

# Keynote 1: Data-based decision making –A puzzle with many pieces

*Freitag, 12. September 2025 13:00 (1 Stunde)*

Under what conditions does assessment contribute to effective teaching in heterogeneous learning groups? In this presentation, two overarching requirements for the success of data-based interventions are highlighted: Firstly, the aspect of suitable instruments and secondly, the professional skills of teachers.

Suitable instruments: To implement assessment-based differentiation in school practice, structured programs with clear guidelines for teachers have proven to be effective (Aust et al., under revision; Stecker et al., 2005). Moreover, it has been shown that teachers are committed to using data when they are provided with evidence-based materials for differentiated support (Hebbecke et al., 2022). We therefore need integrated approaches that include both assessment and intervention measures and where these two aspects are highly aligned (Connor et al., 2019).

Teachers' professional skills: Beyond the specific instruments, teachers must also receive intensive training in implementing data-based interventions. Longer-term teacher-training programs have proven to be necessary for gaining competence in both data literacy and the design of differentiated instruction using evidence-based methods (Ehlert & Souvignier, 2023). Not least, since the greatest challenge for data-based decision making (DBDM) is to translate assessment data into appropriate pedagogical action (Visscher, 2021).

How can the various pieces of the puzzle for a successful implementation of DBDM be realized in school practice? To implement learning progress assessment, differentiated instruction and comprehensive professionalization processes under the conditions of limited resources, technology-based services are required to adequately support teachers (Ehlert et al., 2025). The presentation will introduce an exemplary concept in which digital solutions were implemented in the context of assessment, translation of data into instructional decisions and professional development. It illustrates how an integrated concept of assessment, differentiated reading support and intensive support for teacher change can be implemented into school practice.

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**Sitzung Einordnung:** Keynote 1