



Carnegie Foundation for the Advancement of Teaching

ASSESSING-TEACHING- IMPROVING-LEARNING CONVENING

Data for Improving Human Capital Systems

Meeting Summary

Report prepared by: Alicia Grunow, Jeannie Myung, Anthony S. Bryk and Paul LeMahieu

January 5-6, 2012
Carnegie Foundation for the Advancement of Teaching

Funded through a cooperative agreement with the Institute for Education Sciences

Assessing • Teaching •
Improving • Learning



Assessing • Teaching • Improving • Learning

Convening #3
January 5-6, 2012
Stanford, CA

Meeting Summary

On January 5th-6th, 2012, the Carnegie Foundation for the Advancement of Teaching convened a group of 20 leaders in the use of data for improving human capital systems in K-12 districts. We collectively explored the potential of information on human capital processes to contribute to broad-based improvements in teaching and learning.

Our previous two convenings focused on measurement for evaluating teaching and measurement for improving teaching. This convening broadened our scope for measurement – rather than focusing on measuring the outcomes of teachers on the individual level, we focused on a conceptualization of human capital development in a district as a network of interdependent processes working together to create a stronger teacher workforce, and we began the development of a family of measures for tracking the effectiveness of such a system.

Our objectives for this convening were to (1) test and refine an initial framework of the human capital system, (2) identify the critical elements of information systems that can support the continuous improvement of local strategies for identifying, matching, developing, sustaining and evaluating teachers, and (3) articulate the challenges faced in assessing human capital systems and develop a shared research agenda to advance this field.

Human Capital System Framework

Background. Human capital is the largest investment K-12 districts make – staff salaries account for 80 percent of district budgets. Many districts have come to recognize the skills and competencies of their teaching staff as essential to their capacity to provide high quality educational opportunities for students. However, large-scale, immediate adoption of hastily developed solutions has come to characterize the nature of school reform¹, and consistent with this historical trend, school systems tend to focus intensely on one human capital issue at a time (e.g. pay-for-performance, professional development, new policies for placing teachers, etc.), usually abstracting it from the rest of the human capital system, to say nothing of the

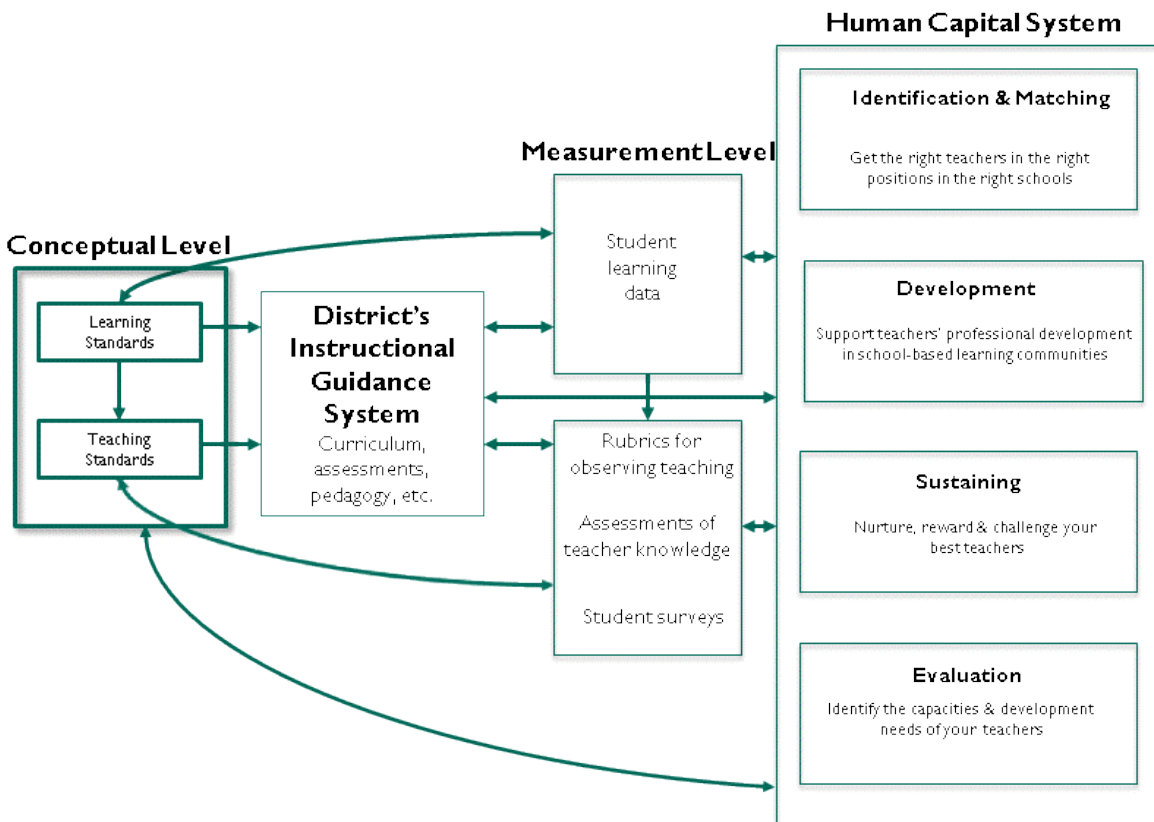
¹ Tyack, D. & Cuban, L. (1997). *Tinkering Toward Utopia: A Century of Public School Reform*. Cambridge: Harvard.

larger system. Most well-intentioned solutions and programs often fail to take into account the complex human capital system within which processes operate.

Human Capital System Alignment

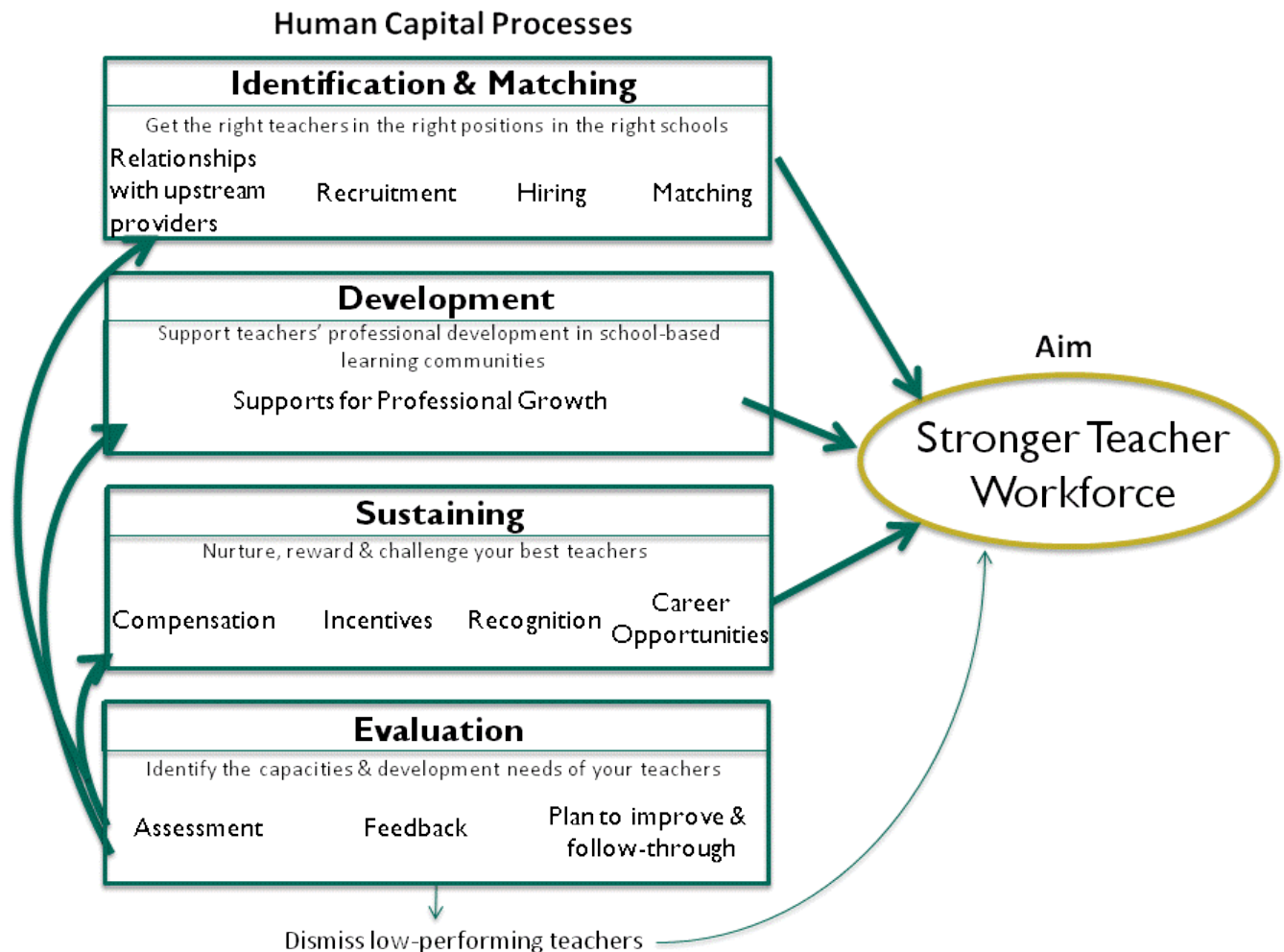
A district's human capital system sits within a greater district teaching-learning information system. Figure 1 depicts an aligned system in which the district's vision of effective teaching and learning drives the instructional guidance system adopted, the measures collected, and the human capital processes enacted. Feedback loops between components inform the continuous improvement of the system.

Figure 1. Human Capital System Alignment



In this convening, we focused on the conceptualization of human capital system in a district as a network of four interdependent microsystems (Identifying & Matching, Developing, Sustaining, and Evaluating teachers) working toward creating a stronger teacher workforce. We created an initial draft of our understanding of the human capital system which we tested with our participants. We incorporated their feedback to create a version 2.0 of our human capital framework (see Figure 2). This is a preliminary version that we plan to refine over time with additional research, testing, and consultation with experts in the field.

Figure 2. Human Capital Framework Version 2.0



Embedded in the diagram are the major pathways through which microsystems influence the system aim. Within the Identification and Matching microsystem, the relationships with upstream providers, recruitment, hiring and matching processes work to acquire talent aligned with the district’s vision of strong teaching and strategically match those teachers with positions in schools in which they can be most impactful and successful. The Development processes strengthen the practice of current teachers in supportive school-based learning communities to increase the effectiveness of their practice. The Sustaining processes recognize the achievements of effective teachers and provide them with advancement opportunities, challenging them and nurturing them to stay in the district. The relationship between Evaluation and the aim of a stronger teacher workforce is both direct and indirect. Evaluation can contribute to the strength of the teacher workforce through the removal of the weakest performers, but its impact is best leveraged through its mediated effect via Identification and Matching, Development, and Sustaining.

Other considerations:

A human capital system framework is a high-level conceptual diagram, but for it to be useful it must go through local adaptation. The following illustrates the problem with failing to grant due consideration to the local contextual factors within which systems operate:

$$x + xy = 8$$

Solve for x .

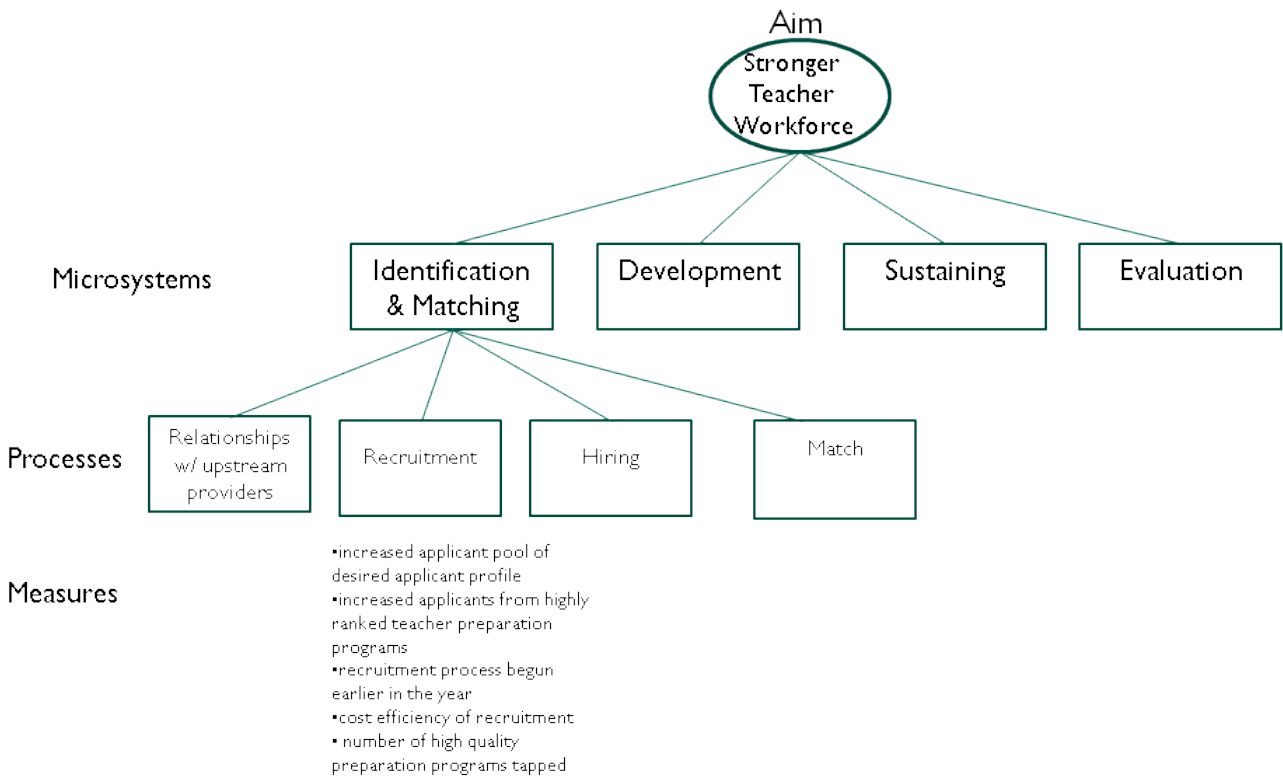
This undefined equation was posed by W.E. Deming to represent an important point. Consider a situation in which the contribution of an individual to the outcome can be represented by x , and the contribution of the individual and the system together is xy . We have the ability to see the outcome, but we do not have the ability to see the interaction between the individual and the system. The overwhelming tendency is to ignore the influence of the system and attribute the outcome entirely to the individual. However, contextual considerations that can influence the outcomes of human capital systems are numerous, including the governance structure of the district; local, state, and federal policies; collective bargaining conditions; as well as culture and engagement, to name just a few. It is essential that districts take a framework such as this one and develop their own operational definitions and measures of human capital process adjusted to their local theories of action and local contexts.

Human Capital System Measures

Strategic management of human capital holds great potential for increasing the strength of the teacher workforce, however, remarkably little data exist to enable the management of human capital processes or to inform and support their improvement within districts. Data on the operations of the human capital processes are scarce; as a consequence, districts tend to focus single-mindedly on the few outcome measures available – student achievement scores and teacher retention rates. These are lagging indicators that are far down the causal chain from human capital processes such as recruitment, hiring and matching processes. As such, they provide little information on the effectiveness of the processes. These lagging indicators measure *how well* they system is doing, but they do not provide information about *how* to improve it. No single measure can adequately inform the improvement of an entire system. In this convening, we engaged participants to consider the human capital development as a system of interrelated processes and worked toward developing a family measures tightly coupled to the efficiency and effectiveness of processes to inform the management of the continuous improvement of both the processes and the system.

We drew inspiration from the field of quality improvement, which continuously examines processes to make them more effective at achieving their aim. A core tenet of quality improvement is the principle that all work is a process. Outcomes are the result of processes. Figure 3 represents a simple diagram that illustrates the tiered levels within systems. Systems are composed of various Microsystems that all contribute to an outcome. Within each microsystems are individual process measures. The process measures themselves reflect a theory of action of what it takes to achieve the microsystem outcome and eventually the system outcome. Attaining quality at scale is contingent upon executing, measuring and improving the processes that aggregate into system outcomes.

Figure 3. Example of Process Measures within a System: Recruitment



In the convening, participants divided into groups and each group was tasked with developing indicators for core processes within one microsystem of the four human capital microsystems. Each group was assigned one white board. Participants took a moment to write down what they considered to be indicators for core process within the assigned microsystem on post-it notes. Proposed indicators were discussed and ideas were posted and consolidated. What emerged was a preliminary set of process measures of the human capital microsystem. Using the Identification and Matching microsystem as an illustration, measures of the *recruitment* process included an increased applicant pool of desired applicant profile, increased applicants from highly ranked teacher preparation programs, recruitment process begun earlier in the year, cost efficiency of recruitment, number of high quality preparation programs tapped (these process measures are presented in Figure 3). Measures of the *hiring* process included increased percentage of schools applying a multi-dimensional selection process for hiring (including demo lessons, portfolio reviews, reference checks, community interviews, etc), increased number of vacancies filled by August, decreased average time to fill vacancies, and increased candidate satisfaction with the hiring process. *Match* measures included increased percentage of high poverty student who have an effective teacher, equitable spending on staffing across schools, decreased percentage of first year teachers placed in high need schools, decreased percentage of out of field placements per school, and decreased percentage of forced placements per school. We are grateful to our participants for bringing their experience with human capital systems to bear on generating these human capital process indicators. We will continue to refine and expand the initial set of indicators developed through this activity.

Appendix A: Convening Agenda



Assessing • Teaching • Improving • Learning

January 5-6, 2012
Stanford, CA

Participant Agenda

Thursday, January 5

8:30-9:00am	Breakfast
9:00-9:30am	Welcome & Introduction to the Assessing-Teaching-Improving-Learning Program
9:30-10:25am	Seeing the System
<i>10:25-10:40am</i>	<i>Participant Presentations</i>
10:40-11:00am	Break
<i>11:00-11:15am</i>	<i>Participant Presentations</i>
11:15-11:45am	Measurement of Core Human Capital Processes
<i>11:45-12:00pm</i>	<i>Participant Presentations</i>
12:00-1:00pm	Lunch
<i>1:00-1:15pm</i>	<i>Participant Presentations</i>
1:15-2:20pm	Identifying Measures of Human Capital Processes
<i>2:20-2:35pm</i>	<i>Participant Presentations</i>
2:35-2:50pm	Break
2:50-3:15pm	Gallery Walk of Human Capital Measures
3:15-4:15pm	Plenary
4:15-4:30pm	Closing
4:30pm-	Reception and Dinner

Friday, January 6

8:00-8:30am	Breakfast
8:30-9:00am	Opening and Summary of Day I
9:00-10:00am	Informing the Dynamic Multi-Stakeholder R&D Agenda to Improve Human Capital Processes
10:00-10:15am	Break
10:15-10:45am	Forum for Feedback on Next Steps for the Carnegie Foundation for the Advancement of Teaching
10:45-11:00am	Closing
11:00am-	Lunch

Appendix B: Convening Participants



Assessing • Teaching • Improving • Learning

January 5-6, 2011
Stanford, CA

PARTICIPANT LIST

Brandon Bennett

Principle Advisor for Improvement
Institute for Healthcare Improvement
improvement.science@gmail.com

Leo Brown

Executive Director
Human Capital and Performance Management
Kansas City Public Schools
lbrown@kcmsd.net

Clover Codd

Director of the Teacher Incentive Fund (TIF)
Seattle Public Schools
ccodd@seattleschools.org

Alison Egan

Senior Managing Director
Student Achievement Analytics
Teach for America
alison.egan@teachforamerica.org

Drew Furedi

Executive Director
Talent Management
Los Angeles Unified School District
drew.furedi@lausd.net

Billie Gastic

Director of Research and Assistant Professor
Relay Graduate School of Education
bgastic@relayschool.org

Paul Goren

Lewis-Sebring Director
University of Chicago Consortium on
School Research

pgoren@uchicago.edu

Rob Johnstone

Senior Research Fellow
Research & Planning (RP) Group for California
Community Colleges
johnstoner@smccd.edu

James Kemple

Executive Director
Research Alliance for New York City Schools
james.kemple@nyu.edu

Heather Kirkpatrick

Vice President of Education
Aspire Public Schools
heather.kirkpatrick@aspirepublicschools.org

William Marinell

Research Associate
Research Alliance for New York City Schools
william.marinell@nyu.edu

Sandy Matthews

Coaching Resources Manager
Success for All Foundation
smatthews@successforall.org

Steven Means

Senior Policy Advisor
Office of Elementary and Secondary Education
US Department of Education

Robert Meyer

Professor and Director
Value-Added Research Center
rhmeyer@wisc.edu

Tony Milanowski

Associate Scientist

Westat

anthonymilanowski@westat.com

Emily Mohr

Strategic Data Project Fellow

Los Angeles Unified School District

emily.mohr@lausd.net

Jennifer O'Day

Managing Director and Policy Analyst

Education, Human Development, and Workforce Program

American Institutes for Research

joday@air.org

Lindsay Page

Senior Research Manager

Strategic Data Project

lindsay_page@gse.harvard.edu

Larry Rosenstock

CEO and Founding Principal

High Tech High

lrosenstock@hightechhigh.org

Laura Sonn

Associate, State Policy Initiatives

Data Quality Campaign

laura@dataqualitycampaign.org

Thomas Tomberlin

Strategic Data Project Fellow

Charlotte-Mecklenburg Schools

thomasr.tomberlin@cms.k12.nc.us

Monica Vasquez

Partner, Performance Management

The New Teacher Project

mvasquez@tntp.org

CARNEGIE STAFF

Tony Bryk

President

bryk@carnegiefoundation.org

Alicia Grunow

Senior Managing Partner

grunow@carnegiefoundation.org

Paul LeMahieu

Senior Managing Partner

lemahieu@carnegiefoundation.org

Krissia Martinez

Research Assistant

martinez@carnegiefoundation.org

Jeannie Myung

Research Associate

myung@carnegiefoundation.org

Sandra Park

Improvement Specialist

park@carnegiefoundation.org

Sola Takahashi

Research Associate

takahashi@carnegiefoundation.org

Thomas Toch

Consultant

tom@thomastoch.com

Amaya Webster

Administrative Assistant

webster@carnegiefoundation.org

Kareen Yang

Program Manager

yang@carnegiefoundation.org