Using Teachers' TryScience to support educators and improve teaching

Carol Berry[1] and Peter Kusterer[2]

[1] IBM Europe, Corporate Citizenship, Education Programme Manager
carol_berry@uk.ibm.com
[2] IBM Deutschland, Corporate Citizenship & Corporate Affairs manager
kusterer@de.ibm.com

Abstract. The challenge is providing teachers with the resources they need to strengthen their instructions and better prepare students for the jobs of the 21st Century. Technology can help meet the challenge. Teachers' Tryscience is a non-commercial offer, developed by the New York Hall of Science, TeachEngineering, the National Board for Professional Teaching Standards and IBM Citizenship to provide teachers with such resources. The workshop provides deeper insight into this tool and discussion of how to support teaching of informatics in schools.

Keywords: science, teacher, collaboration, teaching material, instruction, lesson, social networking

1 Wanted: Great science teachers

Building the base of scientists and engineers and preparing the next generation of innovators requires great science teachers with the skills and knowledge to educate, inspire and motivate students. But the demand for science teachers continues to far outweigh the supply.

In many countries this is especially true for teachers on informatics. While informatics itself is rarely a compulsory part of today's school curricula, latest with the Web 2.0 information technology is being used not only as part of many lessons (e.g. preparing presentations) but pupils are becoming more and more versatile in using these tools, peer learning is prevalent. Formal teachers' education struggles to keep pace with this development.

The challenge is providing teachers with the resources they need to strengthen their instruction and better prepare students for the jobs of the 21st Century, many of which will increasingly be in STEM (science, technology, engineering and math) fields.

2 Enablement through the Web

Therefore continuously sharing of best practices is key for today's advancement of education – even more in the dynamic field of informatics.

While currently focusing on environmental science, using Teachers' TryScience, teachers, primarily at the middle school level, are able to improve their instruction

in project-based learning. Teachers' Tryscience provides free and engaging standards-based lessons, integrated with teaching strategies and resources, which are designed to spark students' interest in science, technology, engineering and math (STEM).

The site also provides social networking tools that enable educators to comment on and rate the lessons and resources; submit their own teaching materials; and form public and private groups to engage in focused discussions with colleagues in the same district or around the globe.

What distinguishes Teachers' TryScience is the integration of lessons with instructional supports. There are literally thousands of lessons on the web. Teachers' TryScience features some of the best and then helps teachers implement them effectively in the classroom by giving them the real tools to do so.

Teachers' Tryscience is a non-commercial offering, developed by the New York Hall of Science, TeachEnginnering (a collaborative project between faculty, students and teachers associated with five universities and the American Society for Engineering Education), the National Board for Professional Teaching Standards and IBM Citizenship.

3   Objective of the workshop

First, to introduce into Teachers' Tryscience and the underlying concept for educators to understand and more effectively use science, technology, engineering and math (STEM) learning, design-based lessons, and summative and formative assessment strategies. Second, in common work group discussions the participants will identify the potential for use on lessons on information technology and how to potentially to utilize the Teachers' TryScience website (`www.teacherstryscience.org`) as an instructional resource.