

INFORMATION PAPER 8 PROGRESS MONITORING

Progress monitoring is an essential aspect of any systematic approach to solving student problems. Whenever an intervention is implemented, student performance data should be collected on a regular and frequent basis. This on-going progress monitoring will yield objective data describing the student's progress toward goals. The data can be used to make decisions about the relative effectiveness of interventions.

Progress monitoring is essential for a number of reasons. First, research fails to support the notion of aptitude-treatment interactions. The technology does not currently exist to match a particular set of student abilities with a particular form of treatment that is certain to be successful. Problem-solving teams must use what they know about effective interventions to select one for an individual student, but must also plan to test the intervention through on-going data collection and analysis in order to evaluate its effectiveness.

A second reason that progress monitoring is essential to problem-solving has to do with an increased emphasis on the demonstration of specific outcomes for students. Mere compliance with a required set of procedures for serving students (e.g., following state and federal guidelines and correctly documenting efforts) is not sufficient. An objective data base regarding student performance must be generated, and this data base must be used to guide intervention decision-making.

A third reason for making use of progress monitoring procedures relates to dissatisfaction with pre-post testing. A pre-post testing approach to the evaluation of student outcomes has been criticized as being unreliable, and as providing too little information for decision-making. (See Marston, 1989, for a more detailed discussion of this topic). Pre-post testing is based on the comparison of isolated data points reflecting static levels of performance. Progress monitoring, on the other hand, is based on the time series analysis of related data points reflecting changing performance. Thus, progress monitoring can be used to evaluate a student's slope of performance (e.g., rate and direction of behavior change) as well as level of performance.

A final reason for making use of progress monitoring procedures is that research supports their application. Fuchs (1989) cites studies which have demonstrated that ongoing systematic progress monitoring is associated with effective special education practices and improved educational outcomes.

The remainder of this paper will define progress monitoring and describe essential components and procedures.

DEFINITION

The monitoring of student progress is one of the steps in systematic problem-solving. Progress monitoring involves the frequent and repeated collection and analysis of student performance data. Such data is collected on a regular basis during the course of an intervention. Progress monitoring provides a standardized and empirical method for evaluating the effectiveness of interventions.

ESSENTIAL COMPONENTS

In order to begin on-going data collection and analysis, the following essential components must be in place:

1) a well-defined behavior. A target behavior must be identified which will be the focus of ongoing measurement. The behavior must be defined in terms that are concrete, observable, specific and measurable. In most cases, the target behavior should be a positive one which is to be learned or increased in frequency.

2) a measurement strategy. The selected strategy must allow the frequent and repeated collection of student performance data. It should be time and cost efficient, and should be sensitive to small changes in student performance over relatively short periods of time. Standardized measurement procedures should be used.

3) a description of the student's current level of functioning. Information regarding a student's current level of functioning is helpful in setting an appropriate performance goal. Also, it provides a baseline against which subsequent performance can be compared.

4) an intervention. No intervention works all of the time or with every student. Intervention plans should be developed with an expectation that they will be altered in some fashion if progress monitoring data indicates a need to do so. Intervention plans should clearly delineate materials and procedures to be used, as well as roles and responsibilities for problem-solving team members.

5) a goal. It is impossible to evaluate progress without a standard against which to compare it. A goal statement provides such a standard by clearly describing the expected outcome of an intervention in terms of improved student performance. This goal statement should specify the behavior, the conditions under which this behavior will be exhibited, and the criterion for satisfactory performance.

6) a graph. Progress monitoring procedures generate a large quantity of data that must be systematically recorded and analyzed. A graph or chart is much more useful for this purpose than a mere tabular recording of data. A graph provides a visual depiction of expected and actual student performance, and facilitates the analysis of performance trends.

7) a decision-making plan. This plan should allow for the systematic interpretation of performance trends with regard to progress toward the identified goal. The decision-making plan should include a rule for raising the performance goal if student progress exceeds expectations. There should also be a rule which prompts the alteration of the intervention plan if insufficient progress is demonstrated. The decision-making plan should be established prior to the implementation of an intervention.

PROGRESS MONITORING PROCEDURES

Progress monitoring begins with planning and data collection relative to the components described above. A target behavior and measurement strategy are selected. The student's current level of functioning is described and an intervention plan is developed. A goal statement is written and a progress monitoring graph is developed. Finally, a decision-making plan is selected.

Once these problem-solving steps have been completed, the intervention plan is implemented, and on-going progress monitoring begins. Data should be collected two to three times per week, if possible. At an absolute minimum, data must be collected at least once per week in order to provide sufficient information for trend analysis.

Each time data is collected, it should be recorded on a graph. Periodically, performance trends should be analyzed using established procedures. (See Schendel & Ulman, 1990, for a description of such procedures). In general, these procedures involve the comparison of actual student performance to the expected level of performance described on the graph by the goal line. The appropriate decision-making rule should be applied based on the results of this comparison.

Effective progress monitoring and decision-making does not involve the mere collection and analysis of data, however. The use of decision rules is pointless unless the problem-solving team follows through with the appropriate action. Thus, when trend analysis indicates a need to raise the performance goal, or to alter the intervention plan, the appropriate action should be taken.

If the intervention plan for a specific goal must be modified, only one instructional factor at a time should be altered. If more than one factor at a time is modified, and if student performance subsequently changes, the problem-solving team will not be able to determine which factor was responsible for the change in student performance. Small changes or refinements in intervention plans should usually be attempted before major alterations in the plan are made. At the same time, however, the modifications must be ones that are judged to be sufficiently substantial to result in improved student performance.

Whenever a modification in the intervention plan is made, this modification should be noted on the graph. A vertical line should be drawn on the graph at the point in time when the plan was changed. The

different phases of an intervention should be clearly labelled on the graph. Records should be kept on the back of the graph or elsewhere about the specific procedures and materials used in each phase of an intervention. Progress monitoring should continue throughout an intervention.

As a student's performance approaches the criterion level established by the goal, the problem-solving team must engage in additional decision-making. If the student has met his/her goal, the team may decide to raise the goal and continue with the intervention. They may decide to select a different target behavior and begin the problem-solving process again, or they may decide to discontinue the problem-solving and intervention process altogether.

In addition to these decisions, the problem-solving team may also need to address the issue of a change in services or program placement for the student. For example, the team may feel that the student has acquired sufficient skills to warrant discontinuation of resource room assistance and reintegration into regular education instruction. Regardless of the decision to be made, progress monitoring provides an objective data base for doing so as well as the means to evaluate the appropriateness of the decision once it has been made.

SUMMARY

Progress monitoring is not an optional luxury to be used only when time permits. Instead, it is a necessary part of every effort to change student performance. If problem-solving for students is to be truly effective, progress monitoring procedures must be used.

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