Classroom Data Tools: What Are They and What Can They Measure?

Teachers have a variety of tools that they can access to collect behavioral or academic information and monitor classroom interventions. This 'look-up' chart provides a review of the most common data sources and what they can measure:

Data Tool	What It Is	What It Can Measure
Archival Data	Existing data routinely collected by schools that provides useful ongoing information about the student's academic or behavioral performance.	• Attendance • Office disciplinary referrals • Other aspects of behavior or academic performance captured in the school database
Behavior Report Cards	A teacher-created rating scale that measures student classroom behaviors. A behavior report card contains 3-4 rating items describing goal behaviors. Each item includes an appropriate rating scale (e.g., Poor-Fair-Good). At the end of an observation period, the rater fills out the report card as a summary snapshot of the student's behavior.	• General behaviors (e.g., complies with teacher requests; waits to be called on before responding) • Academic 'enabling' behaviors (e.g., has all necessary work materials; writes down homework assignment correctly and completely, etc.)
Checklists	The dividing of a larger behavioral task or sequence into constituent steps, sub-skills, or components. Each checklist element is defined in a manner that allows the observer to make a clear judgment (e.g., YES/NO, COMPLETED/NOT COMPLETED) about whether the student is displaying it.	• Step-by-step cognitive strategies • Behavioral routines • Generalization: Target behavior carried out across settings
Cumulative Mastery Records	A cumulative record of the student's acquisition/mastery of a defined collection of academic items such as multiplication math facts. This record is updated after every intervention session.	• Any discrete collection of academic items to be mastered: e.g., vocabulary, math facts, spelling words, letter or number names
Curriculum-Based Measures/ Assessment	A series of brief measures of basic academic skills given under timed conditions and scored using standardized procedures. CBM/CBA measures often include research-derived benchmark norms to assist in evaluating the student's performance.	• Speed and accuracy in basic academic skills: e.g., letter naming, number naming, number sense, vocabulary, oral reading fluency, reading comprehension (maze), production of writing, math fact computation
Grades	Represent in letter or number form the teacher's formal, summary evaluation of the student's academic performance on an assignment, quiz, test, or longer span of evaluation.	• Homework grades • Test grades • Quarterly report card grades
Interviews	Guided by prompts or questions, the student periodically provides verbal feedback about	• Student routines outside of class (e.g., use of study hall time, homework regimen)

	academic performance, conduct, or other relevant intervention targets. Interviews are most effective when brief and consistent in format, with structured questions designed to elicit objective student responses. The interviewer can also reference specific instruments to focus questions: e.g., checklist, rubric, rating scale.	• Collecting covert information accessible only to the student (e.g., a learner's demonstration of ability to implement essential steps of a cognitive strategy)
Logs	Written adult or student entries that track the frequency (and perhaps additional details) of relevant academic performance and/or behaviors.	• Homework completion • Incidents of non-compliance • Student record of dates when he or she uses a self-guided academic intervention. • Listing of student-teacher meetings.
Observation	Data on behavior or academic performance collected during direct observation of the student. The objectivity and consistency of data is often improved if the observer uses instruments to structure the observation: e.g., checklist, rubric, rating scale.	• Academic engagement • Out of seat • Any other observable behavior of interest
Rubrics	An instrument designed to measure a student on complex tasks. In a rubric, the teacher defines the categories that make up the important dimensions of a task, develops written exemplars representing mastery for each dimension, and creates a rating scale to be used in evaluating a particular student's work for each dimension.	• Any complex, multi-dimensional task: e.g., participation in a discussion; writing a research paper; preparing and presenting a PowerPoint; completing and documenting a science lab project, etc.
Self-Monitoring	The student collects information about his or her own performance. The objectivity and consistency of data collection increases if the self-monitoring student uses a structured instrument (e.g., behavior report card, rubric, checklist, etc.).	• Collecting data from settings outside of the classroom (e.g., self-monitoring homework routines) • Monitoring covert information (e.g., student use of multi-step cognitive strategy to solve math problems)
Work Products	Student work that reflects performance on a series of similar in-class or homework assignments (e.g., successive writing assignments or ongoing math homework). A work product is selected because it can reflect growth in the intervention target skill(s). The element(s) of the work product being tracked can be objectively measures and converted to numeric data (e.g., percentage of problems completed).	• Work completion • Work accuracy • Written evidence of problem-solving steps • Quality of student work (e.g., on writing assignments)