

## Prorating performance for students with motor issues

Sometimes students seemingly could be as fluent as their peers on math and writing tasks but may exhibit motor issues that may impede them from doing so. The following is a proposed idea for considering motor related issues in regards to fluency based tasks.

**Note 1:** The following is intended to serve as only a *suggested estimate* for attempting to determine benchmarks/goals for fluency tasks for students with motor issues.

1. **Collect normative fluency data** on student performance with the motor skill
  - a. Math: Have all students write as many numbers as they can 0-9 repeatedly for 1 minute
  - b. Writing: Have all students write as many letters as they can A-Z repeatedly for 1 minute
2. **Determine the Expected Motor Rate (EMR)**
  - a. The 10<sup>th</sup> Percentile of performance is how fast we can expect most students to make written responses.
3. **Determine the Expected Skill Rate (ESR):**
  - a. Cut this rate in half. If the 10<sup>th</sup> percentile Math Motor rate was 100 numbers written correctly per minute the expected Skill rate is 50 digits correct.
4. **Determine Target Students Current Motor Rate (CMR)**
  - a. Simply identify how many digits/letters the target student writes in 1 minute.
5. **Calculate Students Prorated Performance Expectation**
  - a. Use the following formula  $(ESR \times CMR) / EMR$

**NOTE 2:** You are encouraged to use the same process with already known/established cut scores on given fluency tasks (e.g. your local district normative benchmark/cut scores) in place of step 3 above.

### Example

3<sup>rd</sup> grade students were asked to write as many digits as they could in 1 minute. The 10<sup>th</sup> percentile was found to be 100 digits (This is the EMR). The student we are concerned with wrote only 75 digits in the minute (This is the CMR). To allow time for attending (e.g. recognizing, interpreting, processing etc.) the math problem we cut the EMR in half. In this case this Expected Skill rate is 50.

$$(50 \times 75) / 100 =$$

$$3750/100 =$$

$$37.5 = 38 \text{ digits correct per minute.}$$

The student with motor issues might be expected to calculate 38 digits correct per minute compared to a student with no motor related issues who is expected to calculate 50 digits correct per minute.