

Danish primary schools are using Maple to revolutionize mathematics education

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Recently had a wonderful and valuable opportunity to meet with some primary school students and teachers at Holback by Skole in Denmark to discuss the use of technology in the classroom. The Danish education system has long been an advocate of using technology and digital learning solutions to augment learning for its students. One of the technology solutions they are using is Maple, Maplesoft's comprehensive mathematics software tool designed to meet the unique and complex needs of STEM courses. It is rare to find Maple being used at the primary school level, so it was fascinating to see first-hand how Maple is being incorporated at the school.

In speaking with some of the students, I asked them what their education was like before Maple was incorporated into their course. They told me that before they had access to Maple, the teacher would put an example problem on the whiteboard and they would have to take notes and work through the solution in their notebooks. They definitely prefer the way the course is taught using Maple. They love the fact that they have a tool that let them work through the solution and provide context to the answer, as opposed to just giving them the solution. It forces them to think about how to solve the problem. The students expressed to me that Maple has transformed their learning and they cannot imagine going back to taking lectures using a whiteboard and notebook.



Here, I am speaking with some students about how they have adapted Maple to meet their needs ... and about football. Their team had just won 12-1.

Mathematics courses, and on a broader level, STEM courses, deal with a lot of complex materials and can be incredibly challenging. If we are able to start laying the groundwork for competency and understanding at a younger age, students will be better positioned for not only higher education, but their careers as well. This creates the potential for stronger ideas and greater innovation, which has far-reaching benefits for society as a whole.

Jesper Estrup and Gitte Christiansen, two passionate primary school teachers, were responsible for intro-

ducing Maple at Holbaek by Skole. It was a pleasure to meet with them and discuss their vision for improving mathematics education at the school. They wanted to provide their students experience with a technology tool so they would be better equipped to handle learning in the future. With the use of Maple, the students achieved the highest grades in their school system. As a result of this success, Jesper and Gitte decided to develop primary school level content for a learning package to further enhance the way their students learn and understand mathematics, and to benefit other institutions seeking to do the same. Their efforts resulted in the development of Maple-Skole, a new educational tool, based on Maple, that supports mathematics teaching for primary schools in Denmark.

Maplesoft has a long-standing relationship with the Danish education system. Maple is already used in high schools throughout Denmark, supported by the Maple Gym package. This package is an add-on to Maple that contains a number of routines to make working with Maple more convenient within various topics. These routines are made available to students and teachers with a single command that simplifies learning. Maple-Skole is the next step in the country's vision of utilizing technology tools to enhance learning for its students. And having the opportunity to work with one tool all the way through their schooling will provide even greater benefit to students.



(L-R) Henrik and Carolyn from Maplesoft meeting with Jesper and Gitte from Holbaek by Skole

It helps foster greater knowledge and competency in primary school students by developing a passion for mathematics early on. This is a big step and one that we hope will revolutionize mathematics education in the country. It is exciting to see both the great potential for the Maple-Skole package and the fact that young students are already embracing Maple in such a positive way.

For us at Maplesoft, this exciting new package provides a great opportunity to not only improve upon our relationships with educational institutions in Denmark, but also to be a part of something significant, enhancing the way students learn mathematics. We strongly believe in the benefits of Maple-Skole, which is why it will be offered to schools at no charge until July 2020. I truly believe this new tool has the potential to revolutionize mathematics education at a young age, which will make them better prepared as they move forward in their education.