Equity Indicators in School Improvement Policies and Practices: Focus on Opportunity-to-Learn Indicators

April 27, 2022

Session Summary

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Presenters:	Dr. Andrew Rice, CEO, Education Analytics
	Dr. Libby Pier, Chief of Staff & Director of Impact, Education Analytics

Session Highlights

Presentation from Education Analytics: Expanding the Definition of Equitable School and Student Success

o Part I - Probing Course Levels – Dr. Andrew Rice

   o Following the course pathways that students take from middle school to high school shows that there is often "hidden tracking" occurring with students who start in lower level courses often staying in those courses throughout their secondary careers. Students who take higher level courses—even when they attain lower grades—have better longer term outcomes.

   o Dr. Rice described the gulf between the increasing availability of data and the need for new metrics. Although we may be dissatisfied with the state of the art of measurement for important variables, we should pursue data (even if imperfect) about what we value. Rather than propose new cutting-edge ideas, Dr. Rice he proposed looking at "old ideas through new lenses."

   o He built out examples based on course access. Some traditional data points often used as predictors of student outcomes like attendance and GPA turn out to be less predictive than the course pathway a student takes in high school. Example: A student taking a higher-level math course has a better chance of later success in college and beyond than a student taking a lower-level course even if the student taking a higher-level course gets a lower grade than a peer taking a lower-level course.

   o   Assessing difficulty level of courses can be extremely difficulty because labels are inconsistent across districts. In the absence of consistent course/class descriptions, researchers looked at average test scores across districts for the same course code and learned that there are hidden difficulties within course codes. These are hard to uncover, but it offers another way to look at the pathways through high school.

   o Dr. Rice shared an approach to probe course difficulty by using prior year standardized test scores to categorize courses into levels to shed light on how schools are grouping students into different courses, uncovering hidden honors and remedial classes.

   o In terms of equity, looking at course pathways can highlight access to opportunities that lead to different outcomes even after graduation. For example, based on large data sets, if a

       student starts high school in courses that are classified as low or medium they tend to stay in those tracks—even when schools assert that they do not have tracking. These "lower track" courses are typically not college eligible, thus even if the student graduates from high school, they are not prepared for college.

- Part II - SEL and School Culture and Climate – Dr. Libby Pier
  - Measuring social emotional learning and interpreting the results accurately is challenging but with large data sets it is possible to see patterns that show differences in SEL constructs by gender, race/ethnicity, and poverty status. While there is a relationship to measures of climate and culture, the greatest variation occurs at the individual level.
  - Education Analytics has been working with California's CORE districts collaborative to analyze (a) SEL Survey data, which focuses on four main constructs: self-management, social awareness, growth mindset, and self-efficacy; and (b) the Culture and Climate Survey which measures sense of belonging, sense of safety, climate of support for academic learning, and knowledge and fairness of discipline, rules, and norms.
  - SEL measures carry valuable information about the potential for success. For example, SEL measures predict success better than demographic data and attendance. Though SEL constructs can be difficult to assess and interpret, it is important that they are not excluded when trying to understand student success or school success.
  - Through the California CORE Districts data, researchers have been able to examine differences in SEL constructs by student characteristics and subgroups. For example, the patterns show the decline of self-efficacy for all students as they move past elementary school with the drop off most pronounced for female students. This type of analysis of large-scale data sets can be helpful in making comparisons by using the patterns to understand whether an intervention may be exerting a positive effect even with declines in reported self-efficacy, that is by mitigating greater declines in certain constructs, e.g., a lesser drop off.
  - Economically disadvantaged students show less self-efficacy across the board. Racial/ethnic differences also show up in the SEL measures. Dr. Pier cautioned taking contextual factors into account when developing interpretations. She provided information about a variety of approaches to check the surveys for bias.
  - To understand where the variation exists in SEL growth, researchers analyzed ELA and math scores with the SEL survey constructs to identify growth at the school, classroom and student levels. Most of the variation is at the student level, but there is some variance at the classroom and school level as well. That is, there is an impact that schools have, and an impact in the particular classroom that a student is in, but the greatest variation is in experiences of individual students. The implication is to be cautious when drawing interpretations from aggregate school or classroom scores.
  - Among lessons learned, Dr. Pier shared that when comparing subgroups, it is important to consider grade-level differences and probe items and measures for inequities or bias. Similarly, when interpreting or using results, consider grade-level differences, grain size (district, school, classroom, student), and utility for identifying outliers either at the top or bottom of the distribution curve rather than small differences in the middle of the distribution.

      o   Adding SEL and climate measures can help paint a more complete picture of student or school success. These types of analyses can be part of a multiple measure system to add more context to the understanding of student and school success.

Shared Resources **California CORE Districts SEL Survey**

≫ **SEL & Classroom Climate Measurement Resources**
- o Casel: 2011-2021: 10 Years of Social and Emotional Learning in U.S. School Districts
- o Measuring SEL: Assessment Guide
- o PACE: Supporting students' social-emotional, mental & physical health
- o RAND: Education Assessment Finder
- o Harvard University EASEL lab: Taxonomy Project
- o AIR: Are You Ready to Assess Social and Emotional Learning and Development? (Second Edition)

≫ **CORE SEL & CC Survey**
- o Open-source Survey Items – CORE: Elementary Student Survey 2020-2021
- o Benchmarking Data – PACE: Making Sense of Social-Emotional Survey Results Using the CORE Districts' Benchmarking Data
- o Details & Documentation
  - ▪ CORE Survey Data: Hearing from our Students, Staff and Families
  - ▪ CORE Districts: Social Emotional Learning Survey

≫ **CORE SEL Survey Research**
- o Trends in students' SEL: Trends in Student Social-Emotional Learning
- o Schools' contributions to SEL growth: Measuring School Contributions to Growth in Social-Emotional Learning
- o Classrooms' contributions to SEL growth: Can We Measure Classroom Supports for Social-Emotional Learning?
- o Measurement properties: Measuring Students' Social-Emotional Learning Among California's CORE Districts
- o Negatively worded Growth Mindset scale: An IRT Mixture Model for Rating Scale Confusion Associated with Negatively Worded Items in Measures of Social-Emotional Learning
- o Reliability & validity evidence: Measuring Social Emotional Learning Through Student Surveys in the CORE Districts

≫ **Use of SEL & CC Measures**
- o PACE: Using Surveys of Students' Social-Emotional Skills and School Climate for Accountability and Continuous Improvement
- o PACE: The Properties of Non-Academic School Performance Measures
- o Georgetown University FutureEd: CORE Lessons – Measuring the Social and Emotional Dimensions of Student Success

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