



**Hanzehogeschool
Groningen**
University of Applied Sciences



Creëer een positieve talentspiraal

Innovatieve handvatten voor het werken met kinderen met
autisme spectrum stoornis in de klas

Projectvoorstel RAAK Publiek



Healthy Ageing 

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A process approach to studying interaction with children with Autism Spectrum Disorder (ASD) in the classroom

Presentatie Studiedag 21 juni 2018

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Content

- Context Dutch Inclusive Education
- Curious Minds perspective
- Method: microgenetic – process study
- Results: pre – post – time series openness teacher – engagement / on-task behavior student
- Conclusion and discussion

Context

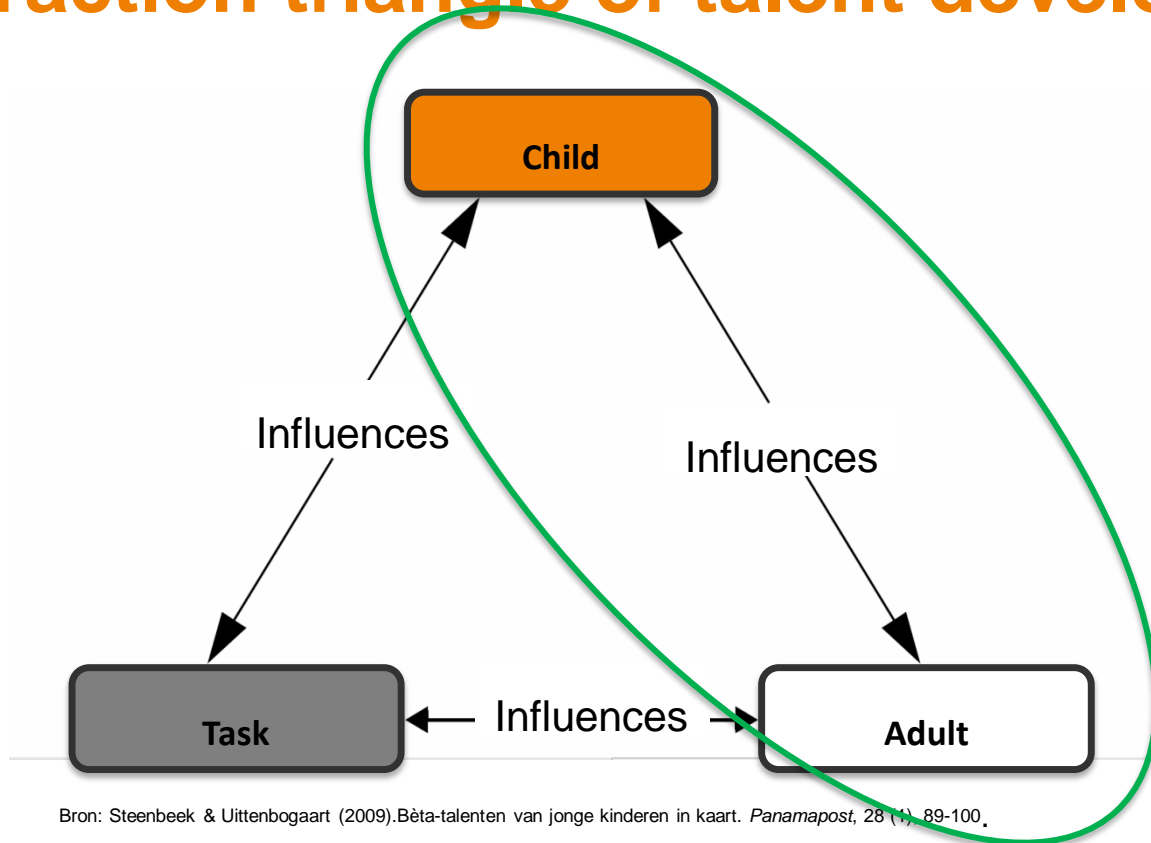
- Passend onderwijs (Act on Inclusive Education): Dutch schools have a duty to care – provide a suitable learning place to every child, also children with ASD (e.g., Boscher, 2013)
- Teacher feel incompetent when it comes to stimulate students to work independently (e.g., Hofstette & Bijstra, 2014) and to evoke talented behavior: enthusiasm, curiosity, deep-level reasoning / problem-solving, evoke support (demand articulation, this project)

Practical Issue: How do I (teacher) support students with ASD in independent work in the classroom, in order for these students to develop optimally and keep up with the other students in the classroom?

Theoretical framework: Curious Minds

- Curious Minds as a means **to understand, approach, and investigate** pupils' talent with a complex dynamic systems theory
- Definition of Talent: **developmental potential of an individual** to excel in when given optimal educational conditions (Van Geert & Steenbeek, 2007)
- Talent **emerges in the (social) dynamic interaction** between child, adult and materials (Steenbeek, Jansen, & van Geert, 2012; Steenbeek, Van Geert, & Van Dijk, 2011; Van der Steen, Steenbeek, & Van Geert, 2012).

Interaction triangle of talent development



Theoretical framework: Curious Minds

- Talented behavior is reflected by a **range of emergent properties** in pupils, i.e., curiosity, interest, deep level of scientific reasoning (o.a.; Meindertsma, Van Dijk, Steenbeek, & Van Geert, 2014)
- Independent work: concept related to **autonomy, self-regulations, on-task** behavior
- **Engagement** is related to support in (cognitive) **autonomy** (Stefanou et al., 2004; Van Vondel, 2017)

Curious Minds strategies

Developed in research on talent development in Science Education
(e.g., Wetzels, 2015; Van Vondel, 2017; Geveke, 2017)

- Provide room for thinking (openness), e.g., student centered questions (Oliveira, 2010)
- Provide structure, e.g., empirical cycle (Goodwin, 2003)
- Use scaffolding (Wood, Bruner, & Ross, 1976; Van de Pol et al.,)
- See www.hanze.nl/autisme for animation

But how does it work with pupils with ASD?



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Diagnostic Criteria ASD:

- 1) Persistent deficits in **social communication and social interaction** across multiple contexts, as manifested by the following, currently or by history
- 2) **Restricted, repetitive patterns** of behavior, interests, or activities, as manifested by at least two of the following, currently or by history



Overarching question project

How can teachers in primary education - both in regular as in special education - apply the Curious Minds Strategies when working with students with ASD, in order to effectively support these students to work independently?

- Six teachers and their class: 2 regular PO, 2 special primary education and 2 (severe) special education – cluster 4 (behavioral problems)
- Video Feedback Coaching, collegial fashion (3x duo)
- Learning in Networks: questions of the teachers and talent moments

Research question this study

How can the level of engagement of students with ASD be increased and what is the role of the teacher's support?

1) Does the level of engagement (S) and openness (teacher) increase? (pre- post- measurements)

2) What are the type of patterns that can be gleaned from data?

3) How can moments of increased engagement be described?

Method

- Three teachers: 1 regular PE, 2 special PE
- 3 ASD- students Special PE en 1 PE (7y8m – 13y1m)
- Videos of math and language lessons: pre Oct 2016 – post May 2017
- Microgenetic approach – studying processes
- Level of **engagement (S)** - level of **Openness (T)**
- Difference in duration behavior / amount of utterances
- Time series: which behavior peaks when?
- Descriptions of peaks

Coding schemes

code	Description behavior student*
1	Off-task and not: doesn't look at the task or teacher; resigns
2	On-task behavior: Makes the task, looks at the task/ teacher (slowly, with frustration or alert)
3	Engagement: enthusiasm, curiosity, takes initiatives, deep-level learning
	Interobserver reliability: 70-78%

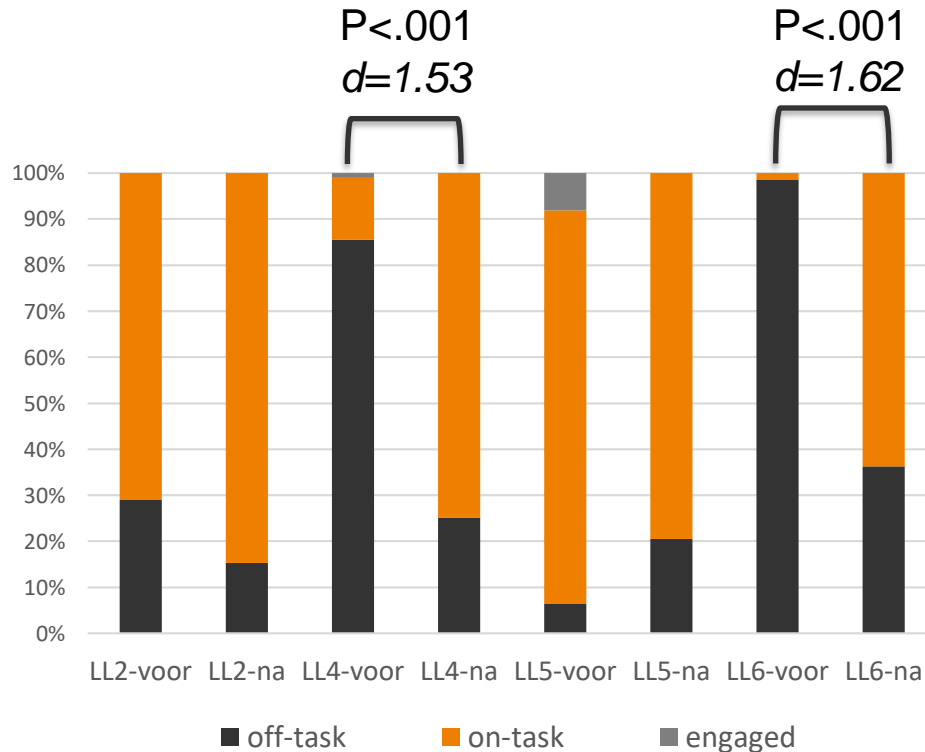
code	Description behavior teacher**
1	Restriction: stop
2	Instruction: look at
3	Provide information: this is a tube
4	Closed question: Is this a planet?
5	Open question: Why do you think...
6	Encouragement: yes, explain...
	Interobserver reliability: 84-89%

*Student's engagement scale (Van Vondel, 2017; Laevers, 2005; Coan&Gottman's, 2007)

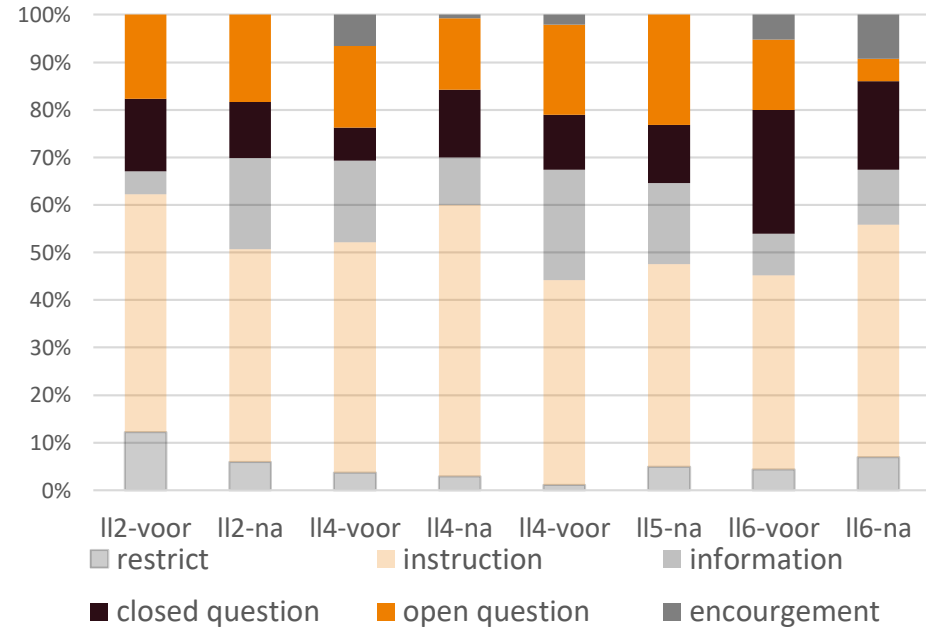
**Openheidschaal (Geveke, 2017; Meindertsma, 2014)

1) Increase engagement and openness?

Lever of engagement pre - post



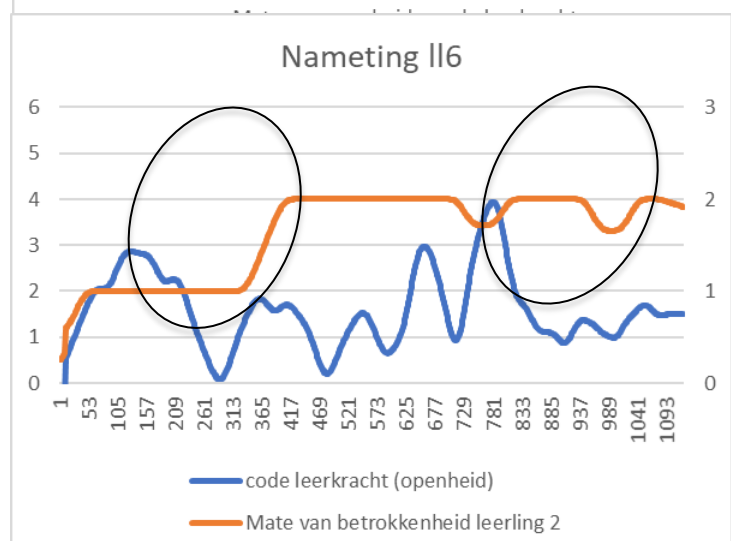
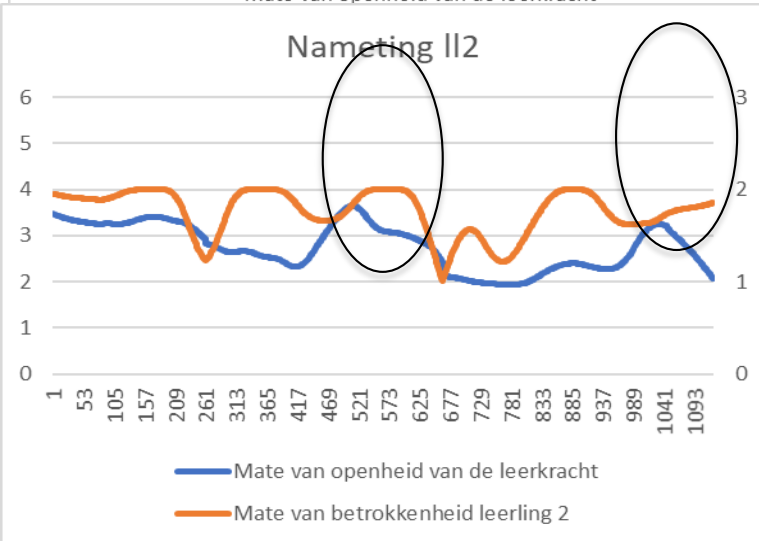
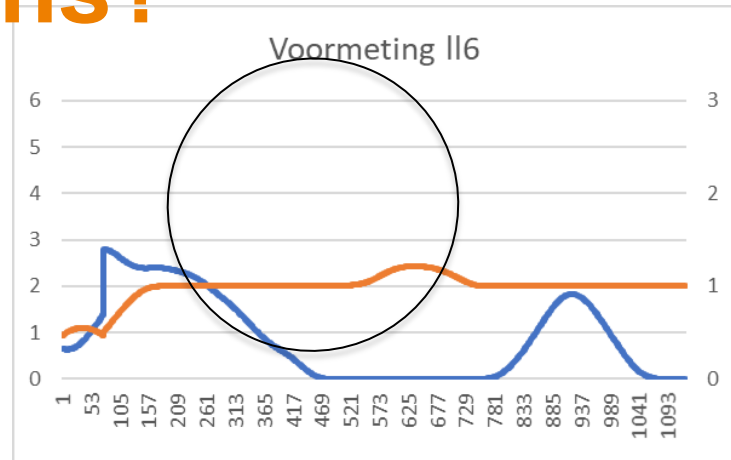
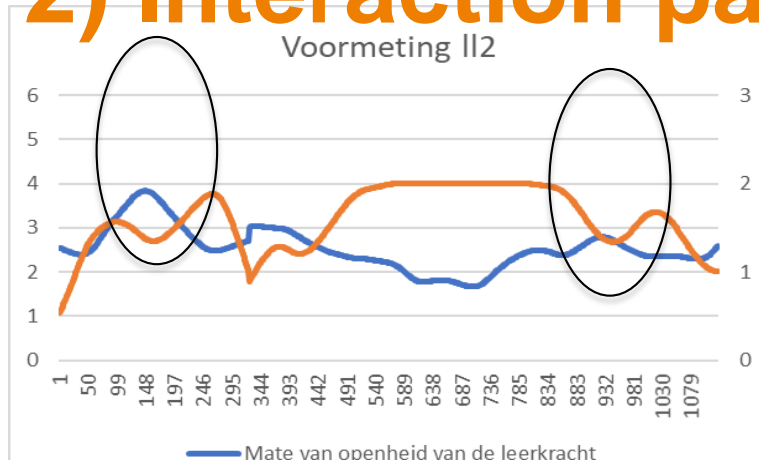
Level of openness pre - post



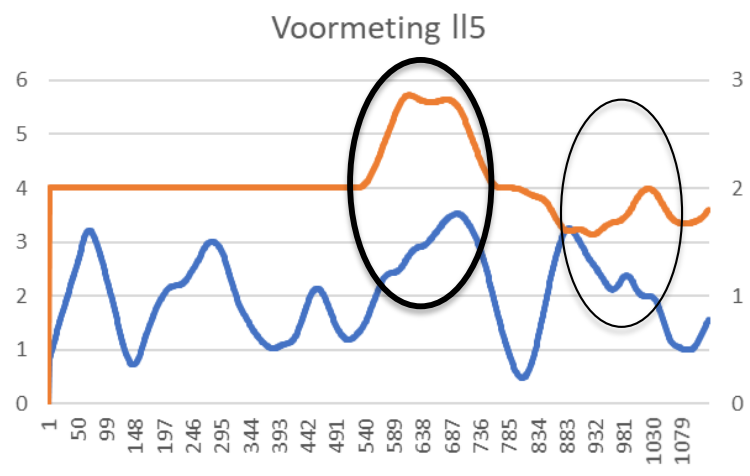
2) Interaction patterns?

SPE:
10y9m

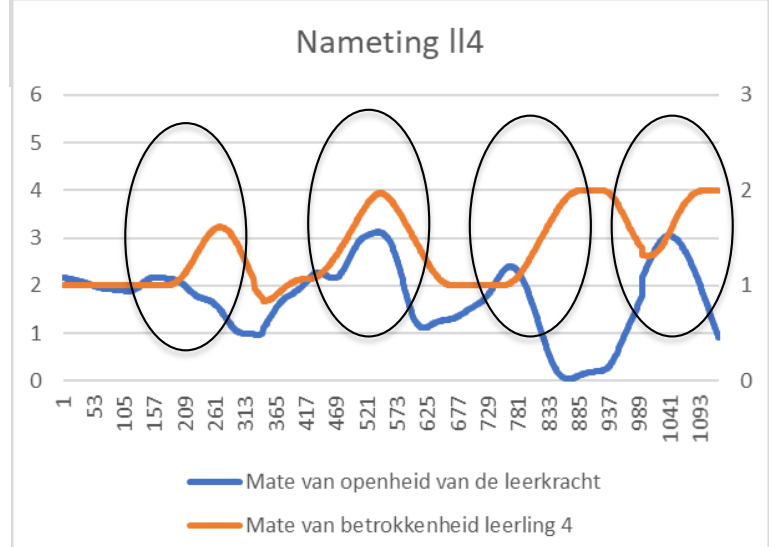
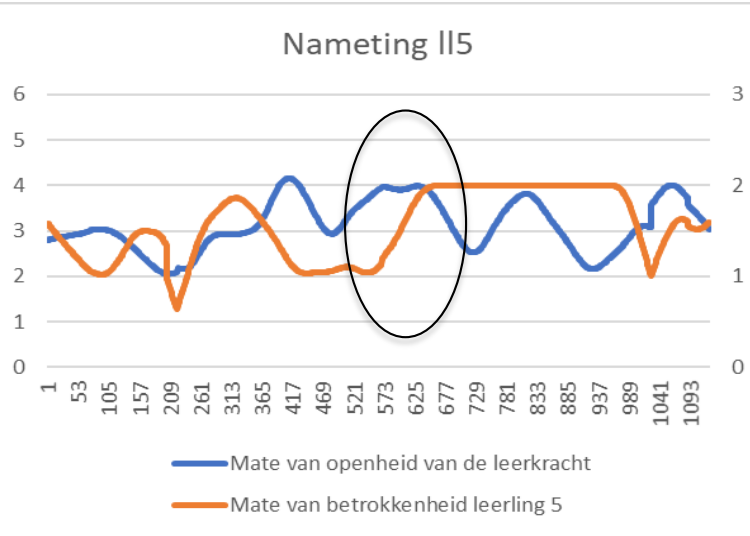
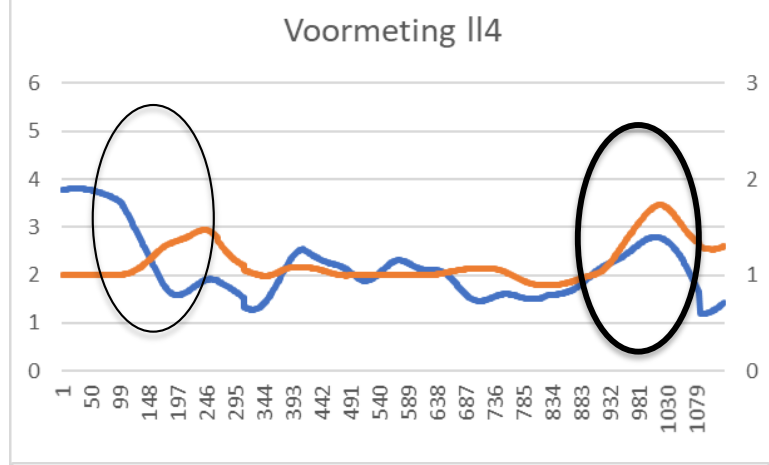
PE:
7y8m



SBO:
12j3m

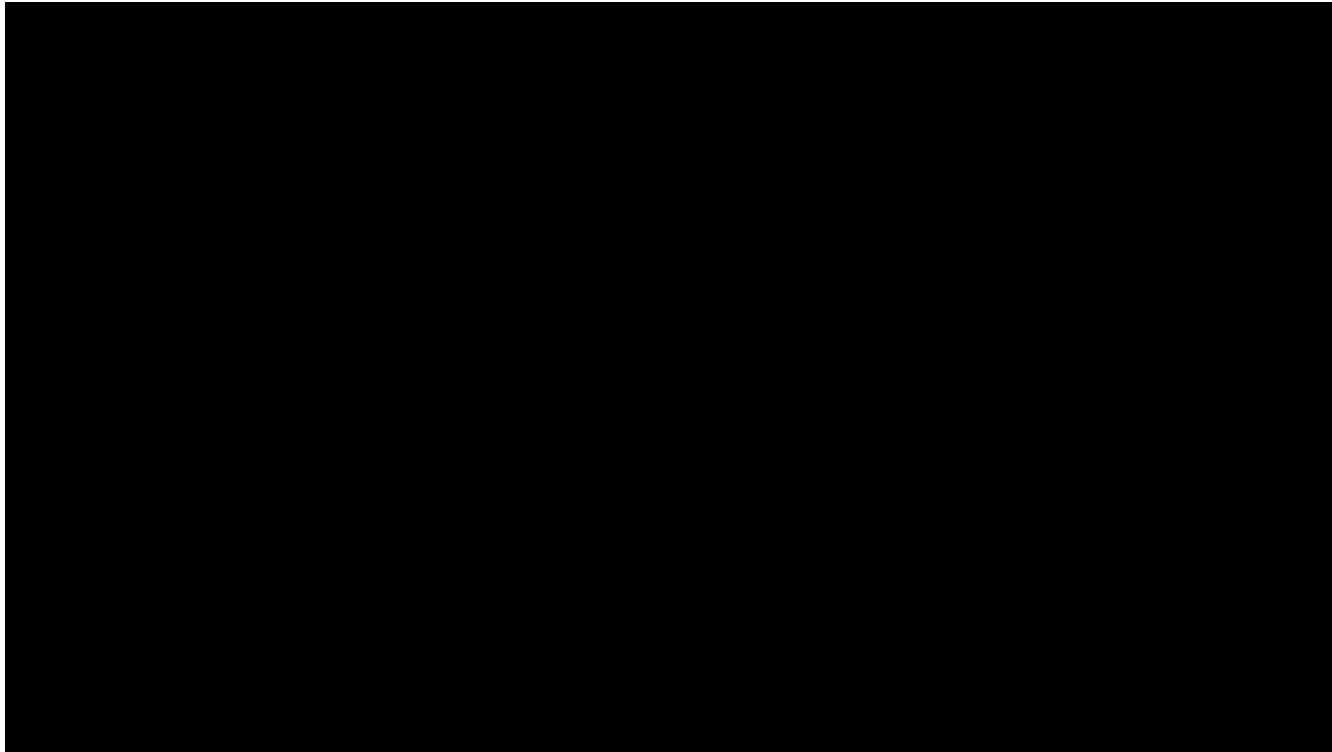


SBO:
13j1m



Meer variabiliteit in de nameting – aanwijzing voor doorbreking van een patroon?

3) Descriptions peaks?



Description peaks?

- Increased engagement – openness does not seem to fully explain, also:
 - Elements of play
 - Experience, investigate
 - Appropriate for the motivation of the individual student
 - Contact
 - Getting a turn

Conclusion and discussion

- On-task behavior and engagement may be evoked by openness
- Students with ASD show small changes in engagement during a short time
- Probably the other strategies or the combination of the three are important to evoke on-task or engaged behavior. Further research is needed
- The surplus of this research is moment-to-moment patterns show: how and when peaks emerge and disappear, variability within and between students/teachers, and coherence between teacher-student.

Practical application:

Good Practices as a tool for professional development in teacher-education



Questions?

- More information: www.hanze.nl/autisme
- Good Practices video's and animations
- Script for working with learning in networks
- Publication (practical – applied)

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