ABSTRACT: Communities have been expanding access to and improving quality of early education programs in recent years, in part to improve educational outcomes for students in early elementary grades. To date, results of these efforts have been somewhat mixed; in short, outcomes for “Age 3 to Grade 3” interventions have been variable, and few resources have emerged that are likely to scale more robust improvement. At the same time, research and development has produced significant innovations in general outcome measurement, an approach to assessing developmental and academic achievement designed to produce actionable information for individuals, small groups, and large organizations. This presentation will describe this model and explore ways in which innovations in classroom assessment – specifically, leveraging innovations in modern test theory and creating systems that implement conceptually and empirically aligned assessment across years – may provide new resources for improving primary grade outcomes for children who begin their formal education in early childhood classrooms.