

Finding the right grain-size
for measurement in the classroom

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It is broadly accepted that successful assessment is one of the best ways to improve educational outcomes (Black & Wiliam, 1998; Hattie & Timperley, 2007); and the focus of this improvement is finding “actionable information for improving classroom instruction” (Lehrer, 2021). In this presentation, I will describe a framework for designing assessments that is keyed to the scope of the educational interpretations. This framework articulates three levels of interpretations of assessment information: micro, meso and macro.

Assessments operate at and between these three levels: (i) classroom-dependent observations that primarily function at the micro level, and (ii) classroom-independent tasks that function at the meso and (potentially) at the macro level. The former are designed to track closely the variation of student performance over time in a classroom instructional context, and latter are designed to provide a basis for triangulating student responses in classroom and school contexts.

This framing will be exemplified in a K-5 elementary school that is seeking to improve the quality of instruction and students’ understandings of measure and rational number. The different levels of assessments and response interpretation will be instantiated with two different pieces of software, which operate at the micro level and the meso/macro levels, respectively.

References

- Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice*, 5(1), 7-74.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.
- Lehrer, R. (2021). *Accountable assessment*. Keynote Address delivered at the ACER Research Conference 2021 (online).