Reinterpreting Pedagogical Diagnostics for Implementation in Teacher Education Programmes

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International Context
Influences on Teacher Education

2nd empirical shift in education around 2000
based upon the 1st empirical shift in the 1960ies (H. Roth 1962: "realistic turn"), two parallel movements
➢ tendency toward large-scale assessments (TIMSS, PISA, PIRLS)
➢ personalization of learning (leadership for learning)

societal transformations since the 1990ies
Global and local co-evolutionary developments (Naisbitt & Naisbitt, 2019):
➢ societal (social dynamics: divide between rich and poor, political extremes, migration, …)
➢ technological (internet/www) and
➢ economical (globalization)
resonate with (public) education systems

Paradigmatic shift from teaching to learning (Barr & Tagg, 1995)
International large-scale assessments (Rutkowski et al., 2013)
Personalization of learning (Garrick et al., 2018)

changes in …
relevance
interpretation
concept
of pedagogical diagnostics
(Schreiner & Kraler, 2019)

National Context
Teacher Education in Austria

System goals:
 - Comparability of outcomes across schools and regions,
 - Equity
➔ New requirements posed by the school system on teachers (and teacher education), particularly in regards of diagnostic expertise
In this context improvements regarding options of action and more clearly defined objectives were needed.

Example: Consortium Teacher Education West

Three pillars: (1) subject-specific competencies, (2) didactics, (3) general pedagogical knowledge. PD is positioned in pillar 3.

Bachelor (4 years) ➔ Master (2 years)

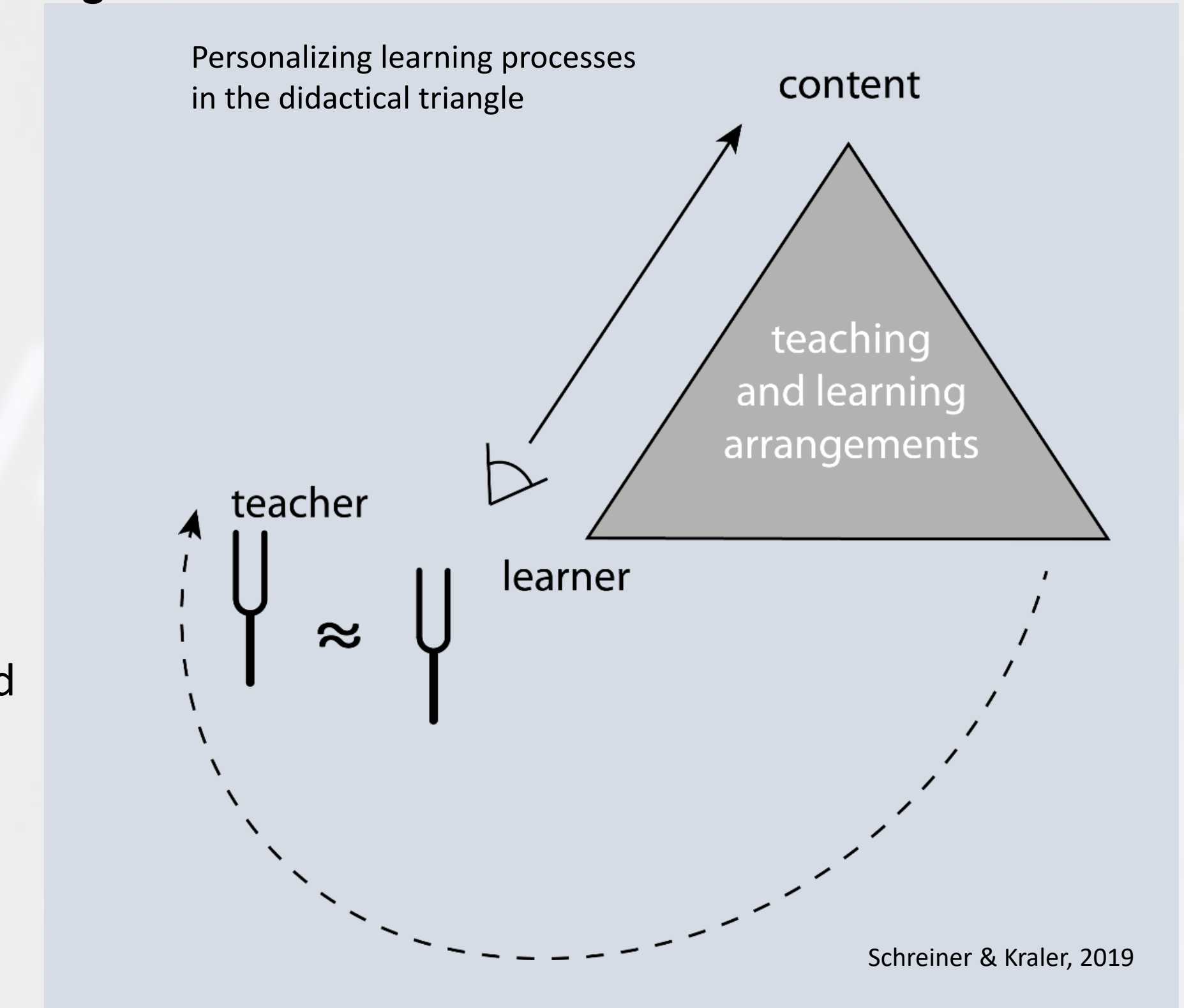M1 M2 **M3** M4 M5 M6   (optional: PhD – 3 years)

pedagogical diagnostics
➔ formative assessment (Wiliam, 2010)
➔ summative assessment (grading)

pedagogical diagnostics
➔ evaluating teaching
➔ school development

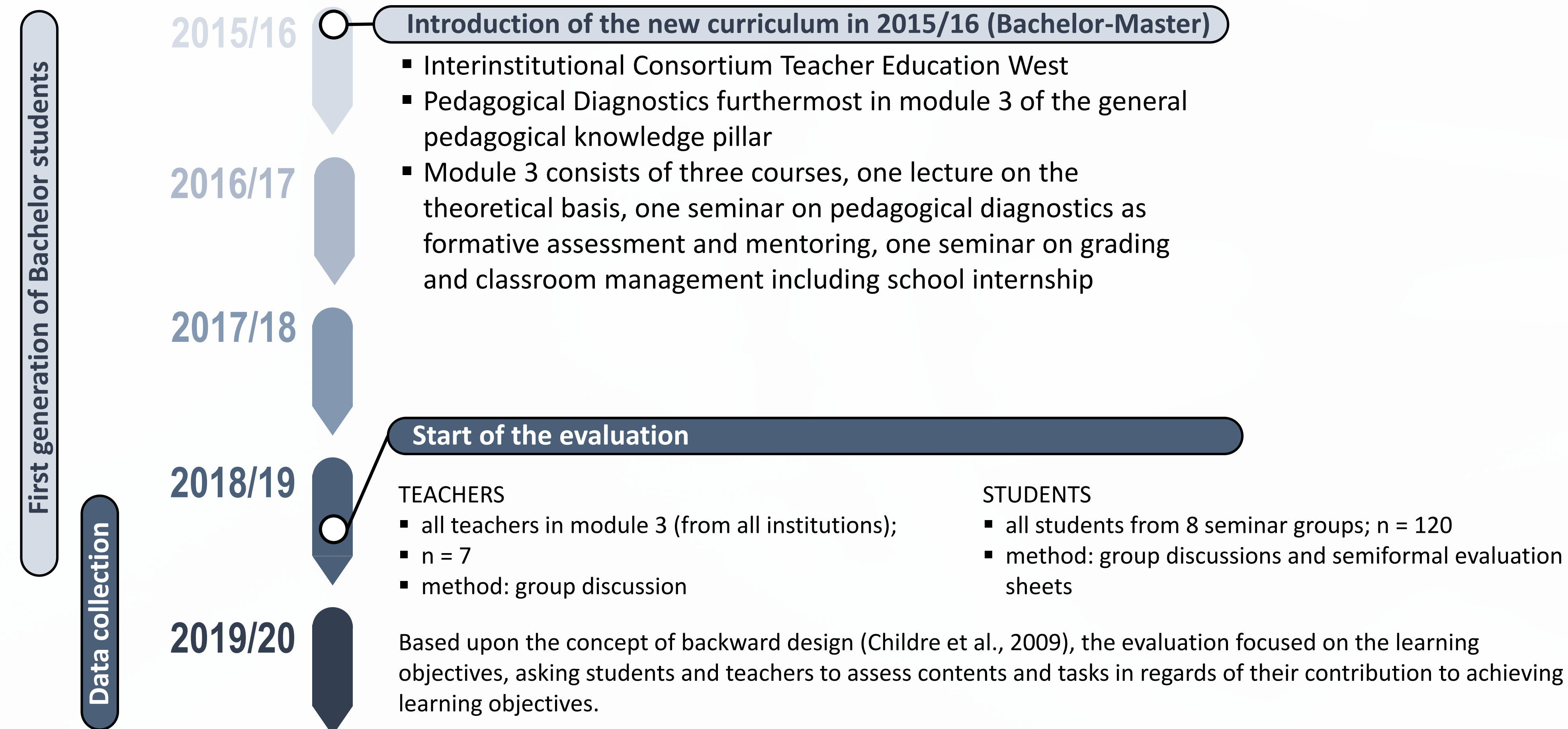## Conceptualizing Pedagogical Diagnostics in Teacher Education

- Heterogeneity of student populations (at all levels)
 — awareness of individuality (Jarvis 2009)
 — diversity as normality (Sliwka, 2010)
 — personalization of learning processes (Griffin 1977, see figure 1)

- **Pedagogical diagnostics can be interpreted as**
 - interactive-dialogical
 - learning-related
 - problem-focused and
 - process-product-orientated
 pedagogical agency.

- Pedagogical diagnostics can be seen as a professional act of collecting and using evidence for the purpose of improvement and development on all levels of the schools system
 — guiding individual student learning
 — supporting development of teaching
 — founding quality development on the school level
 — informing decisions on regional or system level

Figure 1

Personalizing learning processes in the didactical triangle

content

teacher

learner

teaching and learning arrangements

Schreiner & Kraler, 2019

Formative Evaluation of the Implementation of PD in the Curriculum

First generation of Bachelor students

2015/16 — Introduction of the new curriculum in 2015/16 (Bachelor-Master)
- Interinstitutional Consortium Teacher Education West
- Pedagogical Diagnostics furthermost in module 3 of the general pedagogical knowledge pillar
- Module 3 consists of three courses, one lecture on the theoretical basis, one seminar on pedagogical diagnostics as formative assessment and mentoring, one seminar on grading and classroom management including school internship

2016/17

2017/18

2018/19 — Start of the evaluation

TEACHERS
- all teachers in module 3 (from all institutions);
- n = 7
- method: group discussion

STUDENTS
- all students from 8 seminar groups; n = 120
- method: group discussions and semiformal evaluation sheets

2019/20
Based upon the concept of backward design (Childre et al., 2009), the evaluation focused on the learning objectives, asking students and teachers to assess contents and tasks in regards of their contribution to achieving learning objectives.

Data collection

Findings and Future Developments

The overall evaluation of introducing concepts of formative assessment in module 3 is positive:
Concepts of formative assessment are appreciated by students – especially in connection with specific situations of application.

Requirements (by research and curriculum) and students' personal needs and expectations differ:
On the one side, there is research's discourse identifying high diagnostical competencies as requirements for future teachers. The concepts of the module adopt this and thereby implicitly state expectations regarding the future role of the students as teachers. On the other side, we find the students and their personal histories – they typically were socialized in a school system, in which formative assessment had hardly any relevance. Therefore, it is imperative to support the convergence of these two perspectives on the expectations regarding the role of teachers.

Balance between assessing subject-related learning products and processes and assessing contextual conditions:
Assessing contextual conditions (of individual, familial, or social origin) played an important role in in-depth exercises on pedagogical diagnostics in the first version of the curriculum implementation in the form of a long-term group task working on one individual case study per group. The noted benefit was engaging in-depth with an (hypothetical) individual student and the resulting strong effect on the students' sense of responsibility for their future students as human being (and not just learners of e.g. math). The negative side is the strong emphasis the module placed on contextual factors over subject-related learning, which has to be addressed in the further development of the module
➔ **Strengthening the focus on learning-related assessment over contextual factors while trying not to lose the positive effects of the case studies.**

Furthermore, the evaluation findings point to a work load of the module that is to high in relation to the credits awarded and some details on the organization of content within and between courses in the module.

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