

From Outcomes to Opportunities: Broadening the Conception of School Data for Reflective Mathematics Teaching

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An accountability-driven view of data has led to several problems in mathematics teaching, including curriculum narrowing, rigid grouping practices, and deficit views of students (Datnow & Park, 2018). Insufficient attention has been given to how routinely produced school documents might provide insight into intended mathematics opportunity to learn (OTL) within schools. To address this gap, selected findings from the intended mathematics OTL data derived from existing school documents are reported.

Two government primary schools, referred to as School A and School B, participated in the study. Year 3 lesson plans and daily timetables from the first eleven weeks of the school year, along with mathematics scope and sequence documents, were analysed from each school. Documents were coded into quantitative values and analysed using descriptive statistics, including counts, percentages, and measures of central tendency. Although the broader analysis examined several aspects of intended OTL, this presentation reports on the time allocated to mathematics learning, the distribution of planned lessons across strands and proficiencies, and students' grouping practices.

Analysis of school data identified both similarities and differences in the intended OTL across the two schools. Time allocated to mathematics learning was consistent across the four Year 3 classes in School B (Mean: 5.58 hours per week), whereas School A showed greater variation (Mean: 3.42 to 4.23 hours per week). In both schools, Fluency was the most frequently addressed proficiency (School A: 85%; School B: 84%), followed by Understanding (School A: 61%; School B: 53%). Problem Solving appeared more frequently in School B (20%) than School A (10%), while Reasoning was minimally represented (5%) across both contexts. Both schools prioritised the Number and Algebra strand (School A: 60%; School B: 75%), followed by Measurement and Geometry (School A: 29%; School B: 13%) and Statistics and Probability (School A: 10%; School B: 9%). Grouping practices also varied by strand. Teachers in both schools predominantly planned homogeneous groups for Number lessons, informed by test outcomes, whereas Statistics and Probability lessons exclusively involved heterogeneous grouping. In Measurement and Geometry, heterogeneous grouping was common, occurring in approximately 80% of lessons in School A and 70% in School B.

These findings illustrate how routinely produced school documents can be used as a source of intended mathematics OTL data to support reflection on planning and instructional priorities. By focusing on planned learning opportunities rather than student characteristics alone, such data may help teachers and school leaders examine structural factors influencing mathematics outcomes. For researchers and policymakers, analysing intended OTL from school documents offers a complementary approach to survey-based studies. The findings are intended to invite discussion about how school-generated data might be used to support reflective mathematics teaching and planning practices. Limitations associated with using school documents as indicators of intended, rather than enacted, OTL are acknowledged.

References

Datnow, A., & Park, V. (2018). Opening or closing doors for students? Equity and data use in schools. *Journal of Educational Change*, 19(2), 131–152.

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