

A Systematic Review on the Use of Dynamic Testing to Inform Educational Intervention

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Dynamic Testing (DT) refers to a type of test that incorporates a learning intervention in the testing process, for example by using feedback, prompts, or hints (Resing et al., 2020). Using this process, this approach has the potential to generate information about students' instructional needs and provide information about learners' potential for learning. Thus, at least in theory, DT bridges the assessment-to-instruction gap, by including instruction in the assessment process (Veerbeek & Vogelaar, 2025).

This systematic review aims to synthesize empirical studies on the application of DT in primary and secondary education, clarifying how DT is integrated into educational practice. In the review, several topics are addressed. First, the types of data that can arise from DT, the constructs they are supposed to represent, and evidence of their validity are described. Second, the use of DT in educational settings to inform instruction was a specific point of focus, along with the barriers and facilitators for teachers' use of DT data to inform instruction. Last, evidence of DT data contributing to improved student performance was sought out and described.

Articles published between 2011 and 2024 were identified through a structured search across databases. After the initial and secondary screening, 58 studies were identified for in-depth coding. Preliminary impressions reveal substantial variation in how DT is implemented across studies. Procedures range from structured pretest-training-posttest designs to more flexible, interaction-based models delivered through either computerized or in-person formats. Differences are also evident in what DT is intended to measure.

References

- Resing, W. C. M., Elliott, J. G., & Vogelaar, B. (2020). Assessing potential for learning in school children. Oxford Research Encyclopedia of Education, 1–19. <https://doi.org/10.1093/acrefore/9780190264093.013.943>
- Veerbeek, J., & Vogelaar, B. (2025). Dynamic Testing of Instructional Needs: A Training-Only Graduated Prompts Approach. Journal of Psychoeducational Assessment, 43(1), Article 1. <https://doi.org/10.1177/07342829241287947>

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