

Learning to reflect, how do you guide that?

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Learning to reflect, how do you guide that?

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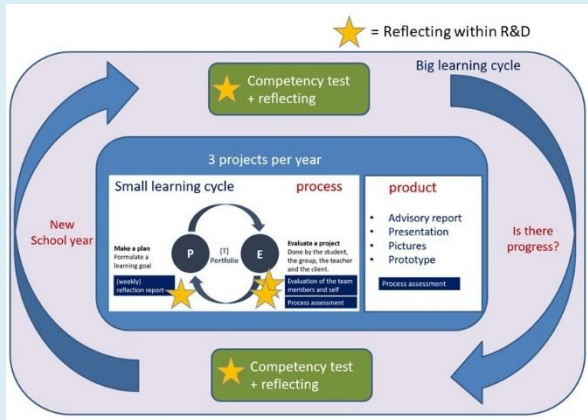
Research questions:

- How is reflecting on cross-curricular competences currently supported within the different schools with R&D?
- What learning goals do R&D teachers have with regard to guiding students' reflection process?

Supervisors: S. Stollman, G. Schellings and J. Vermunt

Context

- 102 Technasium schools in secondary education (NL)
- Research & Design (R&D)
- Science and technology assignments from real firms.
- Students learn to reflect on their developed cross-curricular competences.



Two problems

- R&D teachers have developed their own approaches to include the reflection process on developed cross-curricular competences.
- Teachers that supervise R&D are not used to guiding the reflection process from students in their basic school subjects. They need to develop new skills.



Impression of the workshop on location and in Teams

Research method

Participants

20 R&D teachers

Method

Focus group interview, topics:

- views on the reflection process,
- experiences with guiding reflection process
- views on (process-oriented) feedback,
- experiences with giving (process-oriented) feedback
- learning questions about guiding the reflection process.

Framework content analysis.

Categories	Sub-codes	Participant 1	Participant 2	...
Opinions	Competencies	quote	quote	
	Reflection	quote		
	Feedback			
Experiences	Reflection			
	Feedback			
Motives	Reflection			
	Feedback			
Difficulties/blockages	Reflection			
	Feedback			

Matrix used for the framework content analysis

"For the students, reflecting is an important aspect to master. Students find it annoying and difficult in the beginning but in the upper grades they see more the added value, not only for R&D but also for other courses".

"On paper I find it easier to give positive feedback than in class. In class, you're more likely to address negative behavior".

Preliminary results

- Teachers have knowledge about reflecting on cross-curricular competences and experience relevance.
- Between teachers is a lot of variation in applying.
- Experience R&D teachers is important
- All teachers struggle with balance between coaching on developing competences and the quality of the product.
- Teachers would like to have guidelines in how to inform and support students in the reflection process.
- Preferred way of learning is hands on and closely connected to the teaching practice.

"I am missing guidelines for how to implement and organize the reflection process. Now, I am missing the common thread".

Next step

Information from the interviews will be further analyzed and results will be used in the development of a professionalization trajectory for R&D teachers.