

UNIVERSITY OF TWENTE.



FACTORS INFLUENCING THE USE OF FORMATIVE ASSESSMENT IN THE CLASSROOM

SESSION: FUTURE TRENDS IN EDUCATIONAL ASSESSMENT IN THE NETHERLANDS



CHRISTEL H.D. WOLTERINCK
WILMA B. KIPPERS
KIM SCHILDKAMP
CINDY L. POORTMAN



AERA, WASHINGTON, APRIL 9TH, 2016





INTRODUCTION FORMATIVE ASSESSMENT

- Formative assessment^{1,2,3,6}
 - teachers and students derive information from *assessments*
 - use this as *feedback*
 - to improve the quality of *teachers' instruction*
 - to improve the quality of *students' learning*
- higher quality of education
- better learning outcomes for students

FORMATIVE ASSESSMENT IS AN UMBRELLA TERM

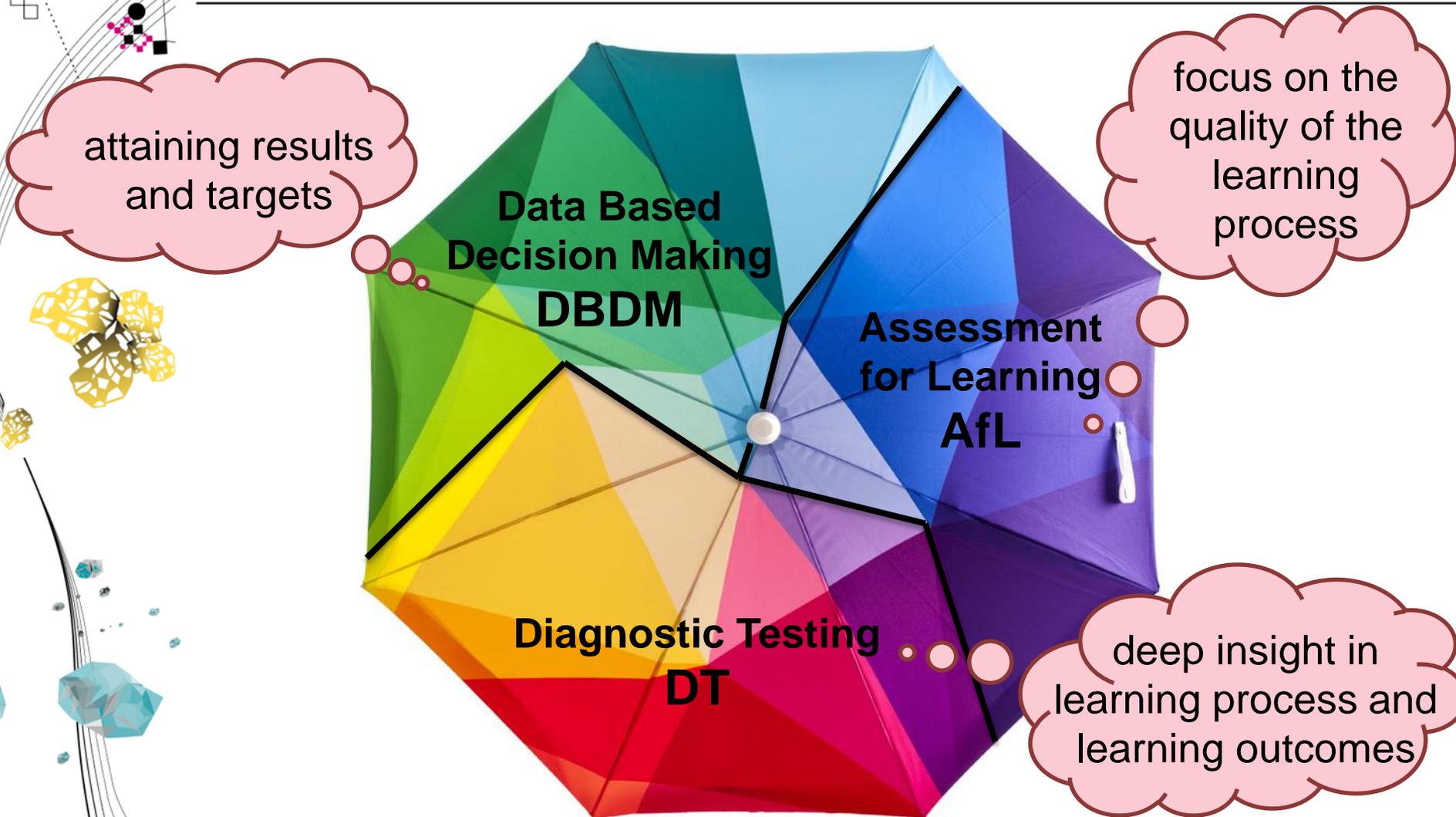
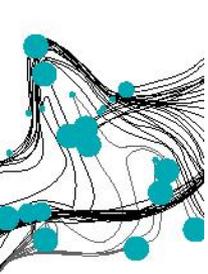
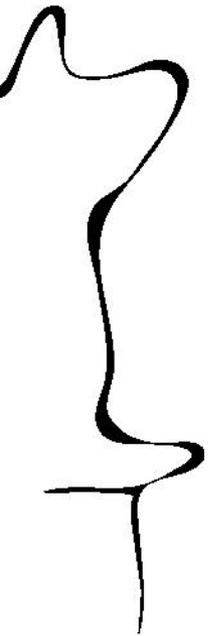


Figure 1: Three approaches towards formative assessment ⁵



FOCUS ON TWO APPROACHES: DBDM AND AFL



DBDM

Data-based decision making

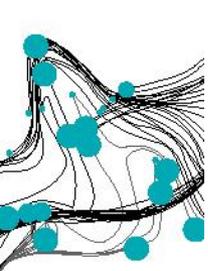
- systematically
- analyzing
- existing data sources
- applying outcomes
- innovate teaching, curricula and school performance
- implementing

AfL

Assessment for learning

- everyday practice
- students, teacher and peers
- improve learning process
- evaluate, reflect on learning
- continuous feedback





FACTORS INFLUENCING FORMATIVE ASSESSMENT

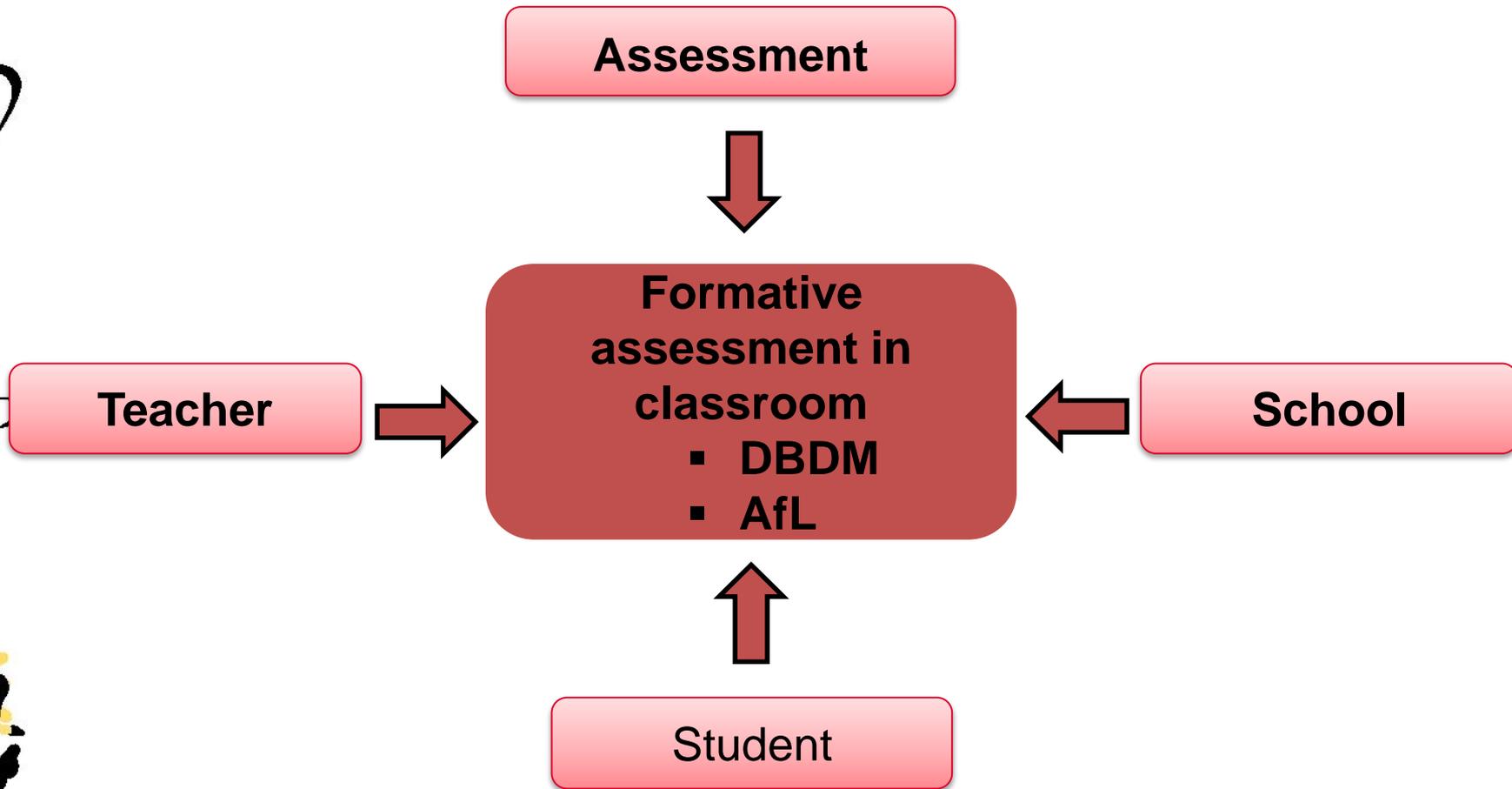
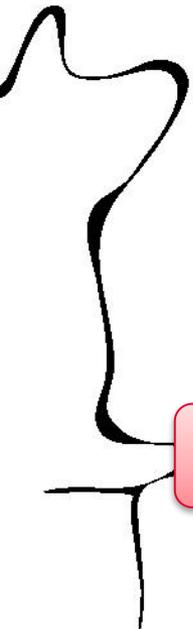
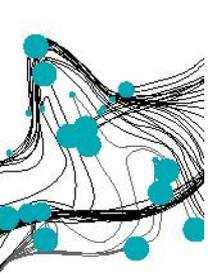


Figure 2: Theoretical framework on factors influencing formative assessment in the classroom



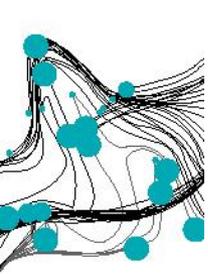
RESEARCH AIM AND QUESTIONS

Aim: Exploring current use of formative assessment by teachers and students in secondary schools

Questions:

1. To what extent is formative assessment (DBDM and AfL) used in classrooms?
 - I. according to the teacher?
 - II. according to the student?
2. Which *prerequisites* do teachers most frequently describe as important for their formative assessment use?
3. To what extent do teacher characteristics influence the use of formative assessment (DBDM and AfL) in classrooms?





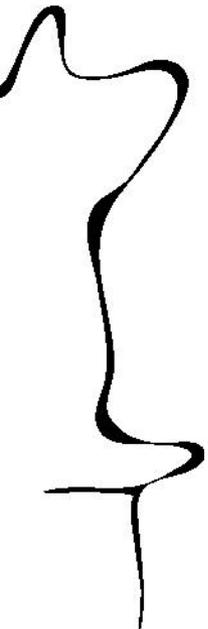
METHOD

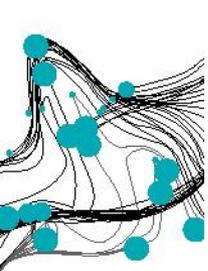
Quantitative research methodology

- 15 Dutch schools
- 434 teachers, 515 students
- Reliable and valid survey for teachers and students ⁴
- Descriptive and regression analyses

Explorative qualitative research methodology

- 4 high-performing Dutch schools
- Individual in-depth interviews, checklists
- Descriptive analyses





RESULTS

RQ1: STRATEGIES USED ACCORDING TO TEACHERS

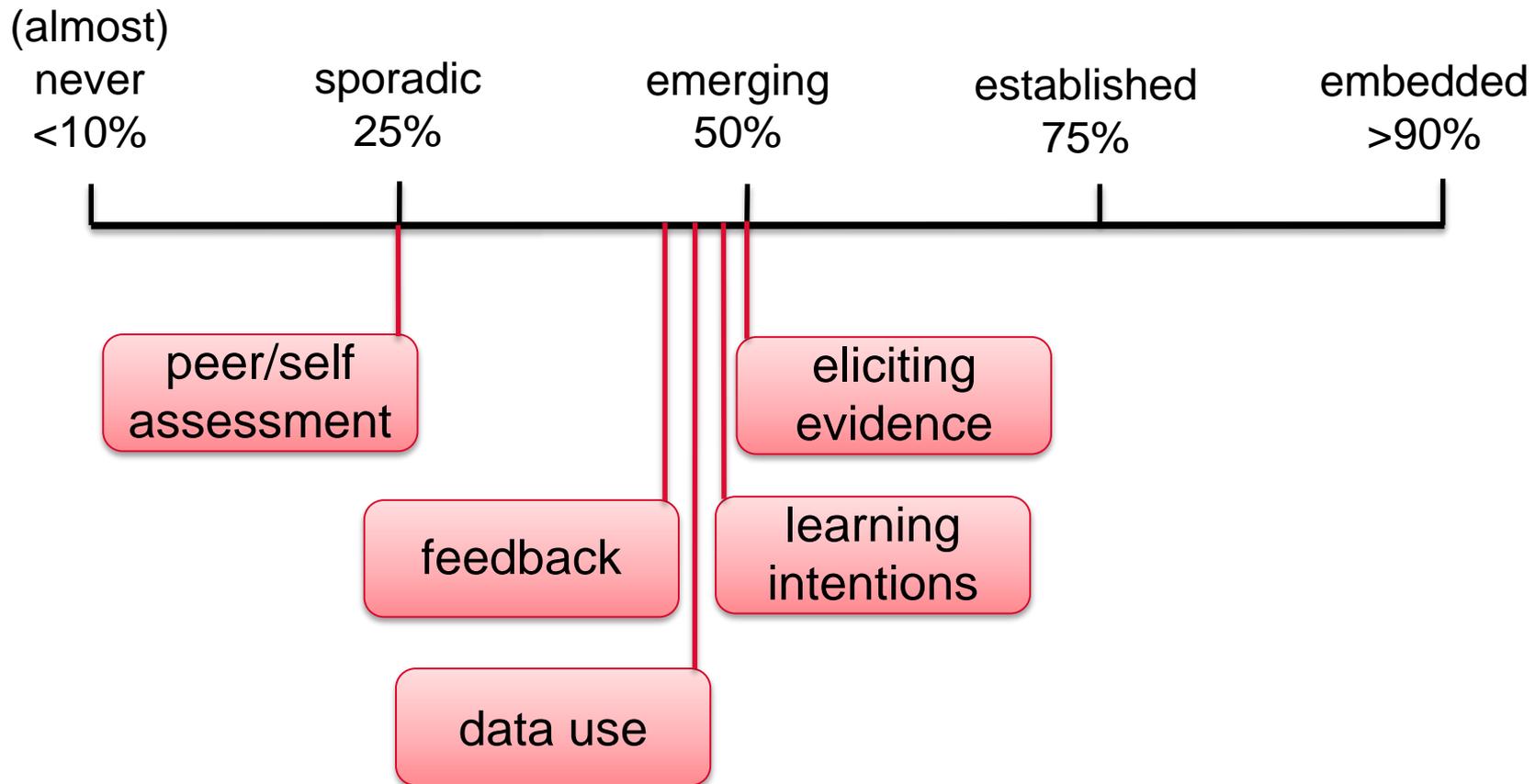
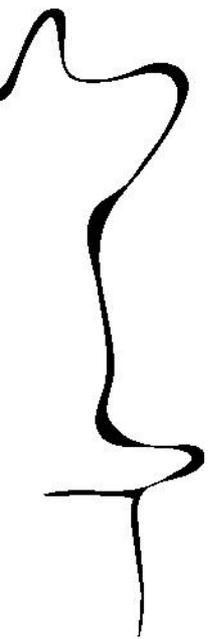
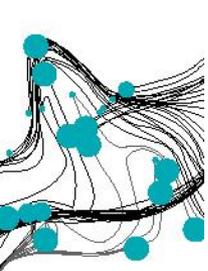


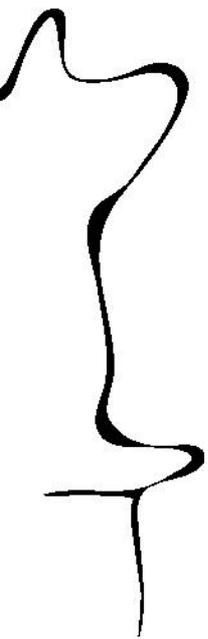
Figure 3: Strategies of formative assessment used according to teachers



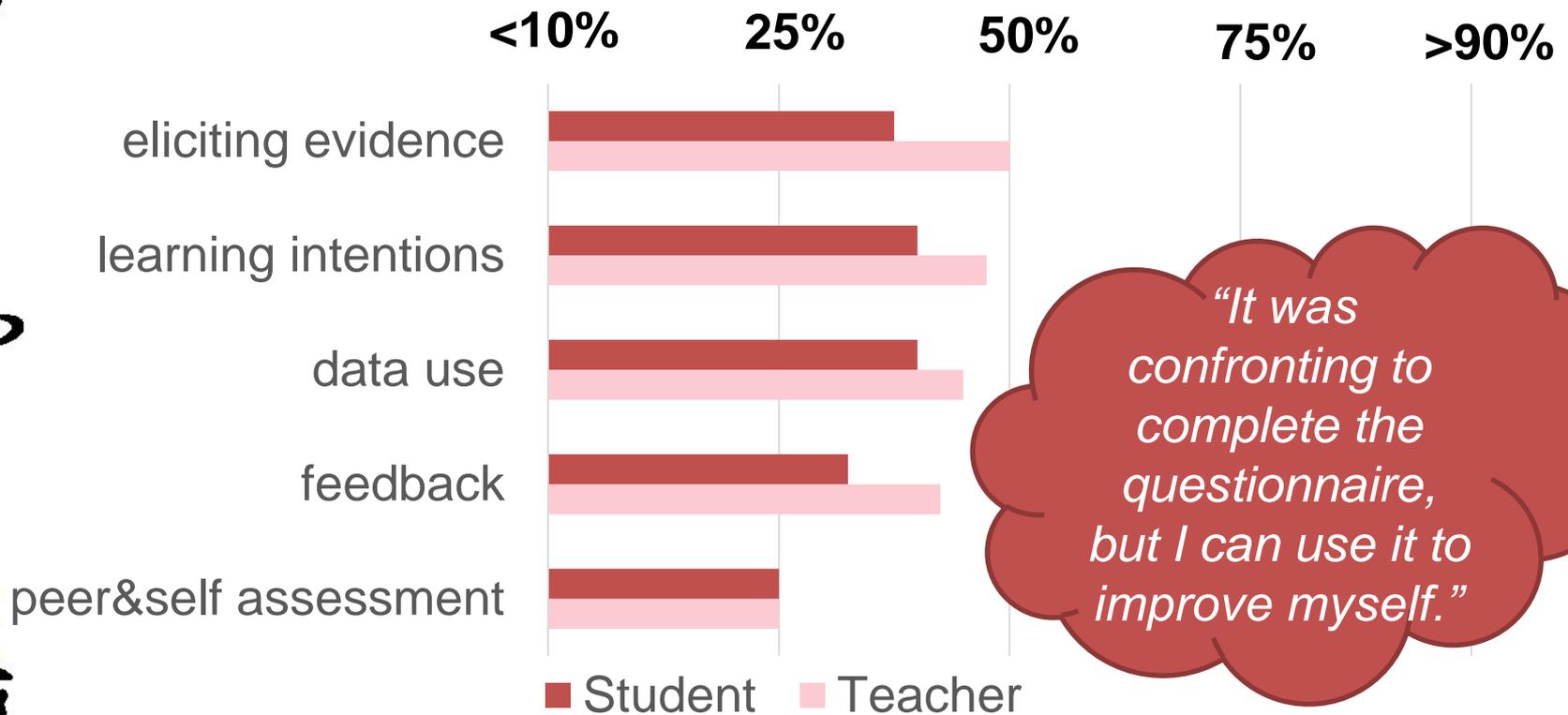


RESULTS

RQ1: STRATEGIES USED ACCORDING TO STUDENTS



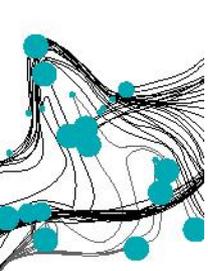
Embedded in lessons:



“It was confronting to complete the questionnaire, but I can use it to improve myself.”



Figure 4: Strategies of formative assessment used according to teachers and students



RESULTS

RQ2: PREREQUISITES



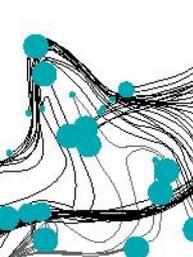
- Five most important prerequisites:
 1. Positive attitude of teachers towards formative assessment
 2. Specific feedback provided by assessments
 3. Alignment between assessments and curriculum
 4. School leaders facilitating formative assessment use
 5. Teachers' knowledge and skills to adjust instruction



'You have to pay attention to your students, know what is going on and be willing.'

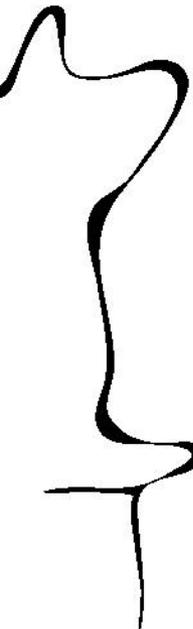
'Students should be aware of the learning objectives.'

'The forty-fifty minute schedule should be changed in a seventy- or eighty-minute schedule.'



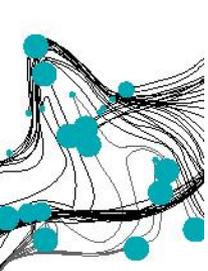
RESULTS

RQ3: TEACHER CHARACTERISTICS



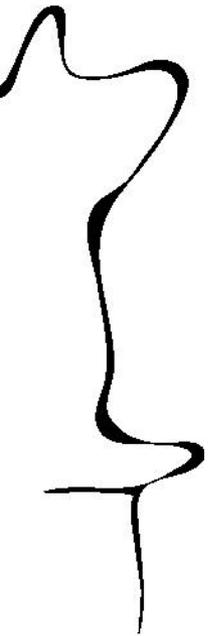
	Predictor	β	p	R ²
1. Peer/self assessment	attitude	-.008	.890	.243
	knowledge/skills	.496	.000	
2. Feedback	attitude	.117	.044	.290
	knowledge/skills	.494	.000	
3. Data use	attitude	.077	.201	.193
	knowledge/skills	.411	.000	
4. Learning intentions	attitude	.026	.670	.175
	knowledge/skills	.409	.000	
5. Eliciting information	attitude	.048	.442	.122
	knowledge/skills	.333	.000	

Table 1. Influence **attitude and knowledge/skills** on use of formative assessment in classroom



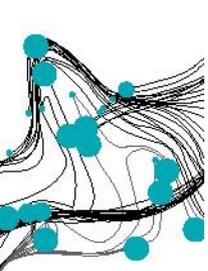
CONCLUSIONS AND DISCUSSION

RQ1: STRATEGIES USED ACCORDING TO TEACHERS AND STUDENTS



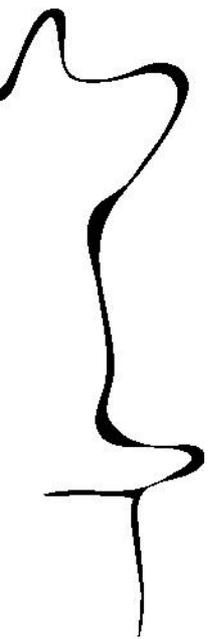
- Most strategies not used often: between 25-50% of lessons
- Students indicate even less use
- Little use of peer- and self assessment
- Formative assessment is not integrated with daily classroom activities





CONCLUSIONS AND DISCUSSION

RQ2 AND RQ3: PREREQUISITES AND TEACHER CHARACTERISTICS

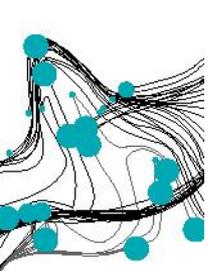


- We need to pay attention to prerequisites, such as:
 - Stimulate a positive attitude
 - Specific feedback assessment
 - Alignment assessment and curriculum
 - Support school leader
 - Teacher knowledge and skills

- Attitude is a poor predictor for the use of formative assessment in classroom. This is probably due to an average positive attitude in our sample and thus too little variance

- **Professional development** in formative assessment urgently needed



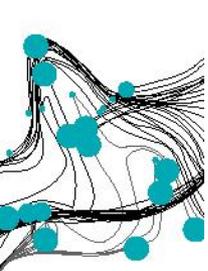


THANK YOU FOR YOUR ATTENTION

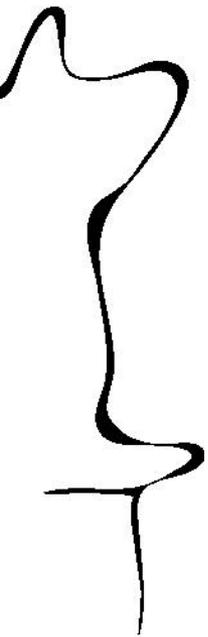


It is assessment which helps us distinguish between teaching and learning

- Any questions?
- For further questions please contact c.h.d.wolterinck@utwente.nl / w.b.kippers@utwente.nl



LITERATURE



- 1: Bennett, R. E. (2011). Formative assessment: A critical review. *Assessment in Education: Principles, Policy & Practice*, 18, 5-25. doi: 10.1080/0969594X.2010.513678
- 2: Black, P. & William, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(1), 5-31. doi: 10.1007/s11092-008-9068-5
- 3: Heritage, M. (2007). Formative assessment: What do teachers need to know and do? *Phi Delta Kappan*, 89(2), 140-145. doi: 10.1177/003172170708900210
- 4: Lysaght, Z., O'Leary, M. (2013). An instrument to audit teachers' use of assessment for learning, *Irish Educational Studies*, 32(2), 217-323. doi: 10.1080/03323315.2013.784636
- 5: Van der Kleij, F. M., Vermeulen, J. A., Schildkamp, K., Eggen, T. J. H. M. (2013, November). *Data-based decision making, assessment for learning, and diagnostic testing in formative assessment*. Keynote presentation at the conference of the European Association for Educational Assessment, Paris, France.
- 6: Van der Kleij, F. M., Vermeulen, J. A., Schildkamp, K., & Eggen, T. J. H. M. (2015). Integrating data-based decision making, Assessment for Learning, and diagnostic testing in formative assessment. *Assessment in Education: Principles, Policy & Practice*. doi: 10.1080/0969594X.2014.999024

