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Blog post

Teachers' voice in the development of curricula for 21st century competences

Karmijn van de Oudeweetering • Joke Voogt • 27 Sep 2017

In the last two decades, the terms '21st century skills' and '21st century competences' have been widely adopted to represent the ambition for an educational reform that will lead to a stronger focus on flexible and ICT-related competences. It is an issue that has been discussed in policy reports of international organizations (e.g. [EU](#), [OECD](#)) and many national government bodies (e.g. [the UK Secretary of State for Education and Skills](#)). Nevertheless, major policy players are still in debate about the exact meaning of these 21st century competences and how they should be operationalized and integrated in the curriculum (e.g. Dede, 2010).

Meanwhile, teachers' voices are barely heard in these macro-scale policy discussions about 21st century competences (Voogt & Pareja Roblin, 2012). This means that is barely recognized how teachers perceive 21st century competences and how they may fit to their own aspirations and daily practices. Initially, it could be considered undemocratic to neglect dialogue with these educational professionals. Yet teachers' input could also benefit the final realization of education policy. Particularly, it is seen that the implementation of educational innovations, such as 21st century competences, may be improved when curricula harmonize with teachers' aspirations and perceptions of their job tasks (e.g. März, & Kelchtermans, 2013).

We, as researchers, were seeking for ways to include teachers' voices in the formulation of curricular guidelines for 21st century competences in order to approximate more viable curricula. We were able to access data of a previous large-scale web-survey, conducted by the Dutch Institute of Curriculum Development, which captured teachers' perceptions of their own implementation of 21st century competences (Thijs, Fisser & Van der Hoeven, 2014). Primary and secondary school teachers in the Netherlands ($N = 2,804$) indicated how frequently they experienced to implement certain teaching activities. Each teaching activity was considered to foster one of ten theoretically informed 21st century competences. We recognized that these teachers' responses could also be used to investigate whether and how teachers perceive that these teaching activities may concur. In this way, the data could be adopted as a way to consult teachers in the development of curricula for 21st century competences.

To investigate how and what teaching activities may best cohere, an exploratory factor analysis was conducted for this study. The findings suggested that teachers perceived six distinct, yet interrelated dimensions in the teaching activities for 21st century competences. These dimensions are:

1. **Digital literacy.** Teachers perceived to coherently implement activities that target skillful, informed, responsible, flexible ICT use for purposes of communication, design and information search.
2. **Innovative Thinking.** This dimension showed that teachers found activities that fostered creativity and problem solving as interspersed. The activities complement each other in the intrinsic and extrinsic benefits of imaginativeness.
3. **Communication and Critical Thinking.** It was very intelligible that teachers' indicated to experience activities for these two competences as consolidated, as activities that foster communication may require

- some analytical work and teaching critical thinking may call for communicative exercises.
4. Digital Citizenship. Activities for social and cultural competences and media literacy formed one dimension, suggesting that teachers perceived how teaching practices to foster socially responsible behavior and informed media use could be integrated.
 5. Self-regulated learning. Teachers indicated this as a rather distinct set of activities for students to learn to plan, regulate and motivate their own learning in the classroom.
 6. (Computer-supported) Collaborative learning. Teachers clearly perceived that activities that foster collaboration form one separate dimension, with a tentative integration of ICT competences.

Our research has been a first step in acknowledging the importance of teachers' voice in the development of curricula for 21st century competences. The findings could help to arrive at new understandings about 21st century competences and how they can be integrated into more practically relevant and feasible curricula.

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Karmijn van de Oudeweetering was a graduate student at the University of Amsterdam at the time she conducted the research. Her studies focus on the impact of technology on the educational field. This study was part of a larger mixed-methods research project on the implementation of 21st century skills in Dutch primary and secondary education.

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