and sign up to try it out by visiting our website:

goo.gl/3oZLEv

About Google Chromebooks

Chromebooks are designed to help students and teachers get things done quickly and easily. Devices are simple to manage at scale through a web browser. With several devices to choose from, it's easy to find a Chromebook that meets your students' needs. You can learn more here:

www.google.com/edu/products/devices

In almost all workplaces today, employees function in teams. It is rare that a single individual conceptualizes and/or implements a project. Google Apps for Education provides you with new avenues of collaboration. Students can work together in groups on the same document. They can see on their own screen what other students in the group are doing. The teacher can also take a peek and give feedback during the process. The teacher can inspire instead of having to criticize when the task or paper is completed and is up for review in its entirety. In this way, the teacher is closer to the students' actual workflow. Google Apps for Education promotes knowledge sharing, collaboration and a more innovative workflow.

Students become more skilled in information and media. They acquire a higher degree of digital edification and Google Apps for Education works as a good supplement to homegrown digital skills. As an example Søren Juulsgaard mentions that the students express a need to be absolutely certain about the settings for sharing of content. When they work across groups and subjects, Google Apps forces students to be mindful of whom they share content with. They orient themselves toward the recipients of the information to a higher extent, which enables them, among other things, to use social media in a more reflected way.

When large parts of the students' work take place online, they simultaneously practice a more critical approach to information. The web is a veritable confusion of information and opportunities. The more you learn how to handle yourself online with guidance from teachers and educators, the better you will become at finding the information you need and to sort the treasure from the trash.

Across the board, the decision-makers in the Kommun are very pleased.

"It is coming along nicely, better than I had dared hope. The feedback shows that we are working well towards the goals we have set", says City Council Member, teacher and Head of the Children and Youth Committee, Anders Norup.

"Positive feedback from our professionals has led us to try to use digital tools in our day care section too", adds Rebild Kommun Mayor, Leon Sebbelin.

"This works – surprisingly well on all parameters. It's real and not just another load of hot air", says Kommun Digital Learning Manager, Søren Juulsgaard.