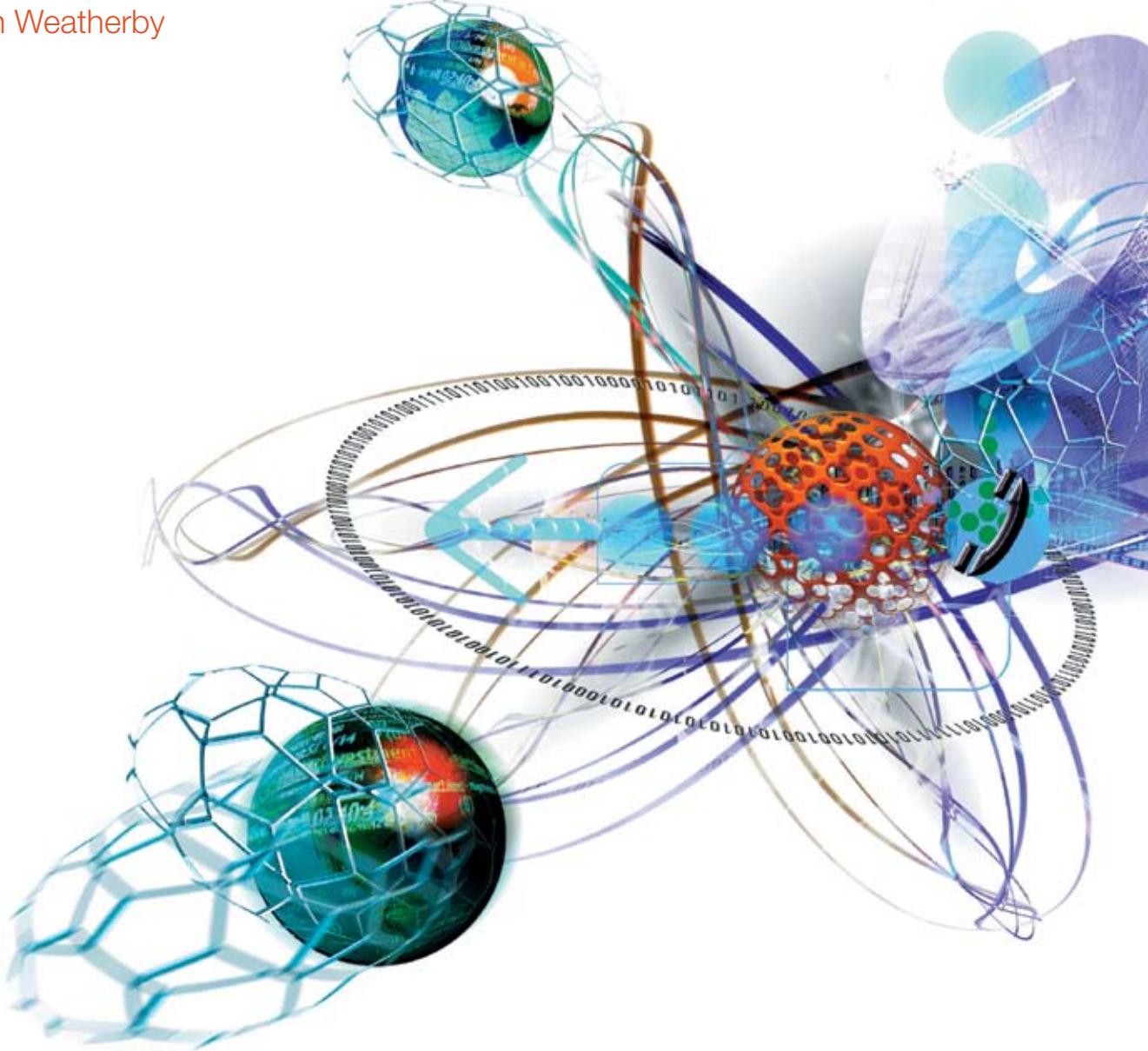


Project-Based Learning Around the World

By Kristen Weatherby



ISTE and Microsoft partnered to develop project-based curriculum for a global audience.

L&L readers know the benefits project-based learning has for students. You can speak to the ease with which technology is integrated into learning projects, and you've probably even created many of your own project-based lessons. This article, and the ones that follow, will address ways that project-based learning is being used in countries

around the world as I've observed in my work with Microsoft Partners in Learning. Through Partners in Learning (<http://www.microsoft.com/partnersinlearning>), Microsoft has joined with ISTE to deliver an interdisciplinary project-based learning course and accompanying teacher training.



gap across communities in terms of quality of life, competitiveness, and economic development. In response to this challenge, Microsoft launched the Partners in Learning initiative. We work with governments, ministries of education, and other key stakeholders in 101 countries to offer a spectrum of education resources—tools, programs, and practices—to empower students and teachers to realize their full potential. The fundamental premise of this vision is that technology in education can be a powerful catalyst to promote learning and that education changes lives, families, communities, and ultimately, nations.

Empowering students and teachers is a pretty lofty goal, and the worldwide Partners in Learning team immediately recognized a few key points.

1. We needed to create resources (curriculum, teacher training, technical support, leadership support, and communities) to meet the wide variety of needs we were hearing from governments in 101 countries.
2. We needed these resources to be completely localizable so that each country could adapt them to the needs of its own local education system.
3. We needed help.

Putting the “I” in ISTE

As the name indicates, Partners in Learning is all about partners, so I reached out immediately to ISTE. Here’s what I knew: I had to create a semester-length, interdisciplinary curriculum that integrated ICT skills into learning projects aimed at students

in grades 6–12. This curriculum had two goals: to teach students basic ICT skills over the course of completing a learning project, and to train teachers how to integrate technology into the teaching of any subject area by creating and customizing learning projects.

ISTE assembled a team of teachers and partners from all over the United States and worked for four months to create instructor, student, and training materials for 12 learning projects comprising approximately 40 hours of classroom use. The learning projects were divided equally between four themes: Space Exploration, Discovery and Change, Heroes and Leaders, and Our Environment.

Once the curriculum was complete, it was sent out to the 101 participating countries for review. Each country had to determine whether this curriculum was appropriate for use in its educational system. For some countries, either the themes or the project-based learning format would not work. However, about 50 countries decided that they could use these materials.

The next step for each country using this curriculum was localization. Localization is much more than just translation, although that’s certainly a very important part of the process. Each country had to determine how to adapt this curriculum to its own education system so that it could be used in local schools. This meant mapping the curriculum to local education standards, changing any U.S.-specific URLs or resources to local resources, and sometimes changing the project themes to ones that were more appropriate for the local culture. To date,

Bridging the Digital Divide

You may be wondering why Microsoft would be concerned with project-based learning at all. Through our past work in primary and secondary education, we had come to realize that many less affluent areas of the globe still lack basic access to technology and training for school leaders, teachers, and students, thus widening the

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Finally, the Danish system of education is very decentralized. There is a national curriculum, as exists in so many other countries throughout Europe, but there are no nationally mandated teaching resources. As long as teachers prepare students to meet the national standards around student achievement for different age levels, they can choose their own teaching resources to do this. Both commercial and non-commercial entities are allowed to create resources for use in Danish schools. An agency within the Ministry of Education, the UNI-C (Danish Centre for Education and Research), reviews all curriculum intended for publication on the MOE's vast Web site for teachers. If curriculum is deemed acceptable for inclusion on the MOE site, it becomes available for all teachers in the country to access for classroom use.

this curriculum has been localized into 22 languages—and counting.

Finally, we were ready to train teachers to use this curriculum. To help scale the program efficiently, we set up a series of regional trainings around the world. Interested countries sent their trainers, who spent two days with ISTE to learn how to use the materials in the classroom and adapt the projects for different age groups or subject areas. ISTE trainers traveled with me to Singapore, Budapest, Cairo, and various locations in the United States to train more than 200 master trainers from the 50 countries using these materials.

Now it was up to the individual countries to train local teachers. We were all eager to see what happened next.

One Country's Example

Denmark was the first country to make the decision to localize and use ISTE's project-based learning curriculum as part of Partners in Learning. As I learned more about the Danish education system, I understood why.

Here are some fast facts on Denmark:

- Population: Approximately 5.4 million
- 2,400 primary and secondary schools
- 625,000 students
- 85,000 teachers

Denmark has had a strong technology focus in schools for years, so the student-to-computer ratio in schools is quite low: 4 students per computer in primary schools and 2.5 students per computer in secondary schools (as compared with 4.4 students per computer in public schools in the United States). Many schools still keep their computers in labs, but due to a project run by the Ministry of Education, 51,000 computers (half of them laptops) were brought into third grade classrooms last year.

The integration of ICT skills into teaching and learning is also a focus in Danish schools. Technology is used in the teaching and learning of every subject area and is fully integrated into much of the curriculum.

Localizing the Curriculum

Microsoft's Danish program manager in charge of Partners in Learning is Kirsten Panton. Panton is a former teacher and head teacher (school

principal), and as a result is well aware of what will and won't work in Danish schools. She immediately saw ISTE's curriculum as a great fit, and brought it to UNI-C for review.

UNI-C approved the use of curriculum in Denmark, which meant that it could be used by any teacher in the country. This was fantastic news, of course, but the materials still needed to be localized. In addition to the basics—translating the materials, providing Danish URLs and resources for each of the projects, and mapping content to Danish education standards—there were a couple of content revisions required.

In the Our Environment theme, Project 7 is called "To Whale or Not to Whale," and discusses issues that the Japanese whaling industry is facing with the International Whaling Commission. As you can imagine, the localization team didn't find many resources in Danish on this topic. However, the whaling industry in nearby Iceland faces many of the same issues. The localization team changed the content of this project to reflect the Icelandic whaling industry rather than that of Japan.

The Heroes and Leaders theme was a bit more problematic. The concept of a hero is not one that is widely accepted in Danish culture. As a Dane, you are supposed to be humble, and no one person can or should stand out from the others enough to be considered a hero. The localization team changed the overall theme of these three projects to discuss the Olympic Games. The heroes then became sports heroes, a concept that is exciting to students and appropriate for the local culture.

Finally, the name of the curriculum changed as well. We'd been referring to this curriculum as Integrating ICT Skills into Teaching and Learning. The localization team changed the name to *X-veje* (pronounced x-veye-uh), which literally means *crossroad*. Some of the other UNI-C curriculum offerings also use road names, and because

ISTE's curriculum is interdisciplinary, it crosses all subject areas.

Classroom Results

The localized X-veje curriculum has been used in Danish schools for more than a year now, and the first evalua-

tions have been received from teachers. Overall, there has been an extremely positive response to this curriculum. Teachers have found the materials to be of high quality and are interested in receiving more and updated projects to use with their students.

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The surveyed teachers have been using the learning projects in everyday teaching or advantageously in "theme" days or weeks. They have found that the projects work well to develop students' skills in a number of areas, including cooperation, project work, information retrieval, analysis, creativity, presentation, argumentation, written and oral communication, and the use of foreign languages. One secondary school teacher who uses the materials in her 11th grade class says that "X-veje strengthens the pupils' cooperation skills and a lot of different skills are brought into play."

Teachers also found that students were very motivated by the use of project-based curriculum. Teachers ascribed this to the use of role-play in

the learning projects. Students are required to take on the role of different members of the team, whether as a researcher, journalist, and so on. One primary school teacher who used this project with a 7th grade class said "When the pupils perceive the learning situation as being authentic, it is the optimal learning situation. It is a real-life assignment—not just a pseudo assignment."

The only negative mentioned by the teachers was that it's very difficult to find X-veje on the Ministry of Education's curriculum Web site. For that reason, the Microsoft office in Denmark is going to engage in some marketing activities this year to make more teachers aware of the curriculum.

Conclusion

Microsoft and ISTE's partnership demonstrates that curriculum can be widely and successfully adapted and used in many different countries around the world. The results from Danish teachers have been fantastic, and I'm excited to see what happens as more teachers begin using the materials.

In the next article, we'll discuss the use of this project-based learning curriculum in Estonia and Hong Kong so that you can get an idea of how it's being used and adapted in these very different education systems.



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