

Titel:

Learning to reflect, how to coach that?

Research on Coaching Skills to Support the Reflection Process of Technasium Students.

Naam:

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Samenvatting:

In the Netherlands, some schools for secondary education (Technasium) provide specialized Research & Design courses. During the R&D course, vwo and havo students work in teams on current science and technology assignments from real firms and clients.

An objective of these courses, is that student learn to reflect on Competencies. Research (Görtzen 2019; Maurits, 2013; Middelkamp, 2015) shows that students' reflection remain at a low level and students are often not motivated to reflect. Besides, R&D teachers experience trouble in coaching their students appropriately. This PhD-research investigates whether coaching in reflecting is improved if R&D teachers better indicate the structure of the reflection process and give process-oriented feedback. A professionalization trajectory for R&D teachers will be developed and evaluated, hereinafter referred to as Collaborative Teacher Reflection (CDR professionalization traject). The aim is to support the coaching skills of R&D teachers, resulting in a measurable improvement in the reflection process of Technasium students. The main research question is: What are the effects of the CDR professionalization trajectory on the reflection process of Technasium students?

The PhD project will consist of three sequential studies. During study 1 the current situation within the Technasia will be mapped and learning goals from teachers will be identified. The research questions of this study are: In what way is reflecting currently shaped within the different Technasia? What learning goals do R&D teachers have with regard to guiding students' reflection process? During a small-scale workshop, R&D teachers are interviewed. The second study concerns the design, usage and evaluation of the CDR professionalization trajectory for R&D teachers, based upon the results of study 1. The research question is: What are the effects of the CDR professionalization trajectory on the coaching skills of R&D teachers?

During this CDR professionalization trajectory laddering interviews will be used to determine personal learning goals and video fragments of lesson, while coaching, will be used to reflect on the current coaching skills. The teacher receives feedback and feedforward from a small group of teachers and is thus helped to reflect on the personal learning goal. This trajectory will be concluded with an evaluation in which teachers can share their experiences and discuss to what extent the expectations and learning questions have been answered.

In the last study, the CDR professionalization trajectory is further refined by focusing on students learning. Now, an important element of the CDR professionalization trajectory is about how to apply student material (reflection reports and questionnaires about perceived usefulness). By looking at student material, a teacher can investigate what changes are needed in teaching practice. The research question for this study will be: To what extent

does the use of student material influence the guidance skills of an R&D teacher? Once again, lessons are videotaped, and teachers and students are interviewed. The assumption is that improvements in process-oriented feedback and the structure of the reflection process, directly result in improvements in the reflection process of Technasium students.

Görtzen, J. (2019). *Reflecteren moet dat echt? Het Effect van een Video Verrijkte Rubriek voor de Vaardigheid Samenwerken, ter Ondersteuning van de Doeloriëntatie, op de Motivatie voor en het Niveau van Reflecteren van Technasiumleerlingen*. (Master's thesis). Open Universiteit, Heerlen.

Maurits, W. (2013). *Het bevorderen van zelfregulatie binnen het Technasium door gebruik te maken van prompts tijdens het schrijven van reflectieve learningjournals*. (Master's thesis). Universiteit Utrecht, Utrecht.

Middelkamp, J. (2015). *Het effect van feedbackgesprekken op de motivatie voor en het niveau van reflecteren van technasiumleerlingen*. (Master's thesis). Open Universiteit, Heerlen.

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Te vinden:

OU: <https://research.ou.nl/en/studentTheses/reflecteren-moet-dat-echt>

De link vanuit de Technasium site wordt aangepast en kan ik later aanleveren.

Van de thesis is een artikel gemaakt voor Script!-onderzoek. Op deze website verzamelt Ons Middelbaar Onderwijs (OMO) wetenschappelijke artikelen voor haar personeelsleden.

Artikel is te vinden via deze link:

<https://www.script-onderzoek.nl/script-onderzoek/a1318 Reflecteren-moet-dat-echt->