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Commentary

# Commentary on progress monitoring with CBM-R and decision making: Problems found and looking for solutions ☆

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## 1. Introduction

Over the course of one's career, there are a few published research studies that are viewed as seminal pieces which are likely to have substantial impact on practice within a field. When considering the published research related to progress monitoring, a few articles stand out as perhaps the biggest influences. Certainly, Fuchs, Deno, and Mirkin (1984) rank among the most influential, as this paper represents for many the keystone paper demonstrating the added value, impact, and use of progress monitoring for improving student performance. Another was the Fuchs, Fuchs, Hamlett, Walz, and Germann (1993) article that provided data on the normative levels of growth expected over time for students who were monitored. This paper provided quantitative answers to the key question of what were the rates of growth one might see among typical performing students and has been viewed as the key piece of research used to set reasonable and ambitious goals when using progress monitoring with students. The two articles on which this commentary is written are likely to fall into similar categories as the classic Fuchs et al. articles, with the potential for substantial influence on the practices of progress monitoring.

In this commentary, I will first summarize the key and most important take away findings of these articles, offering insights into their implications and the nature of how these studies might shape future practice in the use of progress monitoring. Second, I discuss the nature of the findings in terms of the practical application of progress monitoring, linking these studies to the growing interest in examining how practices based on research actually occur in real life schools. I believe that the conclusions drawn by the authors offer an extremely good example of how issues in implementation shape the recommendations that these studies offer. Finally, I provide some specific recommendations based on these studies for how we should be collecting and using progress monitoring data.

☆ Commentary on Ardoin, Christ, Morena, Cormier, and Klingbeil (2013) and Christ, Zopluoglu, Monaghen, Pike-Balow, and Van Norman (2013).

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## 2. Key findings from Ardoin, Christ, Morena, Cormier, and Klingbeil (2013)

Ardoin et al. conducted a systematic review of existing literature in regard to the recommended practices for making instructional decisions from progress monitoring data. In particular, the research team examined the nature of the type of decision rules used (i.e., point or trend rules), recommendations regarding the number of data points needed for making instructional decisions about student responsiveness to intervention, the accuracy of the decision rules by comparing the CBM-R based decision to another measure of student growth, and the accuracy of the CBM-R growth rates. The inclusion of manuals, book chapters, and similar type of articles in the review makes this one of the most comprehensive reviews of the topic ever conducted. Indeed, a large majority of recommendations for interpreting CBM-R progress monitoring data are found in research synthesis articles, textbooks, and practitioner-oriented manuals that do not include extensive empirical documentation for recommendations that are made.

In general, the findings of Ardoin et al. were that there is limited psychometric or empirical support for most decision-making practices related to progress monitoring data. Three places where Ardoin et al. found supporting evidence were when progress monitoring data is used to make normative comparisons to peers on level of performance, when CBM-R is used to estimate annual growth relative to peers when the same passages are used within and between students, and when CBM-R data are used to compare the relative differences across groups of students. However, as Ardoin et al. point out, progress monitoring data were designed primarily to assist the decision-making process at the level of an individual student, and little empirical evidence could be found in support of the kinds of decision-making currently used at this level. Ardoin et al. are very bold in their conclusions and assertions that "trainers and publishers of CBM-R materials should neither suggest to schools that CBM-R progress monitoring data can be used as a primary outcome measure to evaluate individual student growth over short periods of time nor train schools in current CBM-R decision rules."

## 3. Comments about Ardoin et al.'s findings

Ardoin's et al. suggest strongly that the "adoption and use of such procedures has the potential to establish the temporary illusion that practices enhance student outcomes" and that the "evidence must be clear and evident before conclusions are derived with respect to the quality and implication of practices." It is difficult to disagree with these assertions. Although I certainly concur that the practices we adopt need to be based in empirical science, there also needs to be a recognition that policy often emerges ahead of full empirically supported science. The important question is whether the policy can be altered as the scientific evidence develops.

One of the best examples of where changes in policy should be impacting empirical science is the issue related to acceptance of the discrepancy formula for identifying Specific Learning Disabilities (SLD). The original law (i.e., P.L. 94–142) was passed establishing policy (i.e., the need to identify students with learning disabilities). The operationalizing of the definition of SLD emerged (i.e., potential = IQ score and achievement = score on norm-referenced standardized achievement measures). Next, came years upon years of research that could not consistently document that the way policy was operationalized was consistent with the empirical findings (e.g., Ysseldyke et al., 1983). Efforts to change the way policy was operationalized resulted in the development of new policy, Response to Intervention (RTI), which in itself is based on conceptual frameworks that need empirical verification. Currently, empirical support for RTI is at the early stages, so the time is ripe time to alter the policy consistent with the empirical support. The findings of Ardoin et al. as well as Christ, Zopluoglu, Monaghen, Pike-Balow, and Van Norman (2013) certainly should move the field in that direction.

One particular finding by Ardoin et al. is that the reliability and validity evidence reported in the literature related to CBM-R and progress monitoring have been overgeneralized. With little doubt, I fully agree with their assessment. Progress monitoring was originally developed as a process by which teachers of a student with an Individual Educational Plan (IEP) would be better able to monitor student performance against instructional goals of the IEP. Deno and Mirkin (1977), in their seminal work, provided a template for using repeated measurements in this way, and they provided clinical support for the outcomes they found. Expansion to progress monitoring as one of the key components of RTI and the Multi-Tiered System of Supports for all students became evident with the inclusion of parallel analogous concepts written into the Individuals with Disabilities Education Act (IDEA). For example, one of the criteria for deciding if a student is eligible for special education as SLD is "data-based documentation of repeated assessments of achievement and reasonable intervals, reflecting formal assessment of student progress during instruction, which was provided to the child's parents" (§300.309[b][1–2]). Although the term "progress monitoring" is not explicitly used, the implication of the law is that progress monitoring data would certainly meet the criterion of a repeated assessment at reasonable intervals.

I strongly agree with Ardoin et al. that serious questions about the reliability and validity of CBM-R have been raised in several places in the literature and that positive results regarding the viability of CBM-R during progress monitoring probably have been overgeneralized leading to potential misuse. However, there is an interesting phenomenon in the implementation process where schools have altered their use of CBM-R based on their "experience." For example, deciding to use the measure only for grades 1 through 3 and reducing its influence in decisions in higher grades have been a popular decision among many schools. Alterations such as only using CBM-R for a limited set of grades occur because of "concerns" seen and raised by practitioners. Interestingly, the use of CBM-R in only these grades is subsequently supported by research that examined the degree to which CBM-R contributes to decisions about reading performance in students in higher grades (e.g., Shapiro, Solari, & Petcher, 2008; Speece et