

Project meeting of the COMENIUS school project in Finland

Train for Europe—Reloaded



One for all—all for one!
Cross-national collaboration
and a common goal characterize the school project.

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The wheel: example of productive collaboration

The example of the wheels for the cars illustrates how well the collaboration and the group dynamics function in the project's framework.

First, the vocational school students calculate the friction and select the suitable material pair for tracks and wheels. At the same time, other groups consider how they can achieve high running smoothness for the train. Again others set themselves to the task of devising a uniform design for the wheels.

Finally there is a presentation of the ideas of all project groups. The proposals and solutions are discussed in the plenary assembly and the students vote democratically on the issues.

The CNC Musketeers

What do the student gain in this cross-nation group project?

The Train for Europe—Reloaded project is more about the professional exchange of information: but in the framework of this initiative, the participants can overcome borders, experience diversity and make shared decisions. This doesn't only lay down the tracks for the train; it prepares the symbolic groundwork for cooperation in projects.

Just as in the famous novel by Alexandre Dumas on d'Artagnan and his three friends, these students are acting according to the motto "One for all—and all for one." They share a common goal and they all have to pull together to reach it. However, the individual does not get lost here in the crowd—quite the contrary: each member can contribute according to his ability.

Creativity is also required: the trainees can design their cars themselves. In this process the students learn to find ideas and evaluate them, come to agreement and evaluate results. After all, at the end of the project the train has to make its rounds on its custom-manufactured fitness trail.



Each country is responsible for the individual design of the single cars.



Training at work on a project: They discuss things, calculate problems, try things out and then try something else.

HEIDENHAIN provides on-site support with technology and know-how

How does HEIDENHAIN support the students in this CNC network? As an active industrial partner, HEIDENHAIN offers on-site workshops in Kuopio, Finland. Students and teachers learn fundamental programming knowledge at the HEIDENHAIN controls. After all, the actual car parts have to be programmed in the end. The results are documented and instructions for production are written up.

Forecast

The students have to complete defined tasks before each next international meeting: they have to develop the design of individual workpieces as well as plan and conduct their production. To do this they need to continually contact each other.

After the intensive consultation in Finland, the students part ways until the next international "Train for Europe—Reloaded" meeting at the end of January 2013 in St. Pölten, Austria.



Making common decisions: The vocational students cooperate to specify the route of the train tracks and define the standardized chassis of the car.

"On track again"

As in the preceding project, this one is also about the cooperative development of a train by the students of various vocational schools. This cross-national CNC project vividly represents the European Community: the locomotive symbolizes community—and the cars stand for the individuality of the European nations.

While it is coordinated by the BBS TGHS (vocational school for technology, commerce, home economics and social services) in Bad Kreuznach, the project unites highly motivated trainees from 24 European vocational schools in 23 countries across multiple disciplines in their work on this common project. All individual parts are designed by the participating students with CAD systems on modern, CNC-controlled machine tools.

But first things first: During the meeting in Finland, decisions were made that concern them all. They had to decide, for example, to specify the suitable length of track and define the standardized chassis of the car. The students also had to give some thought to the delegation of tasks and the way in which the individual groups were to communicate with each other.

At the same time there were tasks that were to be completed within the individual groups. The chassis of the cars were created in group work, for example, while the individual design of the cars was left to each individual school.

The "Train for Europe—Reloaded" project is part of the Comenius program—an initiative for lifelong learning. It's also a shining example of how collaboration across nations can function. The goal is to build up a network between vocational schools and then work together to manufacture a product using CNC technology. But what does international teamwork look like in practice? The Klartext editorial staff took a look at their last meeting in Finland and shows us how exciting project work can be.