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State and Local Data Infrastructure for Tracking Secondary to Postsecondary Educational Outcomes

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Background

Tracking student pathways from secondary to postsecondary education (PSE) and the workforce is critical for creating programs and policies that prepare all youth—especially high-risk or disadvantaged youth—for productive adulthood. Nationally, educators, scholars, and policy researchers have identified the need for a Kindergarten to postsecondary education (K-16) or even preschool to graduate school or workforce (P-20) educational tracking system to monitor and improve school accountability (Haskins & Kemple, 2009; Venezia, Kirst, & Antonio, 2003). Systems to follow student pathways through various educational experiences are already in place in a number of states, including California. However, most do not include postsecondary education and few include other important pathways, such as participation in career or technical education (CTE), workforce experiences, social services, dependency or delinquency systems, or other supporting activities such as after school or sports programs. Because student learning builds on experiences both inside and outside the school setting, including individual-level data from the multiple settings in which youth engage is critical for improving educational outcomes and advancement (Loeb & Plank, 2007).

An alternative for local leaders seeking to make data-driven policy decisions is to form community-university or community-researcher partnerships to conduct research focused specifically on the youth in their communities. The Youth Data Archive (YDA), a collaboration among local communities, the John W. Gardner Center for Youth and Their Communities at Stanford University (JGC), and the SPHERE Institute, works with school districts, city and county agencies, and community-based organizations to provide information intended to help improve programs and outcomes for local youth.

In this brief, we discuss the ways in which existing administrative data can be used to examine the pathways that students follow to successfully complete secondary and postsecondary education. We begin with a discussion of existing statewide and local data linking projects and then briefly discuss the specific types of administrative data that could be used to follow student pathways.

Existing Statewide Tracking Systems

The Data Quality Campaign reports that 10 states have the ability to link P-12 data to higher education data through the development of a unique student identifier, and an additional 18 states can fulfill this linkage through either demographic variables or using a Social Security number (Data Quality Campaign, 2009). Texas and Florida are leaders in creating linked educational data at the state level. Florida, widely acknowledged as having the most sophisticated P-20 system in the country, first began to collect student-level data in the late 1980s, including postsecondary data on education, employment, military enrollment, public assistance participation, and incarceration. Texas's educational data system links information from preschool through postsecondary education, including community colleges and state universities, and makes longitudinal student and

teacher data available to parents, educators, and researchers. With P-20 tracking systems like these, states can access information to help them solve a number of their intractable problems, including where student achievement gaps begin to occur, what factors help eliminate these differences, and how to align curriculum among preschool, elementary, secondary, and postsecondary institutions.

California has lagged behind these states, but is now implementing a longitudinal tracking system for public school students in grades K-12—the California Longitudinal Pupil Achievement Data System (CALPADS).¹ Initiated by the California Department of Education (CDE) in 2002, the system tracks standardized test scores, enrollments, teacher assignments, and other elements using a newly implemented statewide student identifier (SSID). CALPADS is not currently designed to link to postsecondary, preschool, or other types of data. CDE expects full implementation of CALPADS in the 2009-2010 school year. California has two other data tracking systems that attempt to link high school data to postsecondary outcomes. The CCTran is an internet-based system for community colleges and their partners, including high schools and the California State University and University of California systems, to transmit academic transcript data. Currently, it has no accompanying research component. The California Partnership for Achieving Student Success (Cal-PASS) is a limited and voluntary tracking system that collects K-16 data from a number of California communities. It does not link these records to data from non-educational agencies or organizations. A third system, the California Longitudinal Teacher Integrated Data Education System (CALTIDES), will be implemented in 2011 and will collect data on teacher and student assignments, as well as teacher credentials, participation in internship and teacher support programs, and other individual-level data.

A Local Approach

An advantage of statewide tracking systems is their ability to follow the state's entire population of public school students between school districts and colleges. However, the statewide databases cannot necessarily capture the full range of experiences at the local level. Many local agencies and organizations collect more information in their data systems than is required for state reporting purposes and this information has the possibility to provide more detailed findings or explanations for the local area.

¹ For a detailed report on California's educational data tracking systems, see Vernez, Krop, Vuollo, and Hansen (2008).

There are a number of reasons why some types of cross-agency data sharing collaborations might be better suited toward local initiatives. For instance, data sharing amongst a consortium of service providers from the same community may be best positioned to turn research findings into immediate action. By involving local officials, the research questions asked are attuned to respond to specific needs, and research findings are immediately placed into the hands of decision-makers, who may be best positioned to move policy levers to enact change. These changes may occur more quickly and directly on a local level than is feasible on a state level. In addition, communities approach their problems with different kinds of solutions, and the context of their actions is an important factor to consider in identifying the goals of tracking and applying the findings.

One example of a local data sharing approach is the Youth Data Archive (YDA), operated by the John W. Gardner Center for Youth and Their Communities at Stanford University and its partner the SPHERE Institute. First implemented in 2006, the YDA is an initiative that links data on individual youth across organizations and works with community partners in the San Francisco Bay Area to identify and investigate shared questions that individual agencies cannot answer alone. The YDA team supports partners to understand the resulting analyses and make data-driven policy and programmatic decisions to improve youth outcomes. The YDA includes data from elementary and secondary school districts, human and social services agencies, health departments, county offices of education, city agencies, and multiple community-based organizations, and community college districts.

The Youth Data Archive is one of several university-based cross-agency data initiatives. Other university-assisted collaborations include Chapin Hall at the University of Chicago and Kids Integrated Data System (KIDS), a partnership between the University of Pennsylvania and its local community partners (Brokaw, 2004). Linkages between school records and after school program participation are occurring regularly in places such as Chicago, Illinois, Jefferson County, Missouri, and Portland, Oregon.

How Can Administrative Data Linking Answer Key Questions About Students' Educational Trajectories and Outcomes?

An ideal tracking system would include data about educational and non-educational experiences linked together individually and over time. Exhibit 1 presents some examples of the types of data that might be

useful to study what life experiences shape postsecondary education enrollment and completion. These data are collected at various organizational levels. For instance, elementary, secondary, and postsecondary education data are maintained by school or college districts (though with CALPADS, some are maintained by the State), but alternative education and public preschool data may be collected by county offices of education. County agencies also maintain data on health, mental health, social service, dependency, and delinquency data. GED and employment information are collected at the state level. Data on some extracurricular activities are collected by city agencies and information about other types of extracurricular activities is maintained by the community-based organizations that provide those services. In some cases there may be shared databases amongst several organizations, which would aid the local data tracking initiative.

That these data exist at these different organizational levels poses a substantial problem for statewide tracking systems, but is more manageable at the local level. By piecing together students' in- and out-of-school influences, a local tracking system can determine not only the students who are most likely to continue on to postsecondary education, but also the key factors that promote or inhibit this important outcome.

Local data tracking systems can potentially answer important student pathway questions such as:

- What characteristics and experiences help to explain which alternative education students graduate high school and attend community college?
- Do English learner students' initial college course placements align with their elementary and

secondary English language courses and English language development tests?

- What is the likelihood that students who do not immediately attend college after high school graduation will enroll in and graduate from college?
- To what extent are low-income students involved in extracurricular activities and in what ways do these affect their postsecondary education outcomes?

Discussion

There is an important case to be made for using linked administrative data to study students' educational pathways in order to document and understand the trajectories students follow from secondary to postsecondary education. Although the focus of data integration efforts has been at the state level, local initiatives can also play a key role. By situating an analysis of educational trajectories in a local context—for instance, by including students' participation in specific after-school or summer bridge programs—research has a greater potential to shape the policies and practices that directly affect students' experiences. Also, by focusing on data that are specific to the constituents they serve, policymakers and practitioners can gauge the scope and efficacy of the programs that are available in the community and identify gaps or areas of overlap. Local data sharing initiatives also have drawbacks, most importantly an inability to follow students who are mobile either during their secondary education or for their postsecondary choices. Once students leave the local area, a local data tracking initiative would lose its ability to follow their educational pathways. Some of the most disadvantaged youth—on whom policy makers tend to focus—are highly mobile, including foster and delinquent youth. Still, with willing community partners and a research

Exhibit 1: Examples of Administrative Data to Study Influences on Youth Postsecondary Outcomes

| P-12 Educational Experiences | Community and Extracurricular Influences | Postsecondary Outcomes |
|--|--|---|
| <ul style="list-style-type: none"> • Preschool • Elementary and Secondary School • Alternative Education • GED | <ul style="list-style-type: none"> • Health and Mental Health Services • Social Services • Delinquency • Dependency (Child Welfare) • Extracurricular Activities In and Out of School | <ul style="list-style-type: none"> • Postsecondary Education • Career and Technical Education • Employment |

organization to spearhead the effort, it is possible to put in place a data sharing infrastructure that can offer guidance to policy makers and practitioners to improve postsecondary outcomes for local youth.

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