The Use of Practical Measures for Course Scheduling and Assignment

Across New York City, schools and districts now collect unprecedented amounts of data on everything from students’ academic performance to budgeting. Using these data to drive decision making in schools is a challenge, however, because the data are often fragmented and provide only a point-in-time perspective. Beyond operations and course data, most schools do not have clear systems, supporting technologies, or usage processes that enable them to document, monitor and evaluate programmatic interventions aimed at improving student achievement. How do we know if a new tutoring program is working or an online remediation course is worth the investment? In many cases, existing instructional initiatives and programs sit on top of a fragile hodgepodge of unaligned operational, data and communication structures that house critical determinants of school efficacy.

As a Partnership Support Organization (PSO) and charter management organization with responsibility for 86 schools serving nearly 50,000 students, New Visions believes this missing infrastructure and management capacity is a central problem confronting public schools. It limits the impact of even the most thoughtful reform efforts. In too many instances, effective instructional and human capital strategies are limited by archaic infrastructure and inefficient procedures stemming from, what Tony Bryk calls, “the invisible complexities of schools.” Creating the conditions for continuous improvement in school organizations requires data systems and analyses which are designed with a deep appreciation for the tremendous constraints under which administrators, teachers and other school employees work.

The scheduling of courses and the assignment of students is among the more complex tasks facing high school administrators. On top of the challenges associated with workplace rules, shared facilities and a dense web of regulations is the legacy of non-standardized course codes that make even basic accounting against graduation requirements an uncertain process. Unsurprisingly, one outcome is unintentional variation between schools leading to lost instructional time due to schedule changes well into each term and unpredictability in teacher assignments. This situation has a particularly negative impact on the most at risk students who are often not provided with timely opportunities for remediation when they are unsuccessful and who accumulate failure more quickly than they can catch up.

This presentation will summarize our efforts to support schools in developing comprehensive systems for strategically using their resources to meet the needs of diverse student populations. These efforts include new approaches to the analysis of scheduling and performance data that provide school personnel with insights into student needs, teacher capacities, and the impact of program design. They also provide the opportunity to test the impacts of potential modifications to course sequences and course offerings against the data of a large network of schools. In addition, we will describe a new set of practical measures and tools designed to be integrated into the workflow of practitioners to making the problem solving associated with scheduling courses and related interventions manageable - a precondition for ensuring that this work is conducted in a strategic manner and that schools can explore innovative solutions.