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The use of data by teacher educators in the Netherlands

Do teacher educators practice what they teach?

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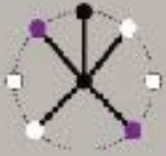
Context

- Increase data (-use) in education (OECD, 2013)

- Teacher Education Colleges —> data use: accountability, part of the curriculum (Mandinach & Gummer, 2016a en b)

Research questions

How do teacher trainers pay attention to data use in teacher education, how does teacher educators use data, and which factors influence this data use?

1. In which way do teachers educators pay attention to data use in their curriculum?

2. To what extent do teacher educators' use data for accountability, teaching and instructional improvement?

3. What factors influence the use of data?

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Data

Information that is collected and organized to represent some aspects of the school (Lai & Schildkamp, 2013, p.10).

- Input data: e.g. gender, previous school;

- Outcome data: e.g. assessments results, written and oral exams, portfolio's

- Process: e.g. the curriculum, instruction observations

- Context data: eg. data on school culture
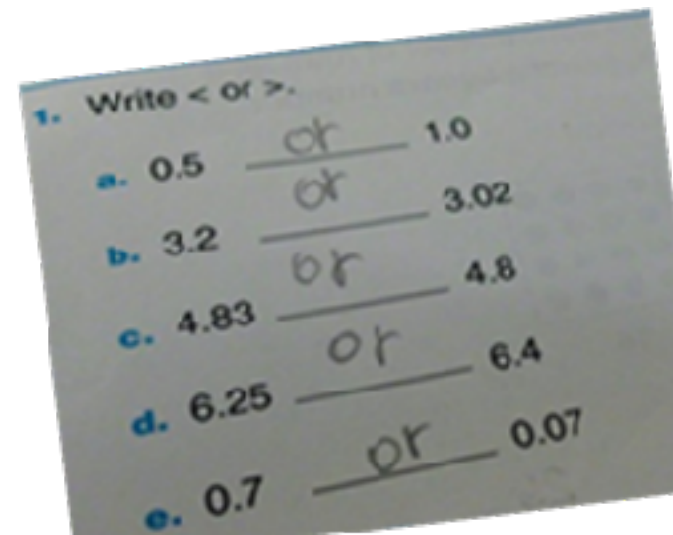
Ways of data use in education / examples of data:

Accountability	Rankings, drop- out rates
School development	Drop-out rates, test results, questionnaires, results form intake
Instructional improvement	Test results (formative and summative), observations
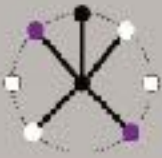
Factors influencing data use

Organisation (e.g. management)	Data (e.g. quality of data)

Data use

| Collaboration (e.g. teacher collaboration)	User (e.g. knowledge/skills)

Schildkamp & Kuiper, 2010

Method

- Questionnaire data use and influencing factors
- Respondents from 7 teacher education institutes (N = 112)
- Documents of 5 teacher education institutes

Scale	Number of items	Reliability
Data characteristics	12	0.86
Characteristics of the user	10	0.84
Characteristics of the organization	15	0.90
Collaboration	8	0.81

Analysis

- Questionnaire data: Regression analysis (7 colleges, ICC was very low, no multilevel analysis needed)

- Analysis of curricula: Qualitative analysis, in a case-ordered and a cross-case ordered matrix
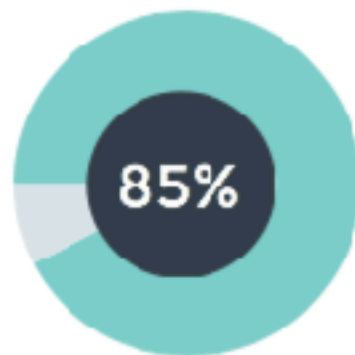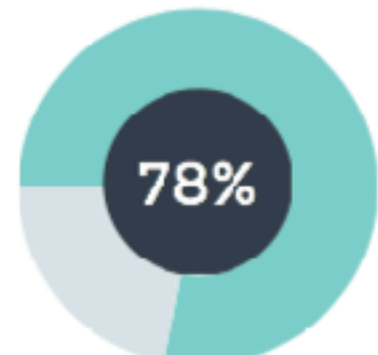
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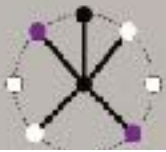
Data-use in curriculum TE

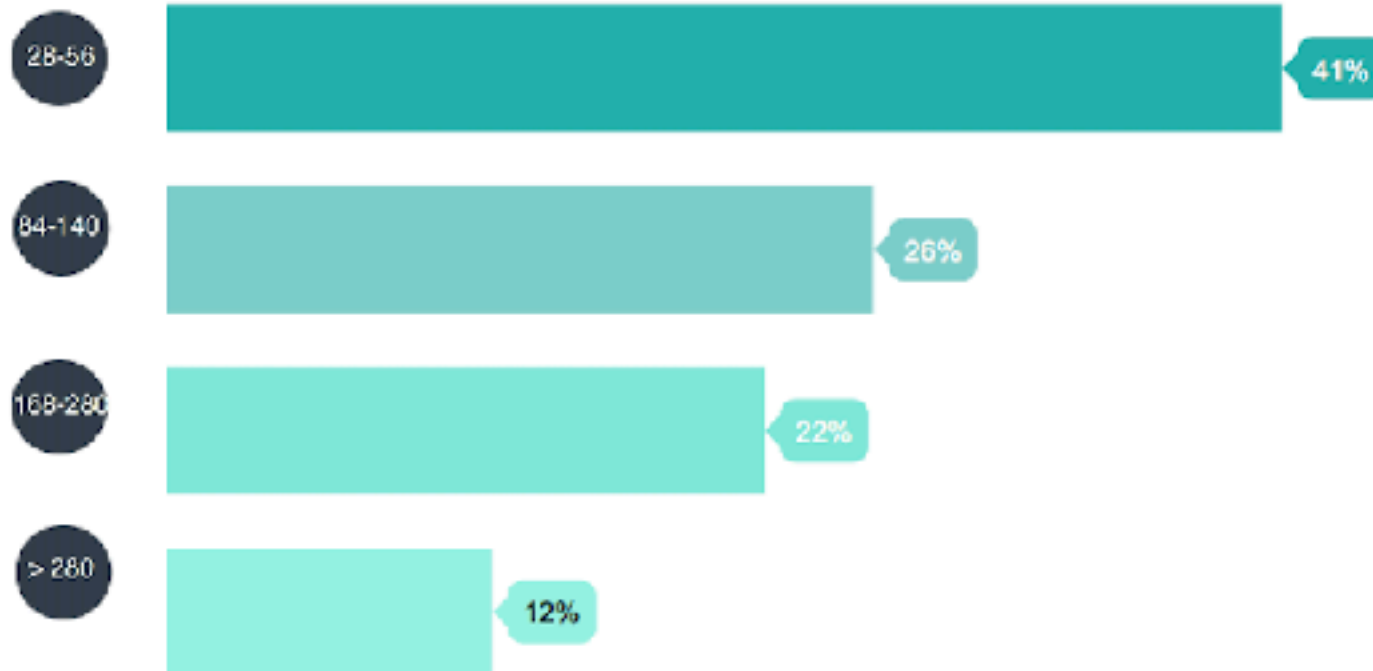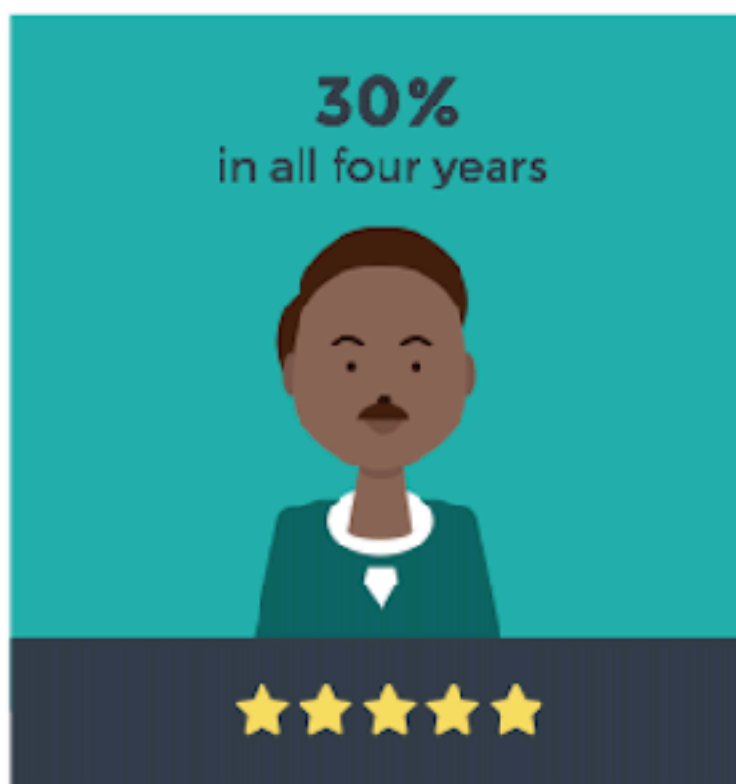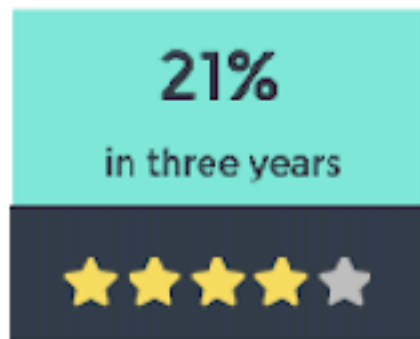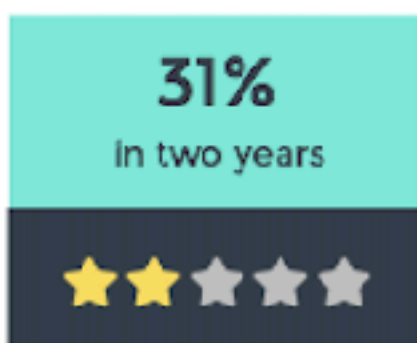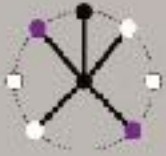| Data-use in curriculum	Data-use mandatory	Integrated in several courses	Part of internship
92%	85%	75%	78%

How do teachers educators use data in teacher education?

Hours spent on data-use in TE

Hours	Percentage
28-56	41%
84-140	26%
168-280	22%
> 280	12%

Data for accountability, school development and instructional improvement?

Scale	Data use for accountability	Data use for school improvement	Data use for instructional improvement
N	113	113	110
Mean	1.89	2.43	3.33
Median	2.00	2.38	3.31
Modus	2.00	2.33	3.68
St. Deviation	0.39	0.48	0.33
Minimum	1.00	1.00	1.25
Maximum	3.18	3.78	4.00

Note: the lower the score, the higher the use
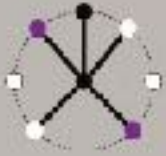
What factors influence the use of data?

	R2	F(Sig)	Standardised coëfficiënts	t	Sig.
Data use for accountability	0.36	15.43 (0.000)*	**0.27 (D)**	**3.09**	**0.003**
			0.30 (G)	**3.38**	**0.001**
			0.23 (S)	**2.12**	**0.036**
			0.03 (O)	0.30	0.767
Data use for school improvement	0.53	30.54 (0.000)*	0.07 (D)	0.87	0.384
			0.03 (G)	0.37	0.713
			0.18 (S)	**1.91**	**0.058**
			0.56 (O)	**5.81**	**0.000**
Data use for instructional improvement	0.03	0.69 (0.599)	0.09 (D)	0.81	0.421
			-0.12 (G)	-1.10	0.272
			0.03 (S)	0.18	0.856
			-0.11 (O)	-0.77	0.440

Table
Results from the regression analysis

* significant for p <0.01; D = Data, User G = S = Working together, O = Organization

Conclusions

- Data use in the curriculum: For most teacher educators data-use is part of the curriculum

- Differences in the place of data use in the curriculum, as a results of autonomy

- Not all components of data use receive equal attention (e.g., less attention for data quality)

Conclusions

- Teacher educators use data for accountability and less for school- and instructional improvement
- Accountability pressure: Improvement needed in teacher education colleges
- User-, data-, organizational characteristics, and collaboration influences data use for accountability and school development
- No influencing factors found for data use for instructional improvement (low sd?)
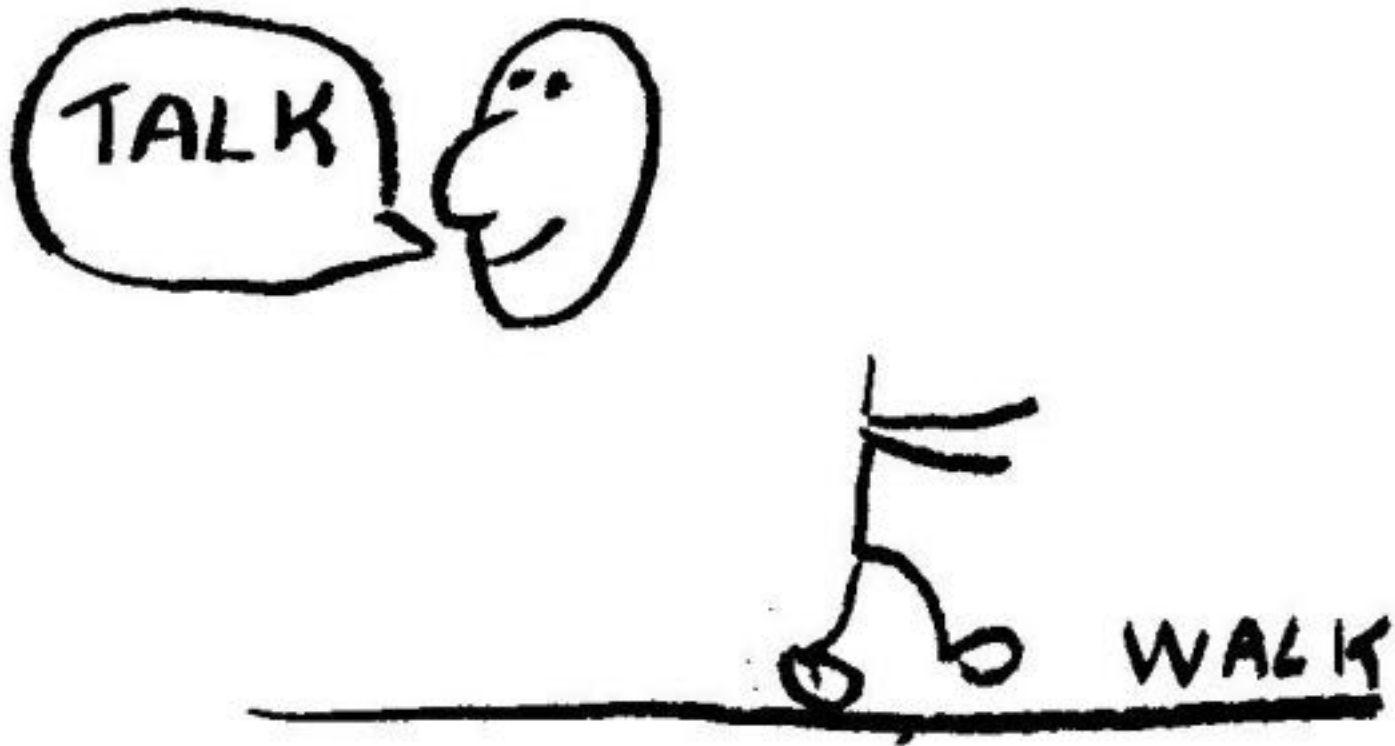
Discussion

- Data use for instruction needs more attention
  - To improve education for future teachers
  - Teacher educators act as a role model

- Important question: what types of knowledge and skills are required of teacher educators?
  - Data literacy
  - Pedagogical Content Knowledge

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Discussion

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Literature

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