ISG® imagine your future®

DIGITALIZATION

From the Chalk Age, to the Digitalization in German Schools

Gerhard Kriechbaum

INTRODUCTION

The Situation in Schools Up to Now

Innovation within the German school system is very ponderous. Lesson plans are organized over years and are revised again, and when implemented: outdated. And whilst children in Finland or Iceland were very swiftly provided with laptops and video-lessons, German students and teachers are still battling with outdated worksheets, and lessons that can only be given in a classroom using a blackboard and chalk.

Digitalization in the school system is late and takes time.

An Example from Bavaria

„Bavaria is speeding out of sedateness“

Bavaria is calm, placid, traditional, and also at times, slightly sedate. In everyday life as well as at school. Digitalization had hardly been addressed at the beginning of 2020. We saw things being analyzed, calculated, and requested, and we still had a lot of time until February 2020 for discussions, without achieving any gainful results. Simply sedate. But then suddenly, everything relating to the subject of digitalization at school had to progress very quickly. The corona pandemic proved to be unforeseeable, and the German school system unprepared. Ministers had to set out rules, reject them, then implement them again, teachers had to train themselves as quickly as possible.

Students who, until then, had been denied access to digital devices at school, had to somehow get to grips with using such demonized computers and mobile phones in order to gain access to teaching material and lessons. And digitalization in schools? Nowadays it’s more often seen in the press rather than made a matter of discussion.

In January 2020, a Bavarian television channel (br24) published a report entitled, „School-Digital-Project: Ministry of Education draws balance“[1] . 20 Bavarian schools have been involved in a digitalization project since 2016, the results of which should have been published by July. Nonetheless, Bavaria’s Minister of Education had already slowed this down at the beginning of the year and explained that it was only a test run. It was stated that not every student would now be working digitally next school-year, and that there were still questions to be answered, the need to develop training opportunities as well as data-protection checks to carry out etc…

Bavarian teachers and students who didn't have digital devices, Wi-Fi nor internet access had to carry on waiting. If the Bavarian Minister of Education had known how wrong he really was.

From the Slow Lane to the Fast Lane

But COVID-19 speeds up the process.

Suddenly the school system now has to wake up and digitalization in Bavarian schools shouldn't have to wait as long as September. Since as early as March, the world now looks completely different. The COVID-19 pandemic makes classroom learning impossible. Students require laptops or tablets in order to stay in touch with teachers, and to be able to be taught further. Creatively if not progressively, Bavarian teachers deliver study material to those students who are not technically connected to their front door. Of course, as a temporary solution. There is an urgent need for action and digitalization is inevitable. Innovations, ideas, and involvement are hardly being noticed from the Ministry of Education, but rather from the schools themselves. Teachers are increasingly working with internet platforms such as Bettermarks or Mebis (which by the way is inaccessible for weeks at a time and has capacity issues), tutorial videos are played using WebEx and Zoom, or video conferences are held using other providers. Having said that, all of this is due to their own initiative, the responsibility of the respective teachers, and without receiving suggestions nor protection from employers. The data-protection's sword of Damocles is hanging over the teachers heads who take the risk themselves to digitalize their lessons. By doing so, and to ensure that data-protection regulations are adhered to, any costs for computers or fee-costing apps must be paid in many cases for in full by the teachers own money. Who individually are all differently equipped, experienced and motivated. The discontent of many parents who also have to equip their children digitally, is offloaded on to the teachers. That said, it should have been the government's obligation to adequately provide their staff with hardware, email addresses and internet connection.

Just imagine this: you're a chef in a restaurant and your employer won't give you a wooden spoon. But you're not allowed to use your own either. Teachers are prohibited to use their own devices if they are also used privately. Like they have a choice! In many schools there is only one computer available for 60 colleagues.

Very kindly now (ironically put), many school boards have given their teachers permission to use their own private computers temporarily during the school closure.

Technically Experienced Students

But students are adapting to the new situation very quickly. Many of them have grown up with mobile phones etc., and have simply been held back by old-fashioned schools. Lots of parents provide them with tablets or laptops, at least those who can afford such items. (As a secondary consideration, the question arises as to whether everyone actually does have the same right to education as the law stipulates). Even when just having a mobile phone, students give each other tips relating to school topics on WhatsApp groups, and exercises are shared using Discord, the gamer communication platform on which students create a server for their exchange. Tutorial videos can be found on Simpleclub, an online platform providing many tutorials, the cost of which is to be paid for themselves as schools haven't found a subscription to be necessary until now and students chat, play and meet at distance using the House-Party app, in order to discuss group work together or to send each other the answers to their homework.

Students technically experienced and mostly well equipped.

Teachers as Part of the System

The faster students overcome digital challenges, the slower the school system becomes. Even advanced, digitally savvy and dedicated teachers are being held back. If a teacher chooses a means of communication, for which they then give their students access and passwords to, the government could consequently ban this due to data protection. In the federal state of Thuringia, a data-protection officer brought this matter to attention because he wanted to investigate and prosecute teachers for possible breaches of data protection in relation to domestic home-learning[2].

Old-fashioned Teaching Staff

Recently, the „Wirtschaftswoche" publication complained that youths aren't being prepared for advanced digital literacy. This won't change either if teachers remain stuck in the digital Stone Age[3].

One of the reasons for this cumbersome development is no doubt due to the fact that teachers – or rather the lack thereof – are having to work in many schools until almost 70 years of age and aren't able to leave the teaching profession when they'd like to. Their generation didn't grow up with digital technology, the first internet connection only came about when they were approaching their 40s and they had already gained several years of experience by then. When smartphones were first launched, many were already 50 or even older, as well as when the first few tablets were introduced for students. The necessity for them to become familiar with it all seems pointless for their last, exhausting years, especially when students are required to help them due to the lack of whiteboards or DVD players. At the same time, the government aren't employing a countless amount of new-generation teachers either, who grew up sitting in their buggies with a mobile phone, just to save costs despite having such a lack of teachers[4].

Politics realized importance.

Bavarian Digital Treaty (Bayerischer Digitalpakt) – Possible Solutions

Imagine once again that you're the chef mentioned earlier. The owner of your restaurant and boss demands that from now on, vegan dishes are to be added to the menu. Essentially not a problem if you know where you're going to source them from. But now, just imagine that you'll need to biochemically analyze all food products yourself, inspect all their nutritional values, and then put together a precise report – including information about their „long-term, scientifical and comprehensive process with regards to quality assurance".

That's how it works for schools when they try to get resources digitalized. In Bavaria, they already tried to get the digitalization-financing problem solved before the pandemic. A digitalization treaty (Digitalpakt[5]) has been agreed in which 778 Million euros should be made available. That said, there are certain requirements in order to be able to gain access to these budget and resources, teaching staff are required to in addition to their teaching duties, compile a 100-page digital-media concept which, amongst other things, for example, should encompass a „long-term, scientifical and comprehensive process with regards to quality assurance".

Teachers who, within their main role, not only have to comply with teaching and pedagogical requirements, as well as adjustments, meetings with parents and many other issues behind the scenes, are now having to become familiar with and train themselves in their own private time about digital technology as a non-expert. Is it therefore any wonder that hardly any resources and money have been requested until now from the digitalization treaty[6]?

Growing Digital Demand by Teachers.

Like leaving a fox to guard the chickens. Or when teachers become IT experts. There is still no external hardware and software support in schools. The most digitally-qualified member of teaching staff takes on the highly needed time-consuming task of „system-support" who, to a greater or lesser extent, keeps the staff-room computer or the printer up and running, who is perhaps also responsible for the school's internet, and who, for all of that, is relieved of a one-hour lesson. And that during times of teacher shortages. Understandably, this job amongst teachers isn't exactly sought-after.

Further Training

The initial mandatory further training for teaching staff resembles swimming exercises in a drained-out pool. Every teacher is expected to complete an online training course using Mebis with their own devices which includes tests on „digitalization", „school and law", or „ethics and digital world". The fact that they don't actually get any useful or gainful content as to how apps or digital lessons are managed doesn't seem to be a bad thing up to now, because often there aren't any computers available for students or teachers anyway. Since the pandemic, only temporary training, for example, about Microsoft is now being offered. The capacity of 1000 participants has been, on many occasions, surpassed by almost 5000 enrollees. You can hardly blame the teachers they didn't even want this training[7].

Modern Private Schools and Norway as an Example

If we take a look at the digital school-world of students attending private schools, in this case the forerunner „Schloss Neubeuern" in Bavaria, we increasingly get the impression that digitalization and education is indeed a question of the size of one's wallet. Using Microsoft's „OneNote" product, workbook content and group activities are put together and completed.

Charging areas are available for students computers, presentations are created using tablets, meetings in MS Teams are held, and diaries and information portals have already been integrated into everyday life for quite a while now[8].

For a long time now, home-schooling has also been very successful in Norway, thanks to advanced digitalization. Norwegian companies support schools by providing learning platforms, most notably with the successful, game-based learning platform, Kahoot. The learning platform Lesemester offers teachers assistance with lessons and gives students access to over thousand e-books. Kikora, a learning platform for maths, offers several thousands of students countless amounts of maths exercises which can be activated by teachers and worked on by students. The „No Isolation AV1" robot can go to school for students in high-risk groups, speak to fellow students, participate in lessons, and ask questions. This new technology is also slowly starting to appear in projects at schools in Berlin, Kiel, and Hamburg. And even if Germany is way behind Norway, we are increasingly seeing some kind of movement in digitalization in schools, finally[9].

Bavaria's Government invests in Digitalization.

Latest Development in Bavaria on Digitalization in Schools in July 2020

On 23rd July 2020, Bavaria's Minister President announced in his press-conference on the digitalization in Bavarian schools that a total of 2 Billion euros (900 Million from the federation and 1.1 Billion from the Bavarian budget), would be made available for the digitalization in Bavarian schools which was to be used for future software, hardware, staff and training purposes. Additionally, there will be a „Bayern-Cloud", (similar to YouTube), in order to share knowledge, and videos are to be made available as well as a means of communication. A school computing center with up to 600 new job vacancies is being planned, and 250,000 rental devices for students, as well as 20,000 devices for teachers are also being arranged. During the summer holidays, schools are going to be equipped with WiFi and broadband internet connection. For further teacher-training, 100 new job vacancies are to be created, and seminars are to be replaced by webinars. Externally selected system-supporters will also be employed in order to maintain the devices which will soon be made available to schools.

Has the End of the Chalk Age Arrived?

It remains to be seen how the corona pandemic develops further, and whether schools will have to be closed again. We'll also have to wait and see if the investment in digitalization for schools will actually happen. Because for years now, there have also been issues relating to a lack of hygiene which still haven't been financed. And we'll have to wait and see which of these promises on digitalization are actually implemented, what each individual school receives, and in what kind of time frame this step forward will be shown. Also, we'll see when the COVID-19 pandemic ends at some point and a regular school operation gets back to normal. We can only hope that Bavaria and Germany wakes up from the Chalk Age and moves from the slow lane into the fast lane.

(Please note, links to sources will route you to German Internet pages).

ABOUT THE AUTHOR

Digitalization:
From the Chalk Age, to the Digitalization in German schools

GERHARD KRIECHBAUM

Gerhard Kriechbaum has over 21 years' experience in managing large multinational IT customer projects, which he applies to the benefit of all ISG customers. His focus is on delivering projects in large strategic first and next generation outsourcing deals, managing large international Transition and Transformation Programs including service take over from incumbent providers or internal IT organizations, carve outs, as well as supporting merger and acquisitions.

ISG®
imagine your future®

ABOUT ISG

ISG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 700 clients, including more than 75 of the top 100 enterprises in the world, ISG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis. Founded in 2006, and based in Stamford, Conn., ISG employs more than 1,300 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data.

www.isg-one.com

Let's connect NOW**...**

ISG®

imagine your future®

