Developing scientific literacy: online professional development of chemistry teachers

PhD student: Rianne van Dinther
Promotor: Prof. B.E.U. Pepin
Co-promotor: Dr. L.G.A. de Putter-Smits PdEng
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Summary:
The goal of science education is to make students scientific literate, to understand the world and its nature in which science and technology play an important role. Although there is no widely accepted definition of scientific literacy, it is understood to encompass skills and knowledge of science that are necessary to understand the natural world, to debate science and technology issues, and to make choices in everyday life.
The new chemistry curriculum in upper secondary education in the Netherlands started in 2013 and is context-based in set-up. Context-based education is one of the (possible) dimensions of scientific literacy. In the teaching practice so far, more attention seems to be paid to content (concepts) and less to skills, so implementation of context-based teaching lags behind.
In my PhD project I want to assist chemistry teachers in implementing scientific literacy in education. Therefore, I will design a scientific literacy framework for upper secondary chemistry education in the Netherlands. The framework will be the backbone for the design and assessment of a video-online professional development program to help chemistry teachers to integrate scientific literacy in chemistry education. This program will be evaluated, along with the learning outcomes of the students.