U.S. Department of Education

IMPROVING THE QUALITY AND USE OF POSTSECONDARY DATA

A Resource Guide for Smaller Learning Communities Grantees

IMPROVING THE QUALITY AND USE OF POSTSECONDARY DATA

A Resource Guide for Smaller Learning Communities Grantees

June 2009

Neal Finkelstein
Anthony Fong
Becca Hirschman
WestEd

Katie Whitney Luers
Theresa Deussen
With Francie Lindner, Mary Rosenthal, Sara Sellards, and Rhonda Barton
Northwest Regional Educational Laboratory, Portland, Oregon

Northwest Regional Educational Laboratory
101 SW Main Street, Suite 500
Portland, Oregon 97204
503-275-9500
www.nwrel.org
info@nwrel.org

This publication was produced under U.S. Department of Education under Contract No. ED-04-CO-0123/0002 (Task 6.3.2). The views expressed herein do not necessarily represent the positions or policies of the Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service, or enterprise mentioned in this publication is intended or should be inferred.

Contents

“I am a deep believer in the power of data to drive our decisions. Data give us the road map to reform [and] tell us where we are, where we need to go, and who is most at risk. ... Hopefully, some day, we can track children from preschool to high school, from high school to college, and from college to career.”

—Secretary Arne Duncan, at the annual conference of the U.S. Department of Education’s Institute of Education Sciences, June 8, 2009

I. Introduction

This guide provides Smaller Learning Communities (SLC) grantees and their colleagues with strategies for collecting data on the postsecondary matriculation and retention patterns of their recent high school graduates. With such data in hand, educators can make more informed decisions about how to improve their students' enrollment and success in postsecondary education.

The guide includes:

- Definitions of key concepts
- A brief summary of the available literature on this topic
- Tips for collecting useful data
- A step-by-step approach to data collection and use
- Detailed information about three major strategies for gathering data: tapping into a state longitudinal data systems (LDS); using StudentTracker and other approaches to record matching; and finally, collecting primary data as an alternative to using existing data resources
- Resources from practitioners that may assist SLC grantees in making informed decisions about cost-effective, efficient, and user-friendly ways to pursue data collection and analysis

Deciding how to collect postsecondary data for useful analysis is a complex task requiring many kinds of expertise, both programmatic and technical. This guide speaks to SLC project directors and other district and high school staff who want to plan a thoughtful yet efficient data collection effort. It focuses on a common roadblock in looking comprehensively at the effectiveness of efforts to improve curriculum and instruction and other strategies implemented by SLC grantees: the difficulty of acquiring accurate postsecondary data. This is not a technical guide to data analysis; most SLC grantees already have capacity in this area, either through their district or an evaluator paid with grant funds.

What are postsecondary data?

Quality postsecondary data allow school and district administrators to gather information on such key questions as:

- Where do our high school graduates enroll in postsecondary education?
- Do they require remediation in postsecondary education?
- What courses of study do they pursue?
- How long do their educational efforts persist?
- Do they transfer between postsecondary institutions?
- Do they graduate from postsecondary institutions with a degree or certificate?
- What degrees, certificates, and other credentials do they earn?

Such data provide administrators with a comprehensive way to study detailed patterns of student progress, starting before high school and extending beyond college. Creating a meaningful database depends on how the data are collected, stored, linked to other relevant data sources, and ultimately analyzed.

Why collect postsecondary data?

There are four major reasons to collect and use postsecondary data:

- Enhance program evaluation and improvement
- Improve student guidance
- Influence policy decisions
- Fulfill grant reporting requirements

Program improvement

Postsecondary data allow schools to discover how adequately their programs are preparing graduates for postsecondary success. For example, examining which students—with what type of high school preparation and support—make their way to college may help SLC grantees identify student subgroups that need more support to succeed in rigorous coursework during high school. This guide primarily helps grantees consider how to collect and process the data; the capacity to use the data for program improvement is also essential.

One rural SLC high school demonstrates the value of ensuring that postsecondary data are accurate. Guidance counselors at this school had routinely gathered information from graduating seniors about their postsecondary plans and gave staff positive reports of how many students went on to college. Suspecting the plans yielded an inflated view of students' participation in postsecondary institutions, school leaders initiated a survey of students the year following graduation. The result was a much more sobering picture. Their findings revealed that among those students who attended college, many had to take remedial English and math classes and/or left before the end of their first year. The data gave school leaders a much more powerful rationale for building more rigorous SLC programs of study than the community and school board members had been willing to support in the past.

Student guidance

Postsecondary data are used in districts such as Chicago Public Schools (CPS) to guide students toward options that best meet their needs. Data that break down student retention in colleges by gender, race, and ethnicity have revealed that certain local institutions accept many CPS graduates, but very few of those students actually obtain degrees. CPS has used this information to steer students toward schools with better support systems that can help them achieve degrees.

Influencing policy

Investing in collecting and carefully analyzing these data not only benefits the SLC grantees and their students but also provides important documentation that can be used to influence local, state, and federal policymakers. Analysis of postsecondary matriculation data—where students go and whether they succeed—is of interest at all levels of policy, in part because it provides insights into the successes and limitations of our education system as a whole. With the help of systematic data analysis of matriculation patterns, policymakers are better equipped to explore how changes can be made to increase student success in high school, college, and beyond.

Chicago Public Schools (CPS) data-sharing partners

CPS obtains data from many sources to create as complete a picture as possible of what happens to its students after they leave the school system. Some sources CPS uses for data:

- Integrated Postsecondary Education Data System (IPEDS): http://nces.ed.gov/IPEDS/
- Consortium on Chicago School Research at the University of Chicago: http://ccsr.uchicago.edu
- National Student Clearinghouse StudentTracker: www.studentclearinghouse.org/colleges/Tracker/
- Illinois Student Assistance Commission (ISAC): www.collegezone.com (financial aid information)
- Illinois Department of Employment Security (IDES): www.ides.state.il.us (employment information)

CPS's efforts are disseminated through its Web site, http://chooseyourfuture.org

Grant reporting

Of course, many SLC grantees are initially concerned with fulfilling the grant reporting requirements. Since 2004, the U.S. Department of Education has required SLC grantees to report annually "the percentage of graduates who enroll in postsecondary education, advanced training, or a registered apprenticeship program in the semester following high school graduation." Other federal programs, such as the state grant program authorized by the Carl D. Perkins Career and Technical Education Improvement Act of 2006, also require districts to collect and report data on their graduates' enrollment in postsecondary education and advanced training.

Sources of postsecondary data

There are three major sources of information that districts have used to successfully track postsecondary matriculation, persistence, and success. It is important to bear in mind that no one source can provide all the information a district is looking for; the richest and most accurate data come from combining these three sources:

- A state longitudinal data system (LDS)
- Databases such as StudentTracker (www.studentclearinghouse.org/colleges/Tracker/)
- Local information such as district databases and student surveys

A state LDS, where it exists and is accessible, will be the most cost-effective way to gather information on a large number of graduates. Local information can augment these data by providing information on students' high school and college experiences.

The following hypothetical example demonstrates the value of combining data sources and how different sources complement each other to develop a fuller account of students' postsecondary progress.

Data	State data*	Existing district data	Local survey
Institution of enrollment	●		
Two-year, four-year, or technical school enrollment	●		
Postsecondary coursework			●
Remediation required	●		●
SLC enrollment		●	
High school course grades		●	
College grades	●		
Career aspirations		●	●
Perceptions about the high school experience		●	●

*Availability depends on state

"Be very familiar with the SLC grant as you receive it: Know what you say you're going to be collecting data on, and make sure you have everything in place to do that."
—Carla Whitis, SLC Project Director and Assistant Principal, Graves County High School, Mayfield, KY

The SLC grantee in this example is able to link data on students' perceptions of high school rigor to their actual need for postsecondary remediation. The grantee could find out whether its SLCs were equally preparing students for postsecondary success. If the grantee uncovered unequal results, it could dig further into SLC student characteristics in prior years to determine if the SLCs are equitably enrolling students.

Barriers to postsecondary data collection

Many project staff find it difficult to collect this kind of information because:

- It is time intensive
- It is expensive
- It requires technical expertise
- Data resources vary considerably by state and school district
- Data infrastructure may not be in place
- Results may be biased with response patterns varying within groups
- There are concerns about the privacy of students

For these reasons, SLC grantees need to set reasonable expectations for how to proceed and how successful they will be in collecting data.

Keys to successful data collection

The research literature and districts that have been successful in collecting postsecondary data concur on elements to consider in planning and implementing an effective data collection process. Some of the common activities in the process are:

- Pull together a districtwide postsecondary data team, including the SLC director, district data managers, high school coordinators, an evaluator, and local college representatives to coordinate efforts efficiently
- Access existing data whenever possible
- Use record matching to link data across databases
- Persist in tracking postsecondary data over time
- Plan for data alignment, management, and archiving
- Allocate adequate resources
- Make and follow through on a data collection plan
- Balance the benefits of data collection and the associated costs in time and resources

II. Available data sources for tracking postsecondary enrollment

This section reviews the research literature on linking secondary and postsecondary data systems and describes major considerations in planning successful postsecondary data collection.

Insights from the research literature on linking data between the secondary and postsecondary systems

A specific body of published literature on matching longitudinal student records among schools, school districts, and institutions of higher education is not well developed. Longitudinal data are data that can be linked to a particular student over time. This literature review explores related issues and provides references to authors who have used matched records in their work, which required successful data handling. By linking K–12 and postsecondary data, researchers have been able to study a variety of topics in the area of postsecondary matriculation and persistence, including dual enrollment in high school and college courses (Karp, Calcagno, Hughes, Jeong, and Bailey 2007); remedial education (Calcagno and Long 2008); and preparedness for college (Dougherty 2008). In addition, Pfeiffer and Windham (2008) provide an overview of studies that have examined the longitudinal K–16 dataset in Florida. Examples of studies include estimating the social costs of dropping out of high school and access to postsecondary education.

State longitudinal data systems

Quality longitudinal data have been useful in school and district improvement: 1) teachers improve their instruction by receiving feedback on student progress (see, for instance, Feldman and Tung 2001; Wayman 2005); 2) districts use these data to improve overall decision making (see, for instance, Honig and Coburn 2008; Lachat and Smith 2005); and 3) students and their parents make more informed educational decisions when they know how they are linked to likely postsecondary outcomes.

Given the value of tracking educational data from prekindergarten through graduate school, policymakers, administrators, and researchers have increasingly focused on the importance of improving LDSs. Longitudinal data tracking relies on the ability to keep tabs on students who may transfer between schools and districts and matriculate into a variety of postsecondary institutions (Data Quality Campaign 2008a; de la Torre and Gwynne 2009). For this reason, the systematic tracking of students longitudinally is increasingly being managed at the state level. To support these developments, state education agencies (SEAs) have received funding from the U.S. Department of Education's Institute of Education Sciences' Statewide Longitudinal Data System Grant Program (U.S. Department of Education 2009) to implement new data systems (McNeil 2009). There is a growing literature base on creating state-based longitudinal data systems (Ewell and Boeke 2007; Smith and Armstrong 2006; Vernez, Krop, Vuollo, and Hansen 2008). For instance, Smith and Armstrong (2006) describe the experiences of four diverse states (Florida, Utah, Virginia, and Wisconsin) that are leaders in building

longitudinal data systems. Their report discusses how these states went about designing their data systems; the cost to create them; the immediate and tangible results achieved; and lessons to share with other states.

Another approach to accessing longitudinal data is to combine existing postsecondary data sources and match them to student records. Most commonly, districts use the National Student Clearinghouse (NSC) database, also known as StudentTracker, which follows students' progress in college. An overview of the NSC can be found in Schoenecker and Reeves (2008). More information about StudentTracker can be found on page 17 of this guide.

Collecting quality data

SLC grantees will want to ensure that the data they collect are valid and reliable—that they measure what was intended and that multiple attempts to measure program outcomes would reveal similar patterns. See the design principles for surveys on page 23 for additional tips on collecting high-quality data from students.

Record matching

One challenge SLC grantees may experience is aligning multiple data systems. How do you know that the student enrolled in a competitive state college is the same one who left your SLC last year? State and other data systems will only be useful to the extent that their data can be "matched" to the information about students that already exists at the district level. Researchers and data analysts use the term "matched" when information about a single individual held in one data system is connected to information in a second data system.

For example, SLC project staff might collect data on the participation of students in summer programs. When matched to state data about the current postsecondary enrollment of the individual, district administrators can merge the data and draw inferences about connections between summer program attendance and college going.

The complexities of record matching will be explored in some detail throughout this guide. Accessing existing data is less expensive and time-consuming, in general, than developing a local system to track students into college. Investing time and money in successfully matching local data systems with state and national systems is a more feasible and cost-effective approach.

Typically, record matching relies on a limited number of fields of information. Ideally, there would be one unique student identifier that is used by both K–12 and public postsecondary educational institutions within a state. This is one of the elements of a state LDS that the Data Quality Campaign has argued is essential (Data Quality Campaign 2008b). Currently, however, most states do not have a single, common student identifier that is used by both the K–12 and postsecondary sectors. Although the most stable unique ID is a student's social security number (SSN), its use may present some concerns over privacy and identify theft. In addition, many undocumented students may not have SSNs and will need to be tracked by other identifiers.

Because of these challenges the linking record often becomes a combination of fields that are "strung together" by a data analyst to identify a student uniquely. The following information is usually considered essential in matching records, and should be included in any data collection you do:

- Last name, first name, middle name
- Date of birth
- Gender

In general, some duplication is built into the system so that the match can be confirmed from combinations of fields, even if some data are missing or have changed over time.

Data privacy

Maintaining student privacy is paramount whenever student longitudinal records are collected, stored, and analyzed. One important privacy risk is releasing data that, although anonymous, pertain to so few students that it is possible to identify the individuals. For these reasons, SLC grantees may encounter restrictions on record matching and the release of personally identifiable records.

Federal law: Family Educational Rights and Privacy Act (FERPA)

Enacted in 1974, the federal Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. 1232g; 34 CFR Part 99) was created with the aim of protecting the privacy of student educational records. FERPA applies to all schools receiving funding through programs administered by the U.S. Department of Education (see www.ed.gov/policy/gen/guid/fpco/ferpa/).

FERPA's main goal is to provide "parents certain rights with respect to their children's education records." The law does, however, allow access without consent to an educational record for certain reasons, including school officials with a legitimate educational interest, specified officials for audit or evaluation purposes, and organizations conducting certain studies for, or on behalf of, the school.

As it stands today, FERPA does not explicitly allow state educational officials, including state LDS staff, to disclose to others personally identifiable student information and data that they have obtained from postsecondary institutions. Because FERPA fails to address record matching and the disclosure to others of personally identifiable data that have been collected from postsecondary institutions explicitly (Cheung, Clements, and Pechman 1997), many state agencies have found it difficult to establish an effective statewide LDS that creates and maintains a comprehensive overview of a student's record and progress throughout his or her educational career, including secondary and postsecondary records (Data Quality Campaign 2007).

FERPA will impact SLC grantees when they attempt to share data with other institutions, or to access data that are gathered by the state but not made publicly available. Interpretations of FERPA vary by state and locality.

State privacy laws

Much of the variation in FERPA interpretation from state to state depends on specific state-level statutes and the intersection of state and federal laws. For example, some states require that data can only be released to parents, personnel of a school district, or other agencies that are directly engaged in the education of the students. Therefore, establishing the terms of the relationship between the SLC project, the governing school district, and the SEA is a necessary first step in determining the feasibility of data sharing with the state. Appendix B2 lists a contact for each state agency. This point of contact is intended to help the SLC grantee clarify two central questions:

1. Will the state agency be able to provide the SLC grantee with individually identifiable records of students who have participated in SLC programs? If so, the SLC staff could move forward with record matching to other data sources in the future. If not, a follow-up strategy is to ask whether the state could provide non-identifiable information, in aggregate, to the SLC project staff.
2. Because institutions of higher education may be disclosing their enrollment and persistence data to the SEAs, is redisclosure of those data allowed under the state agency's interpretation of FERPA and state privacy laws? If the state prohibits the redisclosure, the SLC grantee may work with its students, parents (of minors), and the state agency to implement a consent process that mitigates that barrier to the data exchange.

We recommend contacting the state data representative to work out the details of which data can be shared, what the limitations of "identifiability" are, and how the burden of record matching might be accomplished. State agency staff members who work in this area are familiar with these questions and knowledgeable about state-level regulations as well as the agreements that are already in place between the state agency and institutions that provide postsecondary data to the state. District data personnel may also have insights into legal pathways for data gathering.

Procedural safeguards

Another way to protect privacy involves limiting the number of people accessing individually identifiable data. Some SEAs may protect privacy by taking on the job of matching records and handing consolidated data files back to the project staff.

In cases of small sets of data, some states may only reveal information in blocks of aggregated data. A common rule is that groups of students are aggregated into pools of at least 10 individuals to protect identity.

Local districts may also take steps to protect student privacy by limiting access to student-level data to district data analysts, sharing out only aggregated data for the purpose of program improvement. In addition, districts can store identifiable student records in password-protected and encrypted formats.

Data transport
SLC grantees should ask their states how data are transported across systems. This will impact the time line and the work required to interface state data with local systems. Some states can move data records electronically over secure servers that allow for expedited handling and compliance with high standards of data security. Less secure data transfer includes sending encrypted CDs by overnight courier. For example, Florida has implemented the highest industry standard for secure data transport. One of the strengths of Florida's data system is the Florida Automated System for Transferring Educational Records (the "FASTER System"), which uses the unique K–20 identifier assigned to each public school student in the state (Vernez et al. 2008). FASTER "provides school districts, community colleges, and universities with the means to exchange transcripts and other student records electronically" (Florida Department of Education 2007).

Data collection costs versus benefits

SLC grantees are likely to be interested in understanding the education and career trajectories of each of their graduates: Students who have progressed in postsecondary education are just as important as those who have not, when trying to understand why and how students succeed. The trade-off that inevitably surfaces is how much time, effort, and money should be spent to track down students who are unresponsive. As hard as you might try, it will not be possible to systematically follow each and every graduate.

For these reasons, project staff will want to balance the costs and benefits. Costs will vary depending on a number of factors:

- The response rate desired, and how difficult graduates are to reach. Transient populations, for example, are more difficult to track.
- The outreach methods chosen, and how many efforts are made to follow up with nonrespondents. New Web-based survey tools are available and can be used by computer-fluent analysts at little or no cost except for the professional's time. Follow-up procedures, open-ended survey designs, and mail surveys cost more but may yield a greater response than Web-based tools.
- The technical expertise required for analysis, and whether a grantee needs to contract with a service provider to obtain this level of expertise.

See survey design on page 23 for more data collection strategies.

III. Planning for postsecondary data collection

The types of data an SLC grantee collects should be dictated by what analyses the project staff members ultimately want to do. The simplest level of data analysis simply asks whether graduates are enrolled in college. Project staff should search for the most cost-effective way to obtain this kind of data, such as using their state's LDS or StudentTracker. If the level of desired analysis is more complex—for example, to suggest improvements in program design—the grantee will want to collect more complete postsecondary data. Keep in mind that the district will need to invest resources to match the ambition of the data collection plan.

The flowchart on the next page outlines steps in the data collection process: from assessing needs to analyzing and reporting information. Guiding questions are provided in the descriptions of each step to help grantees home in on what types of data are needed and what resources are available, both internally and externally.

Step 1: Assess data needs

It is not cost effective or efficient to collect all possible data fields. As project staff members begin to plan their data collection, they should identify essential data: the minimum amount of data they will be able to analyze and use for program improvement. They might ask, "What data can answer the most important questions

Assessing Data Needs, Acquisition, and Collection

Step 1:
Assess data needs and the types of information that would be helpful to collect and store over time.

Review project goals and ask what information will best answer project questions.

Step 2:
Consider whether the SLC project and/or school district staff have the capacity to collect and analyze data.

Understand SLC/staff data capacity: Is this a reasonable project for program staff?

YES

Collect existing demographic data from school/district.

NO

Consult with external data partners and educational researchers or data consortia.

Step 3:
Acquire data from existing sources before collecting additional information directly from graduates.

Determine if the state education agency and/or P–16 council can provide existing data that could be matched.

YES

Option: Acquire state postsecondary matriculation data.

NO

Option: Contract with StudentTracker to provide data records.

Step 4:
Collect data and/or develop data sharing agreements to complement existing data.

Option: Design and administer survey annually to SLC program graduates.

Step 5:
Analyze and report.

Conduct analyses and report information that will help program improvement move forward.

about the effectiveness of our program for postsecondary preparation?" As noted previously, the more complex the questions, the more data will probably be needed. Project staff should match the scope of data collection to the time, money, and personnel resources available.

Postsecondary data

The table below lists common postsecondary questions and the types of data that provide insights into those questions.

Examples of data fields	Questions about postsecondary matriculation and success
Postsecondary intent	Do our students follow through on their educational plans?
Free Application for Federal Student Aid (FAFSA) completion	Is lack of financial aid a barrier to postsecondary enrollment?
Remediation at postsecondary levels	Are our high school courses rigorous enough to prepare students for postsecondary education without need for remediation?
Postsecondary application	What percentage of our graduates completes applications to postsecondary institutions, by demographic characteristics?
Postsecondary admission	Do students apply to postsecondary institutions that match their qualifications?
Postsecondary enrollment	What percentage of students enrolls in postsecondary education in the fall after graduation?
One-year postsecondary persistence	Which institutions best support our graduates to complete their first year?
Exit from postsecondary institution prior to degree	What student characteristics are correlated with leaving postsecondary institutions without a degree?

Financial matters in particular have a tremendous impact on students' postsecondary trajectories, and understanding the patterns by which students access federal and state grant and loan programs and juggle work and school may be of interest to SLC grantees.

Secondary data

Project staff may also want to consider which secondary data will help shed light on postsecondary outcomes. SLC membership, course-taking patterns, and postsecondary plans may be included in the list of desired data fields. Research literature indicates a number of factors that are associated with enrollment or persistence in college. Grantees may wish to obtain data on these factors to look for patterns that will inform program improvement.

Data management
SLC grantees will need to establish a protocol for storing the data they collect—whether in simple Excel tables or a more complex relational database design. How the data will be analyzed will drive the product and the database design. For example, if the SLC project staff were to "key in" the data from student surveys into a spreadsheet product, they would be able to access reports on those data in multiple ways. However, if the data were to be matched over many years, with many sources, and set up for statistical analyses, the storage and data management tasks would need to be evaluated carefully by a database designer and/or statistician.

Grantees could, for example, analyze transcript data to indicate the academic intensity of the high school curriculum, a significant factor in completion of a bachelor's degree (Adelman 2006; USED 2002). One study defined a rigorous curriculum as at least four years of English, three years of foreign language, four years of mathematics including precalculus or higher, three years of laboratory science, three years of social studies, and at least one honors or Advanced Placement course.

Other studies have indicated that factors associated with increased enrollment and/or persistence in college include meeting frequently with a counselor (King 1996; McDonough 2005; Plank and Jordan 2001), early family encouragement of college aspirations (Tierney and Auerbach 2005), and consistent communication about college costs and financing systems among students, families, and school personnel (Plank and Jordan 2001).

Identifiers

This guide discusses record matching through identifying data fields that allow records to be linked across databases on page 6. In collecting data, be certain that students' last name, first name, middle name, date of birth, and gender are included, along with student ID number or other unique identifiers.

Step 1 guiding questions

- Which data are essential?
- What specific data fields will help answer more complex questions about postsecondary matriculation and success?

Appendix A1 offers a worksheet to help guide project staff through an assessment of data needs.

Step 2: Determine staff capacity and plan for data management

Gathering and processing data take different kinds of expertise, from survey design to data analysis. SLC grantees should determine what technical capacity exists within their program. Another consideration is the time required to complete the collection and analysis of data. If the project staff members do not have the internal capacity, are there partners or an outside evaluator who can help to fill the gap? Appendix A2 has a sample time line for data collection.

Step 2 guiding questions

- Who will be responsible ultimately for collecting, matching, storing, and reporting the data?
- Is that technical capacity within our project, or with whom can we partner?
- How will we format and manage the data we receive so that they can be matched?

We recommend that SLC staff members work internally with their district data analyst to understand the best approach to storing and managing data.

Data security
Regardless of the software, attention must always be given to data security. Files should be password protected, backed-up as required by school district policy, and computers secured safely. As a general rule, data about students that can be interpreted to identify an individual should never be stored on an unencrypted laptop computer or sent by e-mail transfer.

Step 3: Acquire data from existing sources

Two data sources may be available at little or no cost: data already collected by the district and by the state.

State partnerships

Considering that local data collection may be cost prohibitive, and that data are increasingly collected at the state level, SLC project staff should develop a partnership with their SEA. Early in the data planning process, project staff should determine what data the SEA maintains and how they can be accessed by the project staff or district in a form that can be "matched." If the project staff were able to obtain access to the state LDS efficiently, they may be able to examine such issues as financial aid status, standardized test scores, postsecondary enrollment, success in college coursework, remediation rates, and, eventually, postsecondary graduation rates. State LDSs are described in detail beginning on page 14. State data contact numbers are included in Appendix B2.

District data

"Linking" transcript files to baseline records is a necessary step in preparing for postsecondary data analysis. At the end of the school year, the SLC grantee should request that complete course transcript files for graduating seniors be "linked" to baseline records. In most school districts, this is a standard request and can be accomplished with a review of the existing district data. These data should include courses completed, grades, credits earned, and any standardized test scores that may be reported on the transcript. These data are useful for subsequent analysis that looks at the relationship between high school performance and postsecondary matriculation and persistence.

Grantees may wish to canvas their guidance, career and technical education, and other school and district personnel to find out whether they are collecting data that can be coordinated with the project staff's postsecondary data collection. For example, if seniors are surveyed about postsecondary plans or perceptions of high school rigor, can these data be matched to baseline records as well? If this can be accomplished with ease, it may be a worthwhile step.

Step 3 guiding questions

- Which data exist locally and have already been collected?
- How can the data be extracted and shared with our program leaders?
- Does the SEA collect postsecondary matriculation data?
- What are the unique characteristics of those data that will enable record matching to occur?

Step 4: Collect data or develop data-sharing agreements

Where data are urgently needed but are not available from the state or district, project staff will need to find other sources for these data. Other sources include the National Student Clearinghouse's StudentTracker, which is described beginning on page 17, along with other kinds of data-sharing agreements. Where data can only be collected locally, a survey may be a good way to fill gaps in the data. Project staff members should make sure they carefully assess the costs and benefits of these data before investing resources in local collection. Student surveys are addressed beginning on page 19 of this guide.

Step 4 guiding questions

- Can we adapt our existing data collection methods to get the data we need?
- Should we request data from StudentTracker?
- What local agencies, university research groups, or others may be collecting the data we need? Can we partner with them?
- What additional data, unavailable from existing sources, could be collected by surveying students and their parents directly?
- How frequently should a survey process be implemented (e.g., biennially or annually)?

Step 5: Data analysis and reporting

Because the intended analysis determines the kinds of data to be collected, planning for data analysis begins long before analysis takes place. This guide provides more information on data analysis beginning on page 26.

Step 5 guiding questions

- What analyses are possible with the data that have been secured?
- How should the analysis be prepared and reported, and to whom, to make the information useful?
- Can we use the reports for continuous program improvement?
- What additional data collection should we do in the upcoming year?

IV. State longitudinal data systems

For the past few years, the National Center for Educational Achievement (NCEA) and the Data Quality Campaign (DQC) have mounted a campaign to promote the tracking of student data from prekindergarten through college and graduate school. DQC's Web site, www.dataqualitycampaign.org/survey/, highlights the progress

states have made toward systems that have the "ability to match student records between the P–12 and higher education systems" (Data Quality Campaign, 2008b). Ideally, these systems include information about:

- College enrollment patterns within 15 months of high school graduation, by district
- Remediation in college and the associated variation by student income and ethnicity
- Patterns of students who demonstrate proficiency on states' high school tests but still require college-level remediation
- College completion patterns as they relate to high school courses, grades, and test scores

Availability by state

Twenty-eight of the 50 states currently have an LDS with the ability to match student records across systems. They include:

Alabama	Florida	Kentucky	Mississippi	North Carolina	Vermont
Alaska	Georgia	Louisiana	Missouri	Oregon	Washington
Arizona	Hawaii	Maine	Nevada	Tennessee	Wyoming
Arkansas	Indiana	Massachusetts	New Jersey	Texas	
Delaware	Iowa	Minnesota	New Mexico	Utah	

Where these data-matching systems exist, SLC grantees may be able to access a wealth of additional information such as college-readiness test scores, current enrollment status, and high school transcripts. Appendix B1 shows the additional data available in each state with an LDS.

Example: Florida's Data Warehouse

Florida's K–20 Education Data Warehouse compiles longitudinal data from prekindergarten through graduate school public records, including student-level data for public schools, community colleges, career and technical education, adult education, and the state university system; postschool employment information; and non-education program data. In order to match records, the Warehouse establishes a common K–20 student ID number. To further improve comparability of data across school systems, the Warehouse standardizes course numbers, catalogs, and state standards. It also promotes a state culture of data sharing (Pfeiffer 2006).

School districts receive a High School Feedback Report from the Warehouse, which provides an overview for each public high school on how its graduating class compares to other schools in its district and to the mean of all schools throughout the state. Not only does the report detail how the graduates performed in high school, but it also shows graduates' first year in college, including enrollment, GPA, English and math completion rates, and course content levels. (See Appendix D1 for the types of reporting that are possible with these data.)

"We share with our entire faculty [the reports from the Kentucky Council on Postsecondary Education]. It's an FYI for them because we're always looking at our ACT scores and how we can make those better as well as how to get all our students hitting the benchmarks."

—Carla Whitis, SLC Project Director and Assistant Principal, Graves County High School, Mayfield, KY

Example: Kentucky's High School Feedback Report

The Kentucky Council on Postsecondary Education has developed a series of succinct, easy-to-read reports that the state shares with high schools to show how their graduates ultimately perform in Kentucky postsecondary institutions. The Council's high school feedback report tracks students in their sophomore year of college and is produced in collaboration with the state department of education, the Kentucky Higher Education Assistance Authority, ACT, and the College Board. The most recent report, posted online at http://cpe.ky.gov/news/reports/hsfr_public.htm, is for the class of 2004 while the next report (covering the class of 2006) is planned for release in fall 2009. It features comparison information at the school, district, and state levels and important school statistics such as ACT and Advanced Placement (AP) test-taking and success. A sample of Kentucky's High School Feedback Report is included in Appendix D2.

In addition, the Council produces an annual report for each high school on the previous year's graduating class. It includes retention rate in in-state colleges and universities and students' grades after one year of college. ACT scores, GPA, number of AP courses, and the amount of Kentucky Education Excellence Scholarship money awarded to students is also reflected in the reports, so schools can correlate these measures with how students fare in postsecondary settings.

At rural Graves County High School in Mayfield, Kentucky, SLC Project Director Carla Whitis relies on both reports to convince students that they need to take more rigorous courses. Whitis says the correlation between AP course taking, GPA, scholarship aid, and postsecondary success also makes a strong case to parents and teachers who may ask why a student should take AP classes.

In addition to the Council's reports, Whitis's school collects transition information each fall, documenting the status of its most recent graduating class. In a district with only one high school and with 285–315 graduates, it is not difficult to track 100 percent of students. A list of graduates is e-mailed to faculty, who are able to report on whether their students have gone on to college, work, or the military. The district also checks with in-state colleges and then phones parents of students whose status is uncertain.

Barriers and progress in state longitudinal data collection

If an SLC grantee is located in a state with a high-quality LDS, it may seem golden. But even states with an LDS vary considerably in the scope of data collected and their accessibility. Some states, for example, are better prepared to answer longitudinal questions regarding students' potential success in college and the need to enroll in remedial courses once they matriculate. Specifically, these include Arkansas, Delaware, Florida, Georgia, Texas, and Utah (Data Quality Campaign 2008d).

States that do not link data between secondary and postsecondary education cited the following barriers to matching student records across systems: lack of common identifiers, lack of resources, incompatible systems, and lack of coordination between P–12 and postsecondary systems (Data Quality Campaign 2008c). Connecticut and Wisconsin also mentioned state law as a barrier. Grantees that are located in states without developed data systems will need to rely, over the short term, on other data collection strategies outlined in this guide.

However, given the cost of collecting data locally, advocating for access to better data and data sharing with an SEA may be a worthwhile investment.

P–16 and P–20 councils

Another development in the effort to improve record matching is the creation of intersegmental councils that prioritize communication between secondary and postsecondary institutions. The Education Commission of the States found that, as of May 2008, 38 states had formed a P–16 or P–20 council (a group of community members, educators, and business leaders) to create strategies that better align, support, and improve education from preschool through college (Education Commission of the States 2008). P–20 councils include graduate and postgraduate education. In addition, most councils undertake some shared role in creating and supporting statewide data systems, as part of their goal to increase accountability, reinforce connections, and smooth transitions between high school and college.

Councils may be a useful avenue of advocacy for grantees working to improve data collection and access in their states. Appendix B2 has contact information for each P–16 and P–20 council, including the initial state data contact.

V. StudentTracker: A national repository for student matriculation data

For grantees in states without an LDS, another resource is StudentTracker, a database compiled by the National Student Clearinghouse (NSC). In 2004 the NSC began allowing school systems to follow their graduates through StudentTracker for a fee.

StudentTracker provides access to postsecondary enrollment and degree information for more than 93 million current and former students throughout the United States and more than 3,200 participating public and private postsecondary educational institutions (National Student Clearinghouse, n.d.).

Even districts that can access a state LDS may want to use StudentTracker if a substantial number of graduates go to out-of-state postsecondary institutions, or if their state does not collect information on outcomes after the first year of college. For example, the Chicago Public School (CPS) district has examined CPS graduates' college enrollment and graduation from four-year colleges (Roderick, Nagaoka, and Allensworth 2006). Furthermore, by linking college outcome data from StudentTracker with longitudinal K–12 student data housed within CPS, the district was able to examine how college preparation at the high school level (measured by high school GPA and ACT scores) is related to matriculation into college.

Social security numbers and StudentTracker

Many districts are concerned about sharing student social security numbers (SSNs) when using StudentTracker. NSC has developed some procedures to protect student privacy:

- Using StudentTracker complies with FERPA. Districts do not need to obtain consent to release the limited directory information StudentTracker requires.
- Files can be transmitted over the Internet using secure File Transfer Protocol. This procedure provides a safe and secure way of collecting, storing, managing, and transmitting sensitive information between the education agency and the NSC. The format of the data file can be either in ASCII or Excel, programmed according to the standard layout specifications provided by the NSC.

Using StudentTracker

StudentTracker is not difficult to use, and is quite cost-effective compared to other methods of gathering postsecondary data. For example:

- In 2009, the total cost of the StudentTracker program is $425 per high school per year.
- Local education agencies (LEAs) sign a participation agreement with the NSC.
- Once the agreement is signed, districts or schools create and transmit the graduate file. Files can be transmitted in Excel, or districts can program their local data system to interface with the Clearinghouse database.
- Graduate files include the following information for each high school graduate: name, date of birth, social security number (if available), name of high school, and diploma award date.
- LEAs receive aggregate reports on enrollment, persistence, and degrees granted. Student-level reports allow matching with other longitudinal data.
- Information about joining and using StudentTracker can be found at www.studentclearinghouse.org/highschools/. For a list of postsecondary institutions that participate in the NSC, see www.studentclearinghouse.org/colleges/coreserv/docs/CoreParticipants.xls.

Limitations of StudentTracker

Not all students enrolled in postsecondary education are included: NSC estimates that about 91 percent of all postsecondary students in the United States are enrolled at an institution that is included in the NSC database. This means that on average 9 percent of postsecondary students are not included in the dataset. Given that students tend to matriculate to colleges that are geographically close to where they graduated from high school, it is advisable to examine the list of colleges that participate in the NSC database to determine whether postsecondary institutions close to a particular high school are listed. If all the colleges near a given high school are included in the NSC database, it is likely that StudentTracker will not severely undercount the number of students who matriculate to college. Supplementing StudentTracker with other data, such as local surveys, may also fill in missing data.

Even when the student is enrolled in a participating institution, information on the type of degree awarded and the college major is provided for some, but not all, students. Approximately 93 percent of all colleges in the NSC database report graduation indicators. More than half of that group report detailed graduation information, including degree, major, and minor. Consequently, if many graduates of an engineering SLC enroll in a local technical school that does not report majors, StudentTracker may undercount the number of graduates pursuing technical majors. The SLC project director may be able to obtain the information through a data-sharing agreement with a local institution if it is not available through StudentTracker. The only information that is consistently reported for all high school graduates in the StudentTracker database is postsecondary enrollment status and a variable indicating whether the student graduated.

- There is not an alternative unique identifier to the SSN, but grantees can submit graduate files to StudentTracker without this information. The computers match the records using name, gender, date of birth, and school of origin. Without an SSN, the successful matching of records will decline. The degradation of the match rate depends on the size of the school, the extent to which the students have "common" names, and the overall patterns of missing data.
- Districts receive student-level data back from the NSC. One local procedure to protect student privacy is to limit who has access to this report. The designated person is responsible for aggregating the data before it is shared for program improvement.

This guide has more information on data privacy concerns on page 7.

Augmenting StudentTracker with other sources of data

Data-sharing agreements

StudentTracker is not the only source of data on postsecondary outcomes. Chicago Public Schools has developed data-sharing agreements with multiple databases, so that they can build a comprehensive picture of what happens to their graduates after they leave the system. A data-sharing agreement is a commitment from any two institutions to exchange or provide data.

Data-sharing agreements often are customized so that the data an agency has available are usable by the district. StudentTracker does not require users to develop customized agreements; it provides a standardized data feed. However, data-sharing agreements often specify data fields, the format in which the data will be transmitted so that they are usable by both parties, as well as the safeguards to protect the privacy of student data. The key is the ability of the two data partners to add sufficient detail to their agreements that the data can be used productively, and in many cases, matched at the individual student level.

Partnerships

Districts may have access to a data partnership. These data warehouses build data-sharing agreements with numerous data partners. Schools and districts can then access these data without developing custom data agreements. Some districts also participate in partnerships among school districts, institutions of higher education, research agencies, and state agencies to maximize the value of data that are collected in a central location for analysis.

VI. Augmenting existing data systems: Student surveys of postsecondary matriculation and persistence

When primary data need to be collected at the program or school level, the typical solution is to develop a survey that students complete at some point after graduating from high school (see, for instance, McNamara 2004). This involves building a database of student contact information and developing a questionnaire that covers topics deemed by the project staff or school to be of interest. Examples of baseline and follow-up surveys can be found in Appendices C1, C2, and C3.

SLC grantees should consider these questions in determining whether a survey is the right data collection strategy for their district:

- Are the data necessary for answering essential questions about the effectiveness of our program?
- Is there another way to gather these data?
- Do we have a concrete plan for using these data for program improvement?
- Do we have adequate time, money, and staff expertise to collect primary data?

Data-sharing partnerships

One example of a data partnership is Cal-PASS (California Partnership for Achieving Student Success). Cal-PASS (www.cal-pass.org) collects, analyzes, and shares student data to track performance and improve success from elementary school through university. Its aim is to help instructors and administrators 1) understand student performance, including transitions; 2) improve instruction; and 3) increase student success. The partnership spans 6,800 elementary schools, high schools, community colleges, colleges, and universities from more than 52 counties throughout California. By sharing data among K–12 schools, community colleges, and universities, it seeks to improve instructional programs and student learning and success throughout the educational system.

Survey planning

If project staff members decide to proceed with a survey, they must first plan a number of elements. These include:

- Essential information fields
- Database development and contact strategies
- Delivery methods (electronic, mail, telephone)
- Time line for administration and follow up
- Resources

Essential information

The extent of a grantee's data collection activities and the breadth of its inquiry about college persistence depend on the research questions that it determines are important to understanding program effectiveness. Working with an evaluator can help the project staff identify essential information. Good planning, surveys limited to the essentials, and appropriate questions can reduce data collection costs. Surveys that take 15 minutes to fill out and ask direct pertinent questions will elicit higher response rates than those that take 30 minutes or more to complete and ask many detailed or personal questions.

Any information that can help answer questions about students' progress—from basic data about matriculation to extensive information about college course patterns—is possible and appropriate to gather. As always, the challenge is to balance the utility of the data against the costs of data collection. Remember to first look for other sources of data such as a state LDS or StudentTracker.

Student contact database development

Surveying high school and college students is challenging. Students' intentions about postsecondary matriculation can change over months or even weeks, and the best plans may either play out, be delayed, or take an unforeseen detour. Students are mobile, and keeping track of their location—a seemingly simple task—is enormously difficult in practice.

Before students leave school, it is recommended that administrators build a database of student contact information.

E-mail accounts, phone numbers, and addresses may change as students pursue their lives after high school. Some strategies may improve the chances of securing a successful response from each student in the future, essential to longitudinal studies:

- Collect both a student address and a "permanent" parental contact
- Gather best friends' names and home phone numbers
- Ask students at each point in the data collection process how they should be contacted for future follow-up
- Use counselors and teachers to maintain contact with families with younger children in the same school
- Update the contact database at events when many alumni return to school

It is very important to impress upon graduates the value of collecting longitudinal data and how this kind of personal information allows researchers to follow up. Assure students that their information will be kept in a secure place and will not be shared with anyone. Never ask students for highly personal information such as a social security or driver's license number on a survey.

Delivery methods

The best survey approach is the one that yields the highest, most accurate response pattern. Mail, telephone, e-mail, in-person, and online approaches are all acceptable. In fact, the most practical solution may be to combine approaches: Contact students initially by e-mail and follow up with phone calls to nonresponders.

More and more, surveys are delivered electronically. Increasingly, do-it-yourself survey tools are available online that allow for embedded and secure links to be placed in e-mail messages. SurveyMonkey or SurveyGizmo are two online examples of survey services that support data collection. They are easily accessible and provide a step-by-step guide to creating a survey that specifically meets the needs of the school or district.

Social networking sites such as Facebook and MySpace can be a good pathway for identifying and communicating with graduates. Links to online surveys can be sent to alumni groups. The advantages of Web-based surveys are convenience, rapid data collection, cost effectiveness, ample time to respond, ease of follow-up, ability to reach specialized populations, and use of visual aids. Disadvantages include limited respondent base, self-selection bias, lack of interviewer involvement, and difficulty determining who has received the survey (Rea and Parker 2005).

Phone surveys can get high response rates, but require a lot of time and money. Some school districts have hired retired teachers, or used student or graduate volunteers. Verification of student information through family members is likely best accomplished by telephone follow-up. Phone surveys may be helpful for grantees working with a population with limited literacy. They also allow probing for more complete answers to open-ended questions.

Mail surveys tend to get low return rates. To improve those rates, mail questionnaires should look different from other mail that respondents receive. Mail the questionnaire on Monday or Tuesday, so that even surveys that must be forwarded arrive the same week they were mailed. Avoid mailing close to holidays. Project staff is advised to follow up: One suggestion is to send a postcard to everyone as the deadline nears. The postcard can thank those who have already returned their questionnaires and remind others to send theirs in quickly.

Paper and pencil surveys, distributed at events that attract alumni back to school, such as homecoming games, might reach alumni who are difficult to connect to through other strategies.

Time line

In general, districts that pursue local data collection administer surveys to high school students during their senior year. This survey both gathers information about what students plan to do after high school and secures contact information for later use.

"The more you can do through the district, through the guidance department, and through the Technical Information System, [it makes] life so much easier. It's getting answers back from students after graduation that's the hardest part."

—Angie Grasberger, SLC Grant Project Manager, Manatee County (FL) School District

The frequency of follow-up will depend on the data needed. For the first year after high school graduation, programs may wish to confirm enrollment in the fall. Some schools will want to check back at the end of each semester or at the end of the year. Ambitious districts may follow up for several years. Appendix A2 offers a sample time line.

Resources

The costs involved in developing systems of data collection can vary depending on who is doing the work. There are costs associated with developing, administering, and analyzing the survey. Chicago Public Schools (CPS) received a grant from the Bill & Melinda Gates Foundation to develop its robust local data collection system.

SLC project directors can work closely with their evaluators and district data researchers to design and analyze survey information. Using personnel already associated with the SLC project may also help to keep costs low.

SLC grantee perspectives on survey planning and data use

Lakecia Whimper, manager of program analysis for CPS, collects data on a Senior Exit Questionnaire that is administered before students graduate. In order to achieve response rates above 80 percent, CPS has a carefully planned rollout. First, a data coordinator is identified for each school. This person will be responsible for administering the online survey and following up with nonresponders. The data coordinator works with the district to confirm the identities of all graduating seniors. The survey itself is administered during May. The district provides weekly and then daily updates to the coordinator about the students who have not yet responded. They are individually reminded to complete the survey. Incentives, such as tickets to senior events, are used to encourage students to participate in the survey.

Angie Grasberger, SLC project manager for the Manatee County School District, uses Florida High School Feedback Reports together with data derived from student surveys for grant-reporting purposes and to help inform program decisions. The student survey (see Appendix C3) was designed by Grasberger and the guidance department and is administered in spring of senior year. Student-reported information about postsecondary plans is matched with actual transcript requests. The survey also seeks contact information for both the student and for parents and other family members. A follow-up survey is conducted six months to a year after graduation.

Grasberger reports that gathering postgraduation data is difficult, primarily because families move and don't provide the district with updated contacts. The best strategy the district has used for follow-up is hiring former graduates to call their classmates. Recently the district has moved to using online programs such as SurveyMonkey.

Design principles for surveys

SLC grantees are advised to align their survey questions with the essential information they are trying to collect. Listed below are some practical guidelines for setting up and implementing primary data collection activities. They are intended to assist SLC project directors; expert advice from an evaluator or district data analyst may help to refine strategies.

Design a valid survey

Survey researchers use the term validity in referring to whether the measurement tool being used is actually measuring what was intended. In the context of the SLC project, the survey instrument needs to be carefully designed with attention to each question and the structure of the survey in total (content validity). Are the questions clearly worded and unambiguous? Does the structure of the question (open or closed-ended) allow for providing the most transparent responses that are consistent with the intent of the question? Is the survey likely to be taken seriously, and the questions from beginning to end answered with the same level of rigor? An important strategy for improving validity is to pilot test the administration of the survey with a few people from the target group and get their feedback. Make modifications in areas that seem problematic.

In general, direct factual questions are more likely to lead to valid responses and be clearly understood by respondents. For example, asking graduates their current status in college or a job with forced-choice options (e.g., currently enrolled in a community college or four-year college, currently working part time or full time) will usually engender a valid response. If the status categories are clear and don't overlap, respondents will likely report their status with a great deal of accuracy.

On the other end of the spectrum are questions that ask for opinions or insights, which can be interpreted in different ways by different respondents. Open-ended why or how questions can yield varied responses and different interpretations of how to respond. If a program wants to understand how or why high school factors contributed to students applying to or persisting in college, it should design a list of likely factors that are clearly stated and let graduates check key influencers (e.g., direct advice of my counselor, advice of a particular teacher, parent influence, taking AP classes, or passing AP tests).

Programs need to decide whether their survey will be anonymous or if respondents will be identified; this may affect the validity as well as the response rates. Individuals will often provide background information in anonymous surveys if they feel they cannot be identified from such data.

On the other hand, sometimes a program needs to know who the respondents are in order to follow up and compare responses over time. If the respondents are identified, avoid asking highly personal questions. They may not answer these questions truthfully. As discussed in the section on data privacy, SLC grantees may wish to limit access to individual-level data to a data analyst, and assure respondents that results will be confidential and that only aggregate or group data will be reported.

Tips for designing surveys

- Do not ask more than one question at one time. Avoid "double-barreled" questions that ask about more than one thing.
- Make certain that fixed-response questions provide an option for every possible answer.
- Make certain that answer categories are either mutually exclusive or multiple response.
- Keep it short.
- Minimize the amount respondents have to write.
- Use simple words, avoiding jargon.
- Be as specific as possible without severely limiting the information you need to collect.

Design a reliable survey

Reliability is an assessment of the extent to which the survey questions will be answered similarly each time the questions are presented to the students, all else being equal. For example, if we were to ask students if their parents had graduated from college, under most circumstances, the response would be constant over time. In the case of the SLC project, there may be actual changes in perceptions of the project, or recollections as time goes by. Still, look to build survey questions that allow information to be administered, and then administered again, to allow for checks of internal consistency.

As with validity, clear questions that are not open to multiple interpretations will generally increase reliability. One pitfall to watch for is complicated questions with multiple clauses, or so-called "double-barreled" questions. Asking students whether their parents, teachers, and counselors helped them make their college choice leads to respondent confusion. How do I answer if my parents did help but my teachers did not and my counselor was never available to talk to me? Better to ask three separate questions to avoid confusion and unreliable answers.

Formulate questions

Questions for surveys can be developed to meet the particular interests of SLC project staff members as their program evolves. All questions should be relevant to the research question that the analysis of postsecondary progress is trying to address. Avoid cluttering up a questionnaire with superfluous items.

Multiple choice answer categories need to be exhaustive—that is, include all possible responses. Programs should avoid including answer categories that are not exhaustive, such as:

What is your current work or school status?

☐ Community college
☐ Four-year college or university
☐ Working full time

The respondent could be unemployed, working part time, or attending a technical school.

Answer categories also need to be either mutually exclusive (i.e., each response is distinct) or multiple response. The previous example does not have mutually exclusive categories because a graduate could be both working and attending school. Survey questions can invite multiple responses (i.e., check all that apply). Another possible solution is to ask separate questions about work and school.

Be careful with vague, open-ended questions. A survey with many open-ended questions is time intensive to analyze since written responses have to be read, coded in some way, and counted or interpreted to get at recurring themes and important insights.

If the survey is not anonymous, the program will also want to ask for name, student identifier, date of birth, and gender. Programs can match the survey data to other information through record matching. If the program wants to conduct subgroup analysis on an anonymous survey, it should ask students for important background

- Do not talk down to participants.
- Avoid loaded or leading questions that indicate your preferred answer.
- Avoid biased questions that some groups of students may be less able to answer than others.
- Avoid objectionable questions.
- Avoid hypothetical questions.
- Refine the survey through pilot testing to modify problem areas.

information at the end of the survey. Explain that this information is needed to compare males and females, or graduates from different graduating classes, different high school academies, and so on. Ask only those questions that are important for subgroup analyses.

Order the questions

The order of questions should stimulate interest in the beginning and leave less interesting items for the end. Ask the most important questions early in the process. The very first question, however, should not be too difficult. Start with something that is easy so that respondents can warm up and experience success from the beginning. Group questions by content area so that there are cognitive ties between questions and a flow to the questionnaire or interview. Questions asking for demographic information are best placed at the end.

Evaluate your survey

After designing the survey, look at it again to check it against the suggestions above. Consider these questions:

- Does the questionnaire address postsecondary outcomes?
- Has the survey been reduced to the shortest length possible to achieve the purpose of the study?
- Have all extraneous items (information already available) been removed?
- Have the question items been placed in a logical sequence?
- Have ambiguous or biased questions been removed?
- Did you tell the participants you appreciate their effort?
- Did you assure respondents that results will be confidential and that only aggregate or group results will be reported rather than individual results? This is especially important for a nonanonymous survey where respondents must be identified to allow for follow-up and a comparison of responses over time.

Response rates

For survey data to provide a good picture of postsecondary progress with a small sample size, aim for a response rate in the range of 70–80 percent (USED 2002). Less than a 70 percent response rate will make it very difficult to generalize from the responses you received for the group as a whole. As with all aspects of data collection, weigh the costs against the benefits. An 85 percent response rate is very high by survey standards. But, the difference between a 75 percent and 85 percent response rate might be the difference between an affordable cost and one that drains the budget. The SLC project staff members need to evaluate whether the incremental 10 percent response is worth that burden.

Project staff can provide both nonmaterial and material incentives to encourage a high response rate. Impress upon alumni the importance of the survey information and how they can help other students perhaps have a better high school experience than they did. Also give students something in return—at least sharing results with them. Some research has shown that paying respondents a nominal reward (e.g., five dollars) can increase response rate. This could be done through a small gift card to a popular vendor.

Response rates over time can be improved if project staff members are able to contact family members who are likely to know the location and current status of the student. So, it is essential to collect parents' contact information at the time the student graduates.

Focus groups and other methods of local data collection

Focus groups with graduates may be used as a follow-up for obtaining information on postsecondary career and employment. While these data are more qualitative than quantitative they can be a good method to solicit information about how the graduates view their secondary educational experiences and how prepared they were for postsecondary courses. Focus groups could be administered during class reunions or at times when families gather for holidays.

There are some general rules and protocols to follow in using focus groups. Consider who the target participant is. If the intention is to query a particular group of students, then only select those students. On the other hand, if the goal is a more synergistic discussion among different types of students, then a mixed group may be the way to go. Ten to 12 participants is the maximum for discussion that includes all voices.

There probably will be time to discuss only five to six questions. A creative or imaginative opening question that gets everyone talking is usually a good way to start. As with surveys, questions should be closely linked to the program question you are trying to examine.

Make sure that there is a group facilitator, recorder, and timekeeper. The recorder and facilitator should not be the same person. The role of the facilitator is to pay close attention and use techniques (such as "round robin" questioning) to ensure that all group members participate fully in the discussion. He or she also keeps the discussion on track. The facilitator should pose follow-up questions to clarify vague or incomplete answers. This is a full-time job, so someone else should be recording notes and/or keeping time.

Focus groups should generally not last more than one hour, being mindful of everyone's time. As with surveys, a small thank you gift can help in recruiting participants and getting them to participate fully.

VII. Data analysis strategies

Up to this point, this guide has focused primarily on accessing and collecting data about students in high school and beyond. With these data in hand, grantees can begin the analysis that will help them understand and interpret matriculation and work patterns among their students.

Troubleshooting datasets

Even with a well-designed data collection effort, the data obtained will have gaps and statistical issues. Statisticians have sophisticated correction methods, but even project staff without special training can be aware of how

inconsistent responses and missing data may affect the validity of findings. It is important to note any issues with the data in your reporting.

Nonrepresentative sample

Students who have made gains in postsecondary education will be easier to follow than those who have not. Establish whether the group that has been reached is similar or dissimilar from the original graduating sample in meaningful ways. For example, does the ethnic breakdown of the respondents match the graduating class? If not, in what ways might that affect the validity of your findings? Establishing the "equivalence" of the sample is essential to be able to generalize the findings. Significant variations from the original groups should be noted.

Inaccurate information

Respondents may overstate their educational engagement when responding to survey questions. A student might say he or she has completed core courses on the way to a degree in nursing, when actually the individual has only completed remedial courses that qualify him or her to apply to a nursing program. One way to promote accuracy is to see if multiple data sources verify the same piece of information, such as by comparing the student's direct survey response to data obtained from StudentTracker and from the college. However, obtaining the same data from multiple sources can be costly and needs to be considered carefully.

Contradictory responses

Sometimes answers from one respondent on different survey questions may seem to be contradictory. For example, a respondent says the SLC curriculum was high quality but also checks that he wasn't prepared for college. Contradictory responses are a form of data in and of themselves. Respondents may be interpreting the question differently than the survey designers intended or may feel genuinely ambivalent about the quality of the program.

Missing data

Respondents may answer some but not all survey questions. If many respondents have not answered the same question, it may mean it is too personal or difficult. Don't report on a question with a very low response. Note the number of responses on a question if it is less than the total number of surveys received.

Reporting

The next step is to determine the type of reporting that is desirable and feasible. Usually, there are two broad categories of options:

- Automated reporting that uses standard reporting features from existing databases
- Additional reporting from project-conducted analyses, which can range from basic data summaries to advanced statistical analyses

Automated reporting options

SLC projects using StudentTracker have a range of automated reporting options available to them. These are described briefly here, and several examples are included in appendices D1, D2, and D3:

- **Initial Enrollment Report** summarizes the number and percentage of graduates in any given year who were enrolled in college in the fall after graduation, what types of colleges they enrolled in (public or private, two- or four-year), whether they were enrolled full or part time, and their location. The report also includes the schools that enroll the highest number of graduates from that high school.
- **Report of Current School Enrollment** reports where graduates are now, their enrollment status, types of colleges, full- or part-time status, and location.
- **Graduation Report** summarizes how many high school graduates receive postsecondary degrees.
- **College Enrollment Report** for individual students includes information about where a student enrolled, dates of attendance, degree attained, and major course of study.

The enrollment and graduation reports can be helpful to SLC projects because they provide information about:

- The number and percentage of students who enrolled full or part time in different types of colleges, either directly out of high school or in the subsequent few years
- The schools commonly (and not commonly) attended by graduates, which may influence guidance counseling and programming decisions
- Individual students in a way that can be merged with other information, thus allowing the project staff to save the expense of conducting surveys of former students

As noted earlier, some state databases may also provide automated and easily downloadable reports. For more information about what is available for particular states, see Appendix B1.

Additional analysis and reporting options

Sometimes SLC grantees may wish to conduct additional data analyses to answer questions about the SLC project and its impact or to provide helpful information to administrators, guidance counselors, or teachers. This section describes three broad types of analyses projects might choose to conduct, from basic to highly detailed. Each differs in the types of data required, the cost of the analytical work, and the level of technical expertise required. This section is not intended as a primer on statistical techniques. Instead, it is designed to provide SLC project directors with a clear idea of the type of analyses they might request from district data analysts or an evaluator.

BASIC DATA ANALYSIS

Data required

For a basic data analysis, grantees might work from survey data they collected themselves (using surveys built from the examples in appendices C1, C2, and C3) and combine them with easily accessible information about the school(s) and SLC(s) involved and standard student demographics.

Data for basic analysis

High school data

- Student demographics (gender, ethnicity)
- High school graduation indicator
- High school characteristics (such as location, size, adequate yearly progress [AYP] status)*
- Smaller Learning Community status (yes/no or which SLC)
- Student postsecondary plans (from survey)
- Student completion of FAFSA (yes/no)

Postsecondary data

- College enrollment indicator (yes/no)
- Type of college (trade school, two-year or four-year, public or private)
- Part-time or full-time enrollment
- Degree awarded (if any)
- Student's perception about how well high school prepared him/her for college

*This is useful if the data analyses will include students from more than one school.

Technical expertise required

To conduct basic descriptive analyses (counting how many students did something numerically or by averages or percentages), an analyst must be comfortable using and manipulating a spreadsheet. The results can be displayed using tables and charts, which tend to be easily understood by a wide range of audiences.

What SLCs can learn

SLC project staff can ascertain important information about the connection between high school and postsecondary enrollment through this basic dataset. Basic analyses yield the following information:

- The number and percentage of SLC graduates who apply to and enroll in postsecondary education, disaggregated by ethnicity and gender
- The types of schools SLC graduates enroll in
- Whether students who say they plan to attend postsecondary education actually enroll
- How well SLC graduates feel their high school program prepared them for college
- The number and percentage of SLC graduates who complete the FAFSA, which could help districts and schools decide whether students need more support to ensure they apply for the financial aid for which they are eligible

These fairly simple analyses cannot, however, answer questions about which types of courses high school students should take to best prepare them for college nor about the types of challenges students encounter as they head to college.

DETAILED DATA ANALYSIS

Data required

For deeper information about students' experiences, it is possible to combine the type of data described above with high school transcript data.

Data for basic analysis

High school data

- All "basic" data
- Coursework attempted/completed
- Grades in individual courses
- Overall GPA
- Support interventions

Postsecondary data

- All "basic" data
- College major(s)

Technical expertise required

This work probably requires the involvement of a district data analyst, who can help export the high school transcript data and use them to create student-level variables. These might include whether the student completed Algebra I and a year of English by the end of ninth grade or whether the student completed three years of math and four years of English by the end of 12th grade. Once these student-level variables are created, they can be merged with other data the project already has collected.

With this dataset, it would be possible to conduct statistical tests (t-tests or nonparametric tests such as chi-square) to examine the relationship of one variable (such as number of math courses completed in high school) with another (college enrollment). The analyst must have the technical background to understand which statistical test is appropriate for which types of variables.

What SLCs can learn

This more detailed analysis allows SLCs to compare high school course-taking patterns with postsecondary enrollment and completion, thus providing greater insight into how high school preparation relates to college attendance. Examples of topics to explore include:

- How the rigor of the high school courses taken relates to whether students enrolled in a postsecondary institution and whether they stayed
- How the courses students took relate to students' perceptions of how well prepared they were when they got to college
- How well current high school students are preparing for college, based on the experience of the graduates a few years ahead of them
- Whether students who had initial difficulty in core academic areas and later received extra academic support enrolled in postsecondary education

It is important to remember that these data analyses are not able to prove that taking certain high school classes causes particular postsecondary outcomes. Correlational analyses can demonstrate that two things are related to one another, but not that one causes another.

Using data analysis to inform instruction

SLC grantees' analyses of more detailed datasets have led to curricular change. For example, Chicago Public Schools (CPS) staff learned that students who took four years of math in high school were more successful in postsecondary education. In response to this finding, CPS added four years of math instruction as a curricular requirement.

In Manatee, Florida, staff analysis of the postsecondary academic performance of highly mobile students within the district revealed the need for a common core curriculum in ninth and 10th grade to ensure all students developed a strong academic foundation.

HIGHLY DETAILED DATA ANALYSIS

Data required

For SLCs with the time and resources to draw from multiple datasets, it is possible to combine information about students' high school course taking with college transcripts, financial aid data, and surveys or other data to conduct highly detailed data analyses that can answer a wider range of questions.

Data for highly detailed analysis

High school data

- All "basic" data
- Coursework attempted/completed
- Grades in individual courses
- Overall GPA
- Support interventions
- SAT/ACT scores

Postsecondary data

- All "basic" data
- College major(s) coursework completed (indicating any remedial coursework)
- Grades in individual courses
- Overall GPA

Technical expertise required

This work requires a high level of skill in database management. Like the "detailed analysis," it requires the ability to transform course-level databases (where each course is one row in the database) into student-level data (where each student is represented by a single row of data); this transformation must be repeated for both high school and college databases, which may not be constructed in the same way. Once all the data are pulled together in a student-level database, a variety of statistical analyses are possible but require a high level of statistical expertise, including hierarchical linear modeling for analyses across multiple schools. In some cases, an evaluator may be able to conduct or assist with these analyses.

What SLCs can learn

By drawing together data from multiple sources for multiple years, analysts can create databases that allow them to examine systematic relationships between high school experiences and key outcomes, such as success in college. Some of the questions that might be addressed include:

- The relationship between high school grades or GPA and college remediation.
- The relative contribution of SLC participation by students—all else being equal—to college graduation. Having an expansive dataset allows for standardized test scores, college persistence, and demographic characteristics to be included in explaining the patterns of postsecondary outcomes.
- The contribution of SLC participation to other intermediate goals, such as application for and receipt of financial aid.
- The longer term retention and eventual graduation rates of graduates overall, by type of college, and by key student demographics.

VIII. Wrapping up

The purpose of this resource guide is to suggest how SLC grantees may collect data on postsecondary outcomes to improve students' high school preparation for postsecondary education. The information presented in the guide has been designed to illustrate a wide range of options for collecting and using data toward these ends.

Access to data drives the options for further analysis. As indicated, some states and the StudentTracker system provide tremendous resources to move the data collection process forward. When these systems are not available to grantees, primary data collection through basic survey techniques provides a real and potentially cost-effective alternative. To bridge these gaps, in some areas, regional data partnerships have emerged that link data systems from a few local districts to community colleges and regional universities.

The decision as to which data sources to use requires understanding data availability in the local context. The authors of this guide recommend working with school district staff and coordinating a data collection approach that relies on, and dovetails with, data collection activities that are ongoing in the district, the region, and the state. Resources at SEAs can often augment local data capacity. The result of combining data resources can be extremely useful in record-keeping and in analysis of the progress SLC grantees are making as their students matriculate from high school to college.

References

Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college.* Washington, DC: U.S. Department of Education. Retrieved June 18, 2009, from www.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf

Calcagno, J.C., and Long, B.T. (2008). *The impact of postsecondary remediation using a regression discontinuity approach: Addressing endogenous sorting and noncompliance* (NBER Working Paper No. 14194). Cambridge, MA: National Bureau of Economic Research.

Cheung, O., Clements, B., and Pechman, E. (1997). *Protecting the privacy of student records: Guidelines for education agencies.* Washington, DC: U.S. Department of Education, National Center for Education Statistics, National Forum on Education Statistics

Data Quality Campaign. (2007). *Building and using statewide longitudinal data systems: Implications for policy.* Retrieved May 29, 2009, from www.dataqualitycampaign.org/files/Publication-Building_&_Using_Statewide_Longitudinal_Data_Systems-Implications_for_Policy-040107.pdf

Data Quality Campaign. (2008a). *Measuring what matters: Creating longitudinal data systems to improve student achievement. Phase 1 three-year report.* Retrieved April 30, 2009, from www.dataqualitycampaign.org/files/Publications-Measuring_What_Matters.pdf

Data Quality Campaign. (2008b). *10 essential elements of a state longitudinal data system.* Retrieved May 29, 2009, from www.dataqualitycampaign.org/survey/elements/

Data Quality Campaign. (2008c). *Element 9: Ability to match student-level P–12 and higher education data.* In *10 essential elements of a state longitudinal data system.* Retrieved May 28, 2009, from www.dataqualitycampaign.org/files/element9_survey_responses.pdf

Data Quality Campaign. (2008d). *State comparison.* Retrieved June 10, 2009, from www.dataqualitycampaign.org/survey/compare/policy_responses/

de la Torre, M., and Gwynne, J. (2009). *Changing schools: A look at student mobility trends in Chicago public schools since 1995* [Research rep.]. Chicago, IL: University of Chicago, Consortium on Chicago School Research. Retrieved May 28, 2009, from http://ccsr.uchicago.edu/publications/studentmobility-final.pdf

Dougherty, C. (2008). *Do "college preparatory" courses live up to their labels? Using statewide longitudinal data systems to assess the rigor of academic courses.* Washington, DC: Data Quality Campaign. Retrieved April 30, 2009, from www.dataqualitycampaign.org/files/publications-dqc_college_prep_courses-101308.pdf

Education Commission of the States. (2008). *StateNotes: P–16/P–20 councils.* Retrieved May 29, 2009, from http://mb2.ecs.org/reports/Report.aspx?id=910

Ewell, P., and Boeke, M. (2007). *Critical connections: Linking states' unit record systems to track student progress.* Indianapolis, IN: Lumina Foundation for Education. Retrieved May 28, 2009, from www.luminafoundation.org/publications/Critical_Connections_Web.pdf

Feldman, J., and Tung, R. (2001). Using data-based inquiry and decision making to improve instruction. *ERS Spectrum, 19*(3), 10–19.

Florida Department of Education, Office of Application Support, Florida Automated System For Transferring Educational Records. (2007). *2007–2008 FASTER user manual* (Rev. Ed.). Retrieved May 28, 2009, from http://fldoe.org/faster/manl0708/

Honig, M.I., and Coburn, C. (2008). Evidence-based decision making in school district central offices: Toward a policy and research agenda. *Educational Policy, 22*(4), 578–608.

Karp, M.M., Calcagno, J.C., Hughes, K.L., Jeong, D.W., and Bailey, T.R. (2007). *The postsecondary achievement of participants in dual enrollment: An analysis of student outcomes in two states.* St. Paul, MN: University of Minnesota, National Research Center for Career and Technical Education. (ERIC ED498661)

King, J.E. (1996). *The decision to go to college: Attitudes and experiences associated with college attendance among low-income students. Results of a College Board/Gallup International Institute survey of SAT seniors.* Washington, DC: College Entrance Examination Board. (ERIC ED398775)

Lachat, M.A., and Smith, S. (2005). Practices that support data use in urban high schools. *Journal of Education for Students Placed at Risk, 10*(3), 333–349.

McDonough, P.M. (2005). Counseling matters: Knowledge, assistance, and organizational commitment in college preparation. In W.G. Tierney, Z.B. Corwin, and J.E. Colyar (Eds.), *Preparing for college: Nine elements of effective outreach* (pp. 69–87). Albany, NY: State University of New York Press.

McNamara, F.P. (2004). The multiple benefits of surveying your graduates. *School Administrator, 61*(7), 41.

McNeil, M. (2009, March 18). Data systems set for crucial fund infusion. *Education Week, 28*(25), 13–15.

National Student Clearinghouse. (n.d.). *StudentTracker: Unique campuswide educational research tool.* Retrieved June 16, 2009, from www.studentclearinghouse.org/colleges/Tracker/default.htm

Pfeiffer, J.J. (2006). *Florida's K20 data resources and the education pipeline* [PowerPoint presentation]. Tallahassee, FL: Florida Department of Education. Retrieved May 28, 2009, from www.dataqualitycampaign.org/files/presentations-florida_k-20_data_resources_and_education_pipeline-020106.pdf

Pfeiffer, J., and Windham, P. (2008). A statewide student unit record system: Florida as a case study. In T.H. Bers (Ed.), *New directions for community college: Vol. 143.* Student tracking in the community college (pp. 37–46). San Francisco, CA: Jossey-Bass.

Plank, S.B., and Jordan, W.J. (2001). Effects of information, guidance, and actions on postsecondary destinations: A study of talent loss. *American Educational Research Journal, 38*(4), 947–979.

Rea, L.M., and Parker, R.A. (2005). *Designing and conducting survey research: A comprehensive guide* (3rd ed.). San Francisco, CA: Jossey-Bass.

Roderick, M., Nagaoka, J., and Allensworth, E. (with Coca, V., Correa, M., and Stoker, G.). (2006). *From high school to the future: A first look at Chicago Public School graduates' college enrollment, college preparation, and graduation from four-year colleges.* Chicago, IL: University of Chicago, Consortium on Chicago School Research. Retrieved May 28, 2009, from http://ccsr.uchicago.edu/publications/Postsecondary.pdf

Schoenecker, C., and Reeves, R. (2008). The National Student Clearinghouse: The largest current student tracking database. In T.H. Bers (Ed.), *New directions for community college: Vol. 143.* Student tracking in the community college (pp. 47–57). San Francisco, CA: Jossey-Bass.

Smith, N.J., and Armstrong, J. (2006). *Creating longitudinal data systems: Lessons learned by leading states.* Washington, DC: Data Quality Campaign. Retrieved April 30, 2009, from www.dataqualitycampaign.org/files/Publications-Creating_Longitudinal_Data_Systems-Lessons_Learned_by_Leading_States.pdf

Tierney W.G., and Auerbach, S. (2005). Toward developing an untapped resource: The role of families in college preparation. In W.G. Tierney, Z.B. Corwin, and J.E. Colyar (Eds.), *Preparing for college: Nine elements of effective outreach* (pp. 13–28). Albany, NY: State University of New York Press.

U.S. Department of Education, National Center for Education Statistics. (2002). Survey response rate parameters: Guideline 2-2-2A. In *NCES statistical standards.* Retrieved June 18, 2009, from http://nces.ed.gov/statprog/2002/std2_2.asp

U.S. Department of Education, National Center for Education Statistics. (2009). *Statewide Longitudinal Data Systems Grant Program: Program overview.* Retrieved May 29, 2009, from http://nces.ed.gov/Programs/SLDS/index.asp

Vernez, G., Krop, C., Vuollo, M., and Hansen, J.S. (2008). *Toward a K–20 student unit record data system for California.* Santa Monica, CA: RAND. Retrieved May 29, 2009, from http://rand.org/pubs/monographs/2008/RAND_MG695.pdf

Wayman, J.C. (2005). Involving teachers in data-driven decision making: Using computer data systems to support teacher inquiry and reflection. *Journal of Education for Students Placed at Risk, 10*(3), 295–308.

Appendices

Data assessment action plan (1 of 2)

This tool uses five steps to help you assess your data needs: 1) Develop a question about postsecondary progress that can inform program improvement; 2) identify the postsecondary data required to address this question; 3) consider the high school data linked to your question; 4) determine the identifying information that will allow you to match records; and 5) plan for the analyses that will help you to make sense of the data you have collected.

1. Program question

Record the question you have about your students' postsecondary progress that can be answered with data collection and analysis. (Example: What percentage of our seniors completes FAFSA applications?)

2. Postsecondary data

Use the table below to record the postsecondary data that will help you to address this question. (Example: FAFSA completion.) Consider why these data are needed to address your question, where you can obtain these data, and whether collection is cost effective. Finally, who will be responsible for collecting these data, and what expertise do they have?

Data field	Why essential?	Source	Cost-effective?	Staff/Expertise
		☐ Exists in district ☐ Available from state LDS ☐ Develop data-sharing agreement with _____ ☐ Collect locally		
		☐ Exists in district ☐ Available from state LDS ☐ Develop data-sharing agreement with _____ ☐ Collect locally		
		☐ Exists in district ☐ Available from state LDS ☐ Develop data-sharing agreement with _____ ☐ Collect locally		

3. High school data

Identify the high school information that will enrich your understanding of the postsecondary data. (Example: Student GPA)

Data field	Why essential?	Source	Cost-effective?	Staff/Expertise
		☐ Exists in district ☐ Available from state LDS ☐ Develop data-sharing agreement with _____ ☐ Collect locally		
		☐ Exists in district ☐ Available from state LDS ☐ Develop data-sharing agreement with _____ ☐ Collect locally		
		☐ Exists in district ☐ Available from state LDS ☐ Develop data-sharing agreement with _____ ☐ Collect locally		

4. Matching data

Which data fields will enable you to match new data with baseline records? Collect this information in surveys or specify it in data-sharing agreements.

☐ First name, middle name, last name
☐ Date of birth
☐ Gender
☐ Social security number
☐ Student ID
☐ Other _____

5. Planned Analyses

What reports will you produce to help you understand the data you have collected? (Example: FAFSA completion by subgroups)

Sample data collection time line

Grantees may wish to collect postsecondary data over multiple years in order to do deeper analyses of postsecondary outcomes. This table demonstrates one possible plan for collecting data. Actual data collection plans will depend both on the assessed data needs of the grantee and the resources available. More frequent surveys, for example, may help a grantee maintain contact with graduates, but will cost more.

Year	Data sources	Questions to address
Senior year	Senior exit survey School and district data	What percentage of students: • Applied to college? • Were accepted? • Plan to attend? • Took a college preparatory curriculum?
First year after graduation	StudentTracker Follow-up survey	What percentage of students: • Enrolled in college? • Completed their first year? • Passed their courses? • Took remedial courses? • Got and held a job? • Changed their plans? • Felt they were well prepared for college?
Second year after graduation	StudentTracker	What percentage of students: • Were enrolled in college? • Changed institutions?
Third year after graduation	StudentTracker Follow-up survey	What percentage of students: • Were enrolled in college? • Completed an AA degree? • Transferred from a two-year to a four-year college? • Got and held a job? • Changed their plans? • Felt they were well prepared for college? • What majors were students pursuing?
Fourth year after graduation	StudentTracker	What percentage of students: • Were enrolled in college? • Changed institutions?
Fifth year after graduation	StudentTracker Follow-up survey	What percentage of students: • Graduated from college (two- or four-year degree)? • Were enrolled in college? • Got and held a job? • Changed their plans? • Felt they were well prepared for college?

Capacity to match student records between the P–12 and higher education system, by state

State	Student ID	Enrollment	Test data	Untested	Teacher ID	Transcript	College test	Graduation	P–12/college	Audit
Alabama	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Alaska	Y	Y	Y	Y	N	N	N	Y	Y	Y
Arizona	Y	Y	Y	Y	N	N	N	Y	Y	Y
Arkansas	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Delaware	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Florida	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Georgia	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Hawaii	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Indiana	Y	Y	Y	Y	N	N	Y	Y	Y	Y
Iowa	Y	Y	Y	N	N	N	Y	Y	Y	Y
Kentucky	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Louisiana	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Maine	Y	Y	Y	N	N	N	N	Y	Y	Y
Massachusetts	Y	Y	Y	Y	N	N	N	Y	Y	Y
Minnesota	Y	Y	Y	Y	N	N	Y	Y	Y	Y
Mississippi	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Missouri	N	N	Y	Y	N	N	N	N	Y	Y
Nevada	Y	Y	Y	Y	N	Y	N	Y	Y	Y
New Jersey	Y	Y	Y	Y	N	N	Y	Y	Y	Y
New Mexico	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
North Carolina	N	Y	Y	Y	Y	Y	N	Y	Y	Y
Oregon	Y	Y	Y	Y	N	N	N	Y	Y	Y
Tennessee	Y	Y	Y	Y	Y	N	N	Y	Y	Y
Texas	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Utah	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vermont	Y	Y	Y	Y	N	N	N	Y	Y	Y
Washington	Y	Y	Y	Y	N	Y	N	Y	Y	Y
Wyoming	Y	Y	Y	N	Y	N	N	Y	Y	Y

Currently, only 28 states have this data-matching capacity.

Source: Data Quality Campaign

Definition of Terms

Student ID—A unique statewide student identifier connecting student data across key databases and years
Enrollment—Student-level enrollment, demographic, and program participation information
Test data—The ability to match a student's test records from year to year to measure academic growth
Untested—Information on untested students and the reasons they were not tested
Teacher ID—A teacher identifier system with the ability to match teachers to students
Transcript—Student-level transcript information, including courses completed and grades earned
College test—Student-level college readiness test scores, such as ACT, SAT, and AP examinations
Graduation—Student-level graduation and dropout data
P-12/college—The ability to match student records between the P–12 and higher education systems
Audit—A state data audit system assessing data quality, validity, and reliability

State-by-state resources for data partnerships (1 of 3)

State	P–16 or P–20 council	Council name	Council Web site	State data contact number*
Alabama	NA			334-242-9895
Alaska	NA			907-465-8686
Arizona	P–20	Arizona P–20 Council	www.governor.state.az.us/P20/	602-364-1368
Arkansas	P–20	Arkansas Commission for Coordination of Educational Efforts		501-371-5014
California	P–16	Superintendent's California P–16 Council	www.cde.ca.gov/eo/in/pc/	916-319-0586
Colorado	P–20	The Governor's P–20 Education Coordinating Council	www.colorado.gov/cs/Satellite/GovRitter/GOVR/1187772339688/	303-866-6838
Connecticut	P–20	Connecticut's PK–20 Council		860-713-6888
Delaware	P–20	Delaware P–20 Council	www.doe.k12.de.us/infosuites/ddoe/P20council/	302-735-4140
Florida	SB	State Board of Education and Board of Governors of the State University System		850-245-0437
Georgia	P–16	Alliance of Education Agency Heads	www.usg.edu/p16/	404-657-1065
Hawaii	P–20	United for Learning: The Hawaii P–20 Initiative	http://p20hawaii.org	808-568-3221
Idaho	SB	State Board of Education	www.boardofed.idaho.gov	208-333-6892
Illinois	P–20	Illinois P–20 Council		217-782-0354
Indiana	P–16	Indiana's Education Roundtable	www.edroundtable.state.in.us	317-232-0807
Iowa	SB	State Board of Education		515-281-4837
Kansas	P–20	Governor's P–20 Education Council	www.ksde.org/Default.aspx?tabid=2880	785-296-2317
Kentucky	P–16	Kentucky P–16 Council	www.cpe.ky.gov/committees/p16/	502-564-5279
Louisiana	P–16	Blue Ribbon Commission for Educational Excellence	www.doe.state.la.us/Lde/bese/856.html	225-342-2503
Maine	P–20	Pre–K through Adult Advisory Council		207-624-6840
Maryland	P–20	P–20 Leadership Council	www.marylandpublicschools.org/MSDE/divisions/leadership/programs/P-20_Partnership/	410-767-0027
Massachusetts	NA			781-338-3582
Michigan	SB	State Board of Education	www.michigan.gov/mde/0,1607,7-140-5373-10506--,00.html	517-241-2374
Minnesota	P–16	Minnesota P–16 Partnership	http://mnp16.org	651-582-8688
Mississippi	P–16	Mississippi P–16 Initiatives		601-359-3863
Missouri	P–20	Missouri P–20 Council	www.p-20.mo.gov	573-522-8310

State	P–16 or P–20 council	Council name	Council Web site	State data contact number*
Montana	P–20	The Board of Education–the Kindergarten to College Workgroup	http://governor.mt.gov/boed/kindtocol.asp	406-444-0709
Nebraska	P–16	Nebraska P–16 Leadership Council	https://p16.nebraska.edu	402-471-4740
Nevada	P–16	P–16 Advisory Council	http://gov.state.nv.us/P-16%20Council/	775-687-9126
New Hampshire	P–16	P–16 Working Group	www.nh.gov/postsecondary/p16/	603-271-0073
New Jersey	NA			609-633-9773
New Mexico	SB	P–20 Policy and Programs	http://inst.hed.state.nm.us/content.asp?CustComKey=199036&CategoryKey=202894&pn=Page&DomName=inst.hed.state.nm.us	505-476-0545
New York	P–16	Elementary, Middle, Secondary, and Continuing Education	www.emsc.nysed.gov	518-486-5311
North Carolina	P–20	North Carolina Education Cabinet		919-807-3241
North Dakota	NA			701-328-2189
Ohio	P–16	Partnership for Continued Learning	www.pcl.ohio.gov	614-752-8368
Oklahoma	P–16	Achieving Classroom Excellence Steering Committee (ACE Steering Committee)	www.sde.state.ok.us/Curriculum/ACE/	405-522-8198
Oregon	P–16	Oregon Joint Boards		503-947-5825
Pennsylvania	P–20/P–16	STEM PK–20 Leadership Team, Design Team/Regional Networks and Pennsylvania State System of Higher Education Regional Councils	www.passhe.edu/executive/academic/academy/pkcouncils/Pages/	717-783-4414
Rhode Island	P–16	Rhode Island Statewide PK–16 Council		401-222-8471
South Carolina	K–16	Education and Economic Development Coordinating Council	www.teachscpathways.org/Council.html	803-734-8170
South Dakota	P–21	P21 Advisory Council	http://doe.sd.gov/secretary/P21Initiative/	605-773-4737
Tennessee	P–16	Tennessee P–16 Council	www.tbr.state.tn.us/offices/academicaffairs.aspx?id=4650	615-532-0085
Texas	P–16	Texas P–16 Council	http://ritter.tea.state.tx.us/p16/p16council.html	512-475-3306

State	P–16 or P–20 council	Council name	Council Web site	State data contact number*
Utah	K–16	Utah K–16 Alliance	http://science.uvu.edu/k16alliance/	801-538-7953
Vermont	NA			802-828-0473
Virginia	P–16	Virginia P–16 Education Council	www.education.virginia.gov/Initiatives/P-16Council/	804-225-2099
Washington	P–20	The Governor's P–20 Council	www.p20council.wa.gov	360-725-6356
Washington, D.C.	NA			202-724-2065
West Virginia	P–20	21st Century Jobs Cabinet		304-558-8869
Wisconsin	P–16	Wisconsin PK–16 Leadership Council	www.wisconsin.edu/pk16/	608-266-2937
Wyoming	P–16	Wyoming P–16 Education Council	www.wp-16.org	307-777-6232

*As listed at the Data Quality Campaign Web site, www.dataqualitycampaign.org/survey/compare/elements/ (as of July 2009)
SB=State Board acts as council
NA=Not Applicable (No council)

Survey of High School Seniors, Class of [Year]

As a graduating senior from [Example] High School, you can provide valuable information about your high school experience that will help us improve services for students in future years.

This survey asks for information about your education and work plans. At the end, it also asks for your contact information. This is important because it allows us to reach you for annual follow-ups to understand the career and educational choices you have made.

We appreciate your willingness to complete this survey that will take no more than 10 minutes of your time. All of your responses and contact information will remain completely confidential. You are not obligated to complete this survey, or any other survey we give you. If you have questions, please do not hesitate to contact the program director:

[Program Director Name]
at [e-mail] and [phone]

Section I: Your experience in high school

Are you enrolled in one of the Smaller Learning Community programs in our school?

☐ Yes, Health Sciences
☐ Yes, Engineering
☐ Yes, Arts and Music
☐ Yes, Applied Technology
☐ No

What was the highest level math course you took in high school? [This does not need to be asked if you are able to link to the district course-taking database.]

☐ Algebra I
☐ Geometry
☐ Algebra II & Trigonometry
☐ Precalculus
☐ AP Calculus or Statistics
☐ Other: _____

Were you enrolled in a vocational education concentration while in high school?

☐ Yes—which one? _____
☐ No

Section II: Your plans for education after high school

During your senior year, did you apply to any college, university, or trade school?

☐ Yes, to more than one school
☐ Yes, to one school
☐ No, because the school does not require an application
☐ No (Skip to "If you don't plan to attend college")

During your senior year, did you complete the Free Application for Federal Student Aid (FAFSA)?

☐ Yes ☐ No

During your senior year, did you complete any other scholarship applications?

☐ Yes ☐ No

Were you accepted to at least one of the schools or colleges to which you applied?

☐ Yes ☐ No ☐ Don't know yet

Did you receive any financial aid or scholarships?

☐ Yes ☐ No ☐ Don't know yet

Do you currently plan to attend college next year?

☐ Yes, full time
☐ Yes, part time
☐ Unsure
☐ No

IF YOU PLAN TO ATTEND COLLEGE

What type of school do you plan to attend?

☐ Trade school or technical college
☐ Community (two-year) college
☐ Four-year college or university
☐ Unsure
☐ Other: _____

What trade school, college, or university do you plan to attend? (Please do not abbreviate.)

_____

Where is this school located? (City, state)

_____

What is your intended major? (Please write "don't know" if you haven't decided.)

_____

IF YOU DON'T PLAN TO ATTEND COLLEGE

Why aren't you planning to attend college? (Check all that apply.)

☐ Not interested
☐ Not academically prepared
☐ Too expensive
☐ Family responsibilities
☐ Was not accepted
☐ Prefer to work
☐ Planned military service
☐ Unsure
☐ Other: _____

Section III: Your plans for employment after high school

Next year, how many hours per week do you expect to work for pay?

- ☐ More than 40 hours per week
- ☐ 20–39 hours per week
- ☐ 5–19 hours per week
- ☐ Fewer than 5 hours per week
- ☐ I will not be employed at all during the coming year
- ☐ Military assignment
- ☐ Unsure

If you plan to be employed, do you already know where you will be working?

- ☐ Yes, definitely
- ☐ I have a good idea
- ☐ I have some ideas about possibilities
- ☐ I have no idea where I will be working

Section IV: Your updated contact information

[Note: Ideally, these fields can be filled in from the database from the baseline survey; this survey can simply ask for any changes.]

First name: _____

Middle name: _____

Last name: _____

Student ID in high school: _____

Current address: _____

_____

_____

E-mail address: _____

Home phone: (_____) _____

Cell phone: (_____) _____

Parent or family phone: (_____) _____

Thank you for taking the time to share your plans for the future!

Follow-Up Survey for Students Who Graduated in [2010]

Last year, you graduated from [Example] High School. We hope that you are willing to continue to share perspectives of your high school experience with the program staff and let us know about your progress in the years ahead. With this information, we can continue to improve services for students in future years.

The attached survey asks about your education and work experiences this past year, and in the years ahead. It also asks for updated contact information. This is important because it allows us to reach you for annual follow-ups to understand the career and educational choices you have made.

We appreciate your willingness to complete this survey that will take no more than 10 minutes of your time. All of your responses and contact information will remain completely confidential. You are not obligated to complete this survey, or any survey provided by us. If you have questions, please do not hesitate to contact the program director:

[Program Director Name]
at [e-mail] and [phone]

Section I: Your experience in high school

[Only include this section if you are not going to be able to link this survey to an existing student record that already has this information.]

During high school, were you enrolled in a Smaller Learning Community program?

☐ Yes, Health Sciences
☐ Yes, Engineering
☐ Yes, Arts and Music
☐ Yes, Applied Technology
☐ No

Were you enrolled in a vocational education concentration while in high school?

☐ Yes—which one? _____
☐ No

Section II: Your education after high school

Either during your senior year or during the past 12 months, did you apply to any college, university, or trade school?

☐ Yes, to more than one school
☐ Yes, to one school
☐ No (Skip to "If you have not attended college in the past 12 months")

Either during your senior year or during the past 12 months, did you complete the Free Application for Federal Student Aid (FAFSA)?

☐ Yes
☐ No

During the past 12 months, did you attend a college, university, or trade school?

☐ Yes, full time
☐ Yes, part time
☐ No (Skip to "If you have not attended college in the past 12 months")

IF YOU ATTENDED COLLEGE IN THE LAST 12 MONTHS

What type of school did you attend?

☐ Trade school or technical college
☐ Community (two-year) college
☐ Four-year college or university
☐ Other: _____

What trade school, college, or university did you attend? (Please do not abbreviate.)

_____

Where is this school located? (City, state)

_____

Were you required to enroll in any remedial courses to strengthen your math, reading, or writing skills and prepare you for college-level work? (Check all that apply.)

☐ Yes, math remediation (such as prealgebra, algebra, geometry)
☐ Yes, reading remediation
☐ Yes, writing remediation
☐ No

How well do you feel your high school experience prepared you for education beyond high school?

☐ Very well
☐ Somewhat well
☐ Not that well
☐ Not well at all
☐ Don't know

What is your intended major? (Please write "don't know" if you haven't decided.)

_____

Do you plan to enroll in the same school next year?

☐ Yes, definitely
☐ Probably
☐ Probably not
☐ No, definitely not
☐ Not sure

If you answered probably not or definitely not, do you plan to attend a different trade school, college, or university?

☐ Yes, definitely
☐ Probably
☐ Probably not
☐ No, definitely not
☐ Not sure

IF YOU HAVE NOT ATTENDED COLLEGE IN THE PAST 12 MONTHS

Why aren't you enrolled in college? (Check all that apply.)

- ☐ Not interested
- ☐ Not academically prepared
- ☐ Too expensive
- ☐ Family responsibilities
- ☐ Was not accepted
- ☐ Prefer to work
- ☐ Planned military service
- ☐ Unsure
- ☐ Other: _____

Section III: Your employment after high school

On average during the past year, how many hours per week did you work for pay?

- ☐ More than 40 hours per week
- ☐ 20–39 hours per week
- ☐ 5–19 hours per week
- ☐ Fewer than 5 hours per week
- ☐ I was not employed at all during the past year
- ☐ Military assignment

How many hours per week do you anticipate working in the coming year?

- ☐ More than 40 hours per week
- ☐ 20–39 hours per week
- ☐ 5–19 hours per week
- ☐ Fewer than 5 hours per week
- ☐ I was not employed at all during the past year
- ☐ Military assignment

Section IV: Your updated contact information

[Note: Ideally, these fields can be filled in from the database from the baseline survey; this survey can simply ask for any changes.]

First name: _____

Middle name: _____

Last name: _____

Student ID in high school: _____

Current address: _____

_____

_____

E-mail address: _____

Home phone: (_____) _____

Cell phone: (_____) _____

Parent or family phone: (_____) _____

Thank you for helping us better understand our students' experiences beyond high school!

Bayshore High School—Senior Survey

What are your plans after high school?

- ☐ Florida public community college
- ☐ Florida public four-year college/university
- ☐ Florida technical/trade institution
- ☐ Out-of-state college or technical school
- ☐ U.S. Armed Forces—branch _____
- ☐ None of the above
- ☐ Florida private junior college
- ☐ Florida private college/university
- ☐ Out-of-state college/university
- ☐ Out-of-state community college
- ☐ Full- or part-time employment

Have you been accepted into a community college, university, or career and technical school?

☐ Yes ☐ No If yes, which one do you plan to attend? _____

What is your intended college major? _____

Did you receive any scholarships? ☐ Yes ☐ No If yes, please list the name and amount below. (Please use the back if more space is needed.)

Name	Amount
_____	_____
_____	_____

Which Smaller Learning Community were you involved in at BHS?

- ☐ Bayshore Business Academy (The BIZ)
- ☐ Fine Arts for a Meaningful Education (FAME) Academy
- ☐ Technology, Engineering, Architecture Manufacturing (TEAM) Academy
- ☐ Pre-College and College Center
- ☐ None

Did you participate in any internships or job shadowing as part of your academy experience?

☐ Yes ☐ No

Are you planning on pursuing a career in a field related to your academy content?

☐ Yes ☐ No

Did you participate in Dual Enrollment at MTI or MCC?

☐ Yes ☐ No If yes, which program/course?_____

Name: _____ E-mail address: _____

Address: _____

Parents' or family phone: _____ Your cell phone: _____

Who will know where you are one year from now? _____

Phone: _____

	Postgraduation indicators	School	District	State
14	Percent of 2006 graduates enrolled in a Florida public postsecondary institution in Fall 2006	43.7%	54.5%	52.7%
15	Percent of 2006 graduates found enrolled in Independent Colleges and Universities of Florida (ICUF) in Fall 2006	6.45%	3.76%	3.23%
16	Percent of 2006 graduates found enrolled in an out-of-state public or private institution in Fall 2006	7.52%	5.64%	5.50%
17	Percent of 2006 graduates:			
	• at a community college in Florida during Fall 2006	17.9%	27.0%	31.4%
	• at a state university in Florida during Fall 2006	26.5%	27.1%	20.9%
	• at a technical education center in Florida during Fall 2006	1.07%	1.24%	1.17%
18	Percent of 2006 graduates enrolled in college credit courses in Fall 2006 at a FL public postsecondary institution earning a GPA above 2.0	74.7%	77.2%	75.0%
19	Percent of 2006 graduates enrolled in college credit courses in Fall 2006 at Independent Colleges and Universities of Florida (ICUF) earning a GPA above 2.0	78.9%	78.3%	81.0%
20	Of the graduates enrolled in a math course in Florida in Fall, the percent who successfully completed the course:			
	• Remedial Math (non-college credit)	55.0%	45.5%	56.1%
	• Intermediate Algebra (for elective credit only)	71.4%	54.5%	60.6%
	• Entry-Level Math (for Math credit)	56.4%	58.5%	62.8%
	• Advanced Math	65.4%	55.4%	57.4%
21	Of the graduates enrolled in a math course in Florida in Fall, the percent who successfully completed the course:			
	• Remedial Reading or Writing	78.1%	76.7%	79.6%
	• Freshman Comp I or II	75.0%	81.0%	78.3%
	• Other College-Level English	88.5%	91.3%	90.0%

Fort Lauderdale High School, Postgraduation Indicators, Graduates of 2006, http://data.fldoe.org/readiness/default.cfm?action=view_report_print&institution=300&DisplayYear=2006

Kentucky High School Feedback Report
Class of 2004

Logan County High School
Logan County Schools

The Kentucky High School Feedback Report is collaboratively produced by Kentucky's Council on Postsecondary Education (CPE), the Kentucky Department of Education (KDE), and the Kentucky Higher Education Assistance Authority (KHEAA) with the assistance of ACT, Inc., and The College Board. Its purpose is to provide information about this school's 2004 class of high school seniors including the number who matriculated to a postsecondary institution in Kentucky and how well they performed compared to their peers from the district and the state as a whole.

A. Basic Information About the Class of 2004

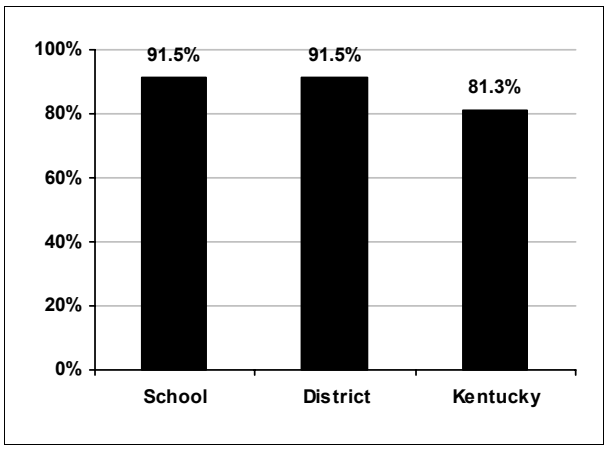
District numbers may include alternative high schools.
Refer to the Technical Notes for explanation of blanks.

	School	District	Kentucky
1. Number of high school graduates:	204	204	41,328
2. Mean cumulative high school GPA:	2.92	2.92	2.81
3. Mean ACT scores for this class:			
English	19.9	19.9	20.0
Reading	21.6	21.6	21.4
Mathematics	19.3	19.3	19.9
Science	20.5	20.5	20.7
Composite	20.4	20.4	20.7
4. Number of Advanced Placement (AP) tests taken by members of this class:	11	11	7,848
5. Percentage of Advanced Placement (AP) tests with scores of 3 or higher (the minimum necessary to receive college credit):	72.7%	72.7%	46.2%
6. Mean Kentucky Educational Excellence Scholarship (KEES) award earned by members of this class:	$1,106	$1,106	$1,054
7. High school graduation rate:	91.5%	91.5%	81.3%
8. In-state college-going rate:	37.4%	37.4%	50.9%

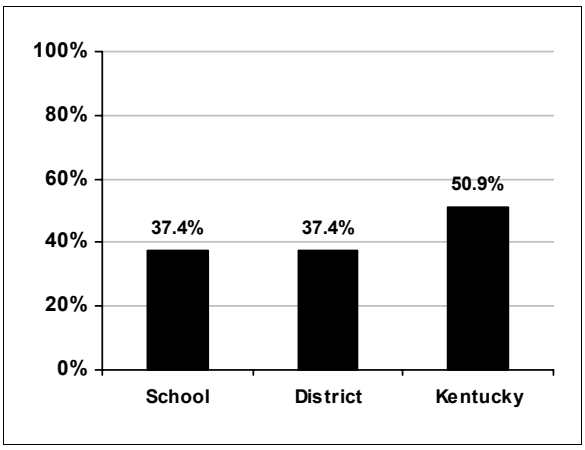
Important School Statistics

High school graduation rate:	91.5%
In-state college going rate:	37.4%
Percentage with developmental needs in one or more subjects:	42.6%
Percentage with developmental needs in English:	25.0%
Percentage with developmental needs in mathematics:	29.4%
Six-year (bachelor's degree) postsecondary graduation rate for the class of 2000:	42.9%
Three-year (associate's degree at KCTCS) postsecondary graduation rate for the class of 2003:	20.0%

High School Graduation Rate



In-State College-Going Rate



For more information visit http://www.cpe.ky.gov/news/reports/highschoolfeedback/
March 2007

Kentucky High School Feedback Report
Class of 2004

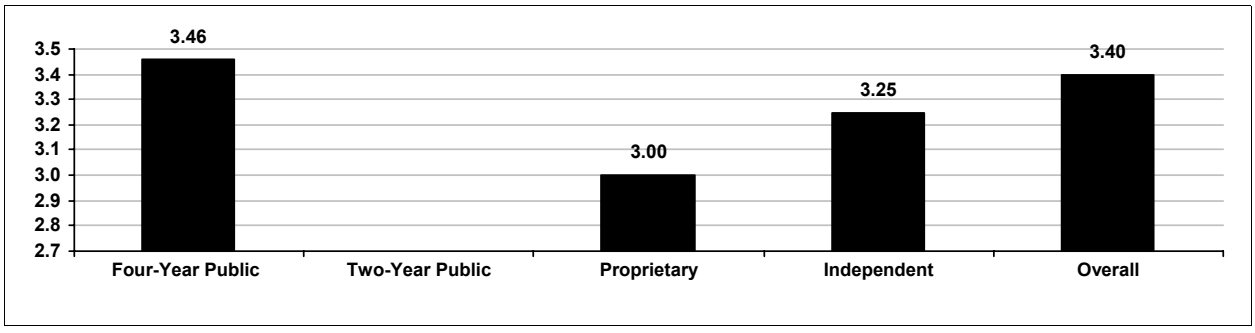
Logan County High School
Logan County Schools

B. In-State Postsecondary Enrollment Information

This information, with the exception of item B.7, is only available for the public colleges and universities in Kentucky and the independent institutions that participate in the CPE's comprehensive database. District numbers may include alternative high schools. Refer to the Technical Notes for explanation of blanks.

	School	District	Kentucky
1. Number and percentage of this school's 2004 high school graduates who enrolled as degree- or credential-seeking students at one of Kentucky's public or participating independent postsecondary institutions in summer or fall 2004 by institution type. These data are not available for proprietary schools.			
Four-year public university:	66	66	11,548
	88.0%	88.0%	60.8%
Two-year public community or technical college (KCTCS):	2	2	4,298
	2.7%	2.7%	22.6%
Participating independent college or university:	7	7	3,147
	9.3%	9.3%	16.6%
Total:	75	75	18,993
2. Number and percentage who entered college as full-time students:	73	73	18,075
	98.6%	98.6%	94.7%
3. Number and percentage who entered with undeclared degree status:	3	3	2,518
	4.0%	4.0%	13.3%
4. Number and percentage who entered a certificate or diploma program:	1	1	377
	1.3%	1.3%	2.0%
5. Number and percentage who entered an associate's (two-year) degree program:	8	8	3,896
	10.7%	10.7%	20.6%
6. Number and percentage who entered a bachelor's (four-year) degree program:	63	63	12,161
	84.0%	84.0%	64.2%
7. Mean cumulative high school GPA by postsecondary institution type:			
Four-year public university:	3.46	3.46	3.27
Two-year public community or technical college (KCTCS):			2.88
Participating independent college or university:	3.25	3.25	3.31
Proprietary college, university, or school:	3.00	3.00	2.73
Overall mean for students entering any postsecondary institution in Kentucky:	3.40	3.40	3.15

Mean Cumulative High School GPA by Postsecondary Institution Type



Kentucky High School Feedback Report
Class of 2004

Logan County High School
Logan County Schools

B. In-State Postsecondary Enrollment Information (continued)

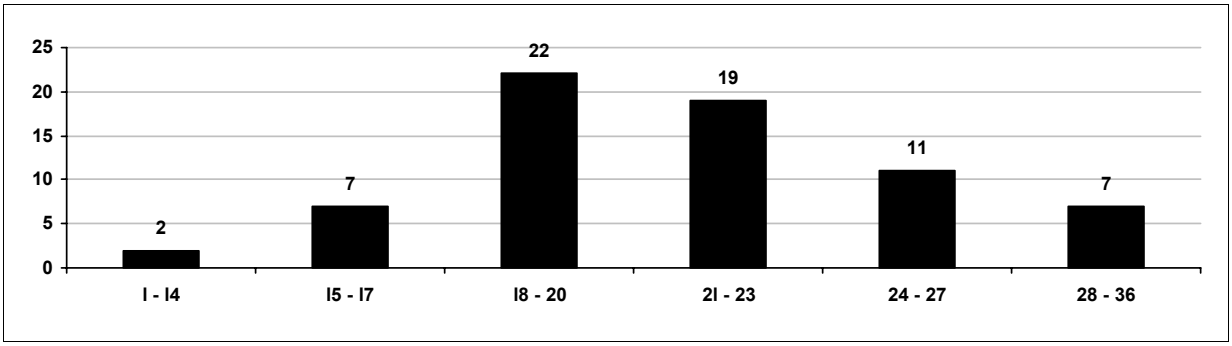
8. Mean ACT scores of postsecondary students who graduated in this school's class of 2004 by subject and institution type:

	School	District	Kentucky
English			
Four-year public university:	21.9	21.9	21.2
Two-year public community or technical college (KCTCS):			20.0
Independent college or university:	19.0	19.0	20.8
Overall mean for students entering any public or participating independent college or university:	21.7	21.7	21.1
Reading			
Four-year public university:	23.2	23.2	22.5
Two-year public community or technical college (KCTCS):			25.0
Independent college or university:	20.7	20.7	22.3
Overall mean for students entering any public or participating independent college or university:	23.1	23.1	22.4
Mathematics			
Four-year public university:	21.0	21.0	20.5
Two-year public community or technical college (KCTCS):			17.0
Independent college or university:	19.0	19.0	20.5
Overall mean for students entering any public or participating independent college or university:	20.8	20.8	20.7
Science			
Four-year public university:	22.0	22.0	21.6
Two-year public community or technical college (KCTCS):			22.0
Independent college or university:	20.3	20.3	21.3
Overall mean for students entering any public or participating independent college or university:	21.9	21.9	21.5
Composite			
Four-year public university:	21.7	21.7	21.1
Two-year public community or technical college (KCTCS):			21.0
Independent college or university:	19.7	19.7	21.2
Overall mean for students entering any public or participating independent college or university:	21.6	21.6	21.3

9. Percentage who enrolled in a public or participating independent institution in Kentucky and were identified as having developmental needs (an ACT subscore of less than 18 or an equivalent score on an alternative test by subject area):

English:	25.0%	25.0%	27.4%
Reading:	14.7%	14.7%	21.4%
Mathematics:	29.4%	29.4%	33.6%
Developmental needs in one or more subject areas:	42.6%	42.6%	44.5%

Distribution of ACT Composite for Students Who Entered Postsecondary Education



For more information visit http://www.cpe.ky.gov/news/reports/highschoolfeedback/
March 2007

Kentucky High School Feedback Report
Class of 2004

Logan County High School
Logan County Schools

C. Student Postsecondary Performance

This information, with the exception of item C.7, is only available for the public colleges and universities in Kentucky and the independent institutions that participate in the CPE's comprehensive database. District numbers may include alternative high schools. Refer to the Technical Notes for explanation of blanks.

In Kentucky, ACT scores are used to determine if students need developmental courses before they take certain college level courses. Students are assessed as having developmental needs in English, mathematics, and reading if their ACT subscore is less than 18, or if they have an equivalent score on the SAT or another standardized placement exam. Much of the following academic performance data is presented to show how students with developmental needs perform compared to those without developmental needs.

College Grades	School	District	Kentucky
1. Percentage of this high school's 2004 class enrolling in college-level English during the first two years of college who earned a grade of "C" or better, by developmental need:			
All students:	86.2%	86.2%	84.2%
Students with an ACT English subscore less than 18 or equivalent:	83.3%	83.3%	76.2%
Students with an ACT English subscore of 18 or above or equivalent:	87.0%	87.0%	86.3%
2. Percentage of this high school's 2004 class enrolling in college-level mathematics during the first two years of college who earned a grade of "C" or better, by developmental need:			
All students:	80.0%	80.0%	74.1%
Students with an ACT mathematics subscore less than 18 or equivalent:	63.6%	63.6%	63.0%
Students with an ACT mathematics subscore of 18 or above or equivalent:	84.6%	84.6%	76.8%
3. Mean college GPA of this high school's 2004 class at the end of the first year in college:			
All students:	2.64	2.64	2.28
Students with developmental needs in one or more subjects:	2.26	2.26	1.78
Students without developmental needs:	2.90	2.90	2.68

College Retention, Credit Hours, and KEES Awards

Retention, credit hours earned, and KEES awards maintained are all influenced by a student's level of academic preparation. The following items are broken out by whether a student has developmental needs or not.

4. One semester postsecondary retention rate of enrolled freshmen (i.e., entered in fall 2004 and returned for the spring 2005 semester):			
All students:	88.4%	88.4%	89.1%
Students with developmental needs in one or more subjects:	88.9%	88.9%	83.4%
Students without developmental needs:	89.5%	89.5%	93.6%

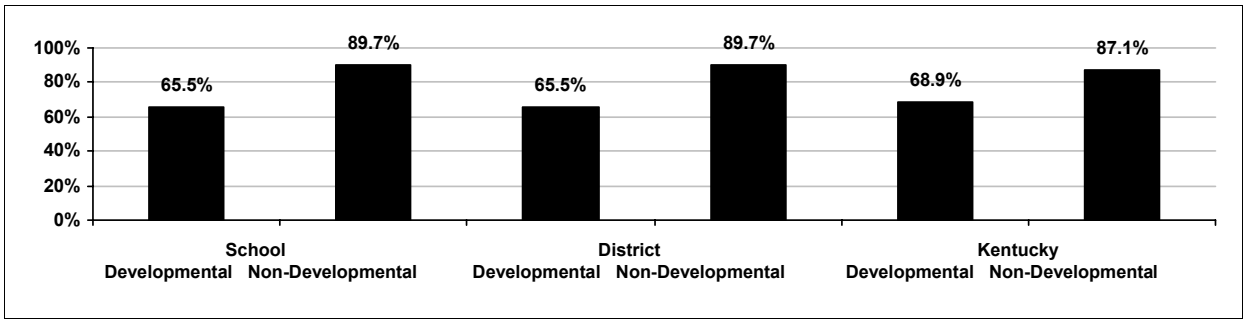
Kentucky High School Feedback Report
Class of 2004

Logan County High School
Logan County Schools

C. Student Postsecondary Performance (continued):

College Retention, Credit Hours, and KEES Awards (continued)	School	District	Kentucky
5. First-to-second year postsecondary retention rate (i.e., entered in fall 2004 and returned for the fall 2005 semester):			
All students:	78.7%	78.7%	79.1%
Students with developmental needs in one or more subjects:	65.5%	65.5%	68.9%
Students without developmental needs:	89.7%	89.7%	87.1%
6. Median number of college credit hours earned during the first year in college:			
All students:	27.0	27.0	25.0
Students with developmental needs in one or more subjects:	25.0	25.0	22.0
Students without developmental needs:	29.0	29.0	28.0
7. Percentage of KEES recipients who maintained KEES awards for the second year:	61.0%	61.0%	60.6%
College Graduation Rates for Former Graduates:			
8. Most recent graduation rate for students who graduated from this high school in 2003 and entered KCTCS in fall 2003 and earned an associate's degree within three years:	20.0%	20.0%	14.2%
9. Most recent graduation rate for students who graduated from this high school in 2000 and entered one of Kentucky's public four-year universities in fall 2000 and earned a bachelor's degree within six years:	42.9%	42.9%	48.2%

First-to-Second Year Postsecondary Retention Rate



For more information visit http:/www.cpe.ky.gov/news/reports/highschoolfeedback/

March 2007

Kentucky High School Feedback Report
Class of 2004

Logan County High School
Logan County Schools

D. Kentucky Institutions Students Entered

Public Four-Year Universities:

Eastern Kentucky University	
Kentucky State University	
Morehead State University	
Murray State University	4
Northern Kentucky University	
University of Kentucky	8
University of Louisville	2
Western Kentucky University	52

Kentucky Community and Technical Colleges

Ashland Community and Technical College	
Big Sandy Community and Technical College	
Bluegrass Community and Technical College	
Bowling Green Technical College	
Elizabethtown Community and Technical College	
Gateway Community and Technical College	
Hazard Community and Technical College	
Henderson Community College	
Hopkinsville Community College	2
Jefferson Community and Technical College	
Madisonville Community College	
Maysville Community and Technical College	
Owensboro Community and Technical College	
Somerset Community College	
Southeast Kentucky Community and Technical College	
West Kentucky Community and Technical College	

Independent Colleges and Universities

Alice Lloyd College	
Asbury College	
Bellarmine University	
Berea College	
Brescia University	2
Campbellsville University	
Centre College	
Georgetown College	
Kentucky Christian University	
Kentucky Wesleyan College	3
Lindsey Wilson College	1
Mid-Continent University	
Midway College	
Pikeville College	
Spalding University	1
St. Catharine College	
Thomas More College	
Transylvania University	
Union College	
University of the Cumberlands	

E. College Majors

Undeclared	28
Agriculture, Agricultural Operations	5
Natural Resources and Conservation	
Architecture and Related Services	
Area, Ethnic, Cultural, and Gender Studies	
Communications, Journalism, and Related Programs	6
Communications Technologies/Technicians	
Computer and Information Sciences	1
Personal and Culinary Services	
Education	5
Engineering	5
Engineering Technologies/Technicians	1
Foreign Languages, Literatures and Linguistics	
Family and Consumer Sciences/ Human Sciences	
Legal Professions and Studies	
English Language and Literature/Letters	4
Liberal Arts and Sciences, General Studies	1
Biological and Biomedical Sciences	2
Mathematics and Statistics	
Multi/Interdisciplinary Studies	
Parks, Recreation, Leisure, and Fitness Studies	1
Philosophy and Religious Studies	
Theology and Religious Vocations	
Physical Sciences	
Psychology	
Security and Protective Services	
Public Administration and Social Service Prof	1
Social Sciences	2
Construction Trades	
Mechanics and Repair Technologies	
Precision Production	
Transportation and Materials Moving	
Visual and Performing Arts	1
Health Professions and Related Clinical Sciences	7
Business, Management, Marketing, Related Svcs	4
History	1

NOTE: The information on this page is only available for the public colleges and universities in Kentucky and the independent institutions that participate in the CPE's comprehensive database. Majors not reported for some students.

REPORT OF INITIAL SCHOOL OF ENROLLMENT
SAMPLE CENTRAL HIGH SCHOOL
Date of Report: December 1, 2007

	Year of High School Graduation						
	2002	2003	2004	2005	2006	2007	Total
Total # High School Graduates	400	420	435	455	480	500	2690
Total College Enrolled	248	265	283	305	326	350	1777
% of High School Graduates	62.0%	63.0%	65.0%	67.0%	68.0%	70.0%	66.0%
By College Type:							
Less Than 2 Year	12	13	14	15	16	18	89
2 Yr. Public	41	42	47	51	53	57	291
2 Yr. Private	9	11	10	10	12	13	65
4 Yr. Public	149	159	170	183	196	210	1066
4 Yr. Private	37	40	42	46	49	53	266
By Enrollment Status:							
Full-Time	159	169	181	195	209	224	1137
Half-Time	77	82	88	95	101	109	551
Less Than Half-Time	12	13	14	15	16	18	89
By Location:							
In-State	186	198	212	229	245	263	1332
Out-of-State	62	66	71	76	82	88	444
Top Schools:							
1 Finest State University	47	50	54	58	62	67	338
2 Community College of the County	35	37	40	43	46	49	249
3 Learned College	20	21	23	24	26	28	142
4 City Community College	10	11	12	12	13	14	73
5 University of Knowledge	10	11	11	12	13	14	71
6 University of Books	9	10	11	12	12	13	68
7 Studious University	9	9	10	11	11	12	62
8 City Institute of Technology	7	7	8	9	9	10	50
9 Library College	6	7	7	8	8	9	44
10 Great State University	5	5	6	6	7	7	36
…etc.							

Note: This report reflects students' first-time enrollment in postsecondary institutions after graduation from high school.

REPORT OF CURRENT SCHOOL OF ENROLLMENT
SAMPLE CENTRAL HIGH SCHOOL
Date of Report: December 1, 2007

	Year of High School Graduation						
	2002	2003	2004	2005	2006	2007	Total
Total # High School Graduates	400	420	435	455	480	500	2690
Total College Enrolled	37	105	166	198	240	350	1097
% of High School Graduates	9%	25%	38%	44%	50%	70%	41%
By College Type:							
Less Than 2 Year	0	0	1	4	5	18	28
2 Yr. Public	3	8	10	13	24	58	116
2 Yr. Private	1	2	2	5	10	12	32
4 Yr. Public	30	79	119	137	157	210	732
4 Yr. Private	4	16	34	39	44	53	189
By Enrollment Status:							
Full-Time	24	67	106	127	154	224	702
Half-Time	12	33	51	61	74	109	340
Less Than Half-Time	2	5	8	10	12	18	55
By Location:							
In-State	28	79	124	149	180	263	822
Out-of-State	9	26	41	50	60	88	274
Top Schools:							
1 Finest State University	9	25	38	44	50	67	233
2 Community College of the County	3	7	8	15	30	49	112
3 Learned College	2	8	18	21	23	28	100
4 University of Knowledge	2	5	8	9	10	14	48
5 University of Books	2	5	7	8	10	13	45
6 Studious University	2	5	7	8	9	12	43
7 City Community College	1	2	2	4	8	14	31
8 Library College	1	3	6	7	7	9	33
9 Great State University	1	2	2	3	3	7	18
10 City Institute of Technology	0	0	1	2	3	10	16
…etc.							

Note: This report reflects students' enrollment in postsecondary institutions as of the date of this report.

GRADUATION REPORT
SAMPLE CENTRAL HIGH SCHOOL

Date of Report: December 1, 2007

	Year of High School Graduation						
	2002	2003	2004	2005	2006	2007	Total
Total # High School Graduates	400	420	435	455	480	500	2,690
Total College Graduates	133	137	84	26	24	10	413
% of High School Graduates	33.3%	32.6%	19.3%	5.7%	4.9%	2.0%	15.4%
By College Type:							
Less Than 2 Year	8	9	9	10	11	10	56
2 Yr. Public	9	10	11	14	12	0	56
2 Yr. Private	1	1	2	2	1	0	7
4 Yr. Public	88	89	40	0	0	0	217
4 Yr. Private	27	28	22	0	0	0	77
By Location:							
In-State	100	103	63	23	21	9	319
Out-of-State	33	34	21	3	2	1	94
Top Schools:							
1 Finest State University	27	28	13	0	0	0	68
2 Community College of the County	8	9	11	15	13	0	56
3 City Institute of Technology	7	8	8	9	10	9	51
4 Learned College	18	18	8	0	0	0	44
5 University of Knowledge	6	6	2	0	0	0	14
6 University of Books	6	6	2	0	0	0	14
7 City Community College	2	2	2	4	3	0	13
8 Studious University	3	3	1	0	0	0	7
9 Library College	1	1	1	0	0	0	3
10 Great State University	0	0	0	0	0	0	0
…etc.							

Note: This report reflects students' most recent graduation from a postsecondary institution as of the date of the report.

STUDENT DETAIL DATA SAMPLE*
SAMPLE CENTRAL HIGH SCHOOL

Your Unique ID	Name First	Mid	Last	Suf.	Requestor Return Field	Record Found	High School Code	High School Grad Date	College Code	College Name	College State	2/4 Year	Public/ Private	Period of Enrollment		Enroll Status	Grad?	Grad Date	Degree Title	Major
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	222222-00	LOCAL COMMUNITY COLI	NY	2	Public	20020823	20021215	F	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	222222-00	LOCAL COMMUNITY COLI	NY	2	Public	20030118	20030510	F	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	222222-00	LOCAL COMMUNITY COLI	NY	2	Public	20030828	20031220	F	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	222222-00	LOCAL COMMUNITY COLI	NY	2	Public	20040122	20040516	F	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	654321-00	LEARNED COLLEGE	CT	4	Private	20040827	20041219	H	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	654321-00	LEARNED COLLEGE	CT	4	Private	20050122	20050515	H	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	654321-00	LEARNED COLLEGE	CT	4	Private	20050826	20051218	H	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	654321-00	LEARNED COLLEGE	CT	4	Private	20060121	20060514	F	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	654321-00	LEARNED COLLEGE	CT	4	Private	20060825	20061217	F	N			
9876543210	SUSAN	M	SMART		CBA321	Y	100001	20020501	654321-00	LEARNED COLLEGE	CT	4	Private	20070120	20070515	F	Y	20070515	BA	HISTORY
5675675675	NANCY	P	SMITH		MNO678	Y	100001	20030501	011462-00	CITY INSTITUTE OF TECH	TX	4	Private	20030901	20031231	F	N			
5675675675	NANCY	P	SMITH		MNO678	Y	100001	20030501	011462-00	CITY INSTITUTE OF TECH	TX	4	Private	20030901	20031231	W	N			
1029384757	FRANK	Z	JONES		BLA729	N	100001	20040515												

**NOTE: The three examples above are of students who exhibit the following characteristics:*
1. Susan Smart enrolled in college and persisted through graduation.
2. Nancy Smith enrolled in college and withdrew before graduating.
3. Frank Jones did not enroll in a college that participates in the Clearinghouse.

This worksheet offers a sample of the student-level detail data that you will receive electronically from the Clearinghouse.

This section may help SLC project staff discuss statistical methods with data analysts. The dataset descriptions match the section on data analysis beginning on page 26.

Example 1: Basic dataset (High school and college enrollment data)

Dataset characteristics:

This dataset is at the student level, where there is one record/observation for each student.

High school data: high school graduation indicator, high school characteristics (for example, location, size, adequate yearly progress [AYP] status, smaller learning community status [yes or no])

College data: college enrollment indicator (yes/no), type of college enrolled (for example, two-year or four-year, public or private), enrollment status (part time or full time), graduation status (for example, graduated or not yet graduated)

Possible data analysis:

i. Calculate the proportion of students who matriculated to a postsecondary institution; matriculated to a two-year or four-year institution; enrolled full time or part time; and graduated within a given time frame, for example within five years of high school graduation. This information can be illustrated through tables and histograms.
ii. Perform cross-tabulations such as AYP status and type of college enrolled; AYP status and rate of college graduation; high school location and college enrollment status (part time or full time). This information can be illustrated through tables, histograms, and line graphs. Tests can be performed to test whether, for instance, the relationship between AYP status and the rate of college graduation is statistically significant.

Example 2: Detailed dataset (High school transcripts and college enrollment data)

Data characteristics:

In this dataset, high school transcript data are at the course level (where there is one record/observation for each course that a student attempted), and the college enrollment data are at the student level.

High school data: all coursework attempted/completed, grades, GPA, student demographics (for example, gender, ethnicity, free- or reduced-price lunch status, English language learner status), high school graduation indicator, high school characteristics (for example, location, size, adequate yearly progress [AYP] status, smaller learning community status [yes or no])

College data: college enrollment indicator (yes or no), type of college enrolled (for example, two-year or four-year, public or private), enrollment status (part time or full time), degree(s) awarded, college major(s)

Possible data analysis:

First, create the desired high school variables from the high school transcripts. This could include creating indicator variables for having completed certain courses by specified times, such as completing Algebra I and a year of English by the end of ninth grade, or completing three years of math and four years of English by the end of 12th grade.

Then, after creating the desired high school variables from the high school transcripts, the dataset may be collapsed from the course level to the student level.

i. Once the dataset is at the student level, perform the following types of bivariate correlations to examine the relationship between high school course-taking patterns and college outcomes: high school GPA and rate of college completion; English language learner status and rate of college matriculation; completing four units

of math in high school; and rate of college completion. This information can be illustrated through tables, histograms, and line graphs. Tests can be performed to determine whether, for instance, the relationship between high school GPA and the rate of college completion is statistically significant.

Example 3: Highly detailed dataset (High school transcripts; college transcripts, with financial aid data)

Data characteristics:

In this dataset, both the high school transcript data and the college transcript data are at the course level (where there is one record/observation for each course that a student attempted in high school/college).

High school data: all coursework attempted/completed, grades, GPA, SAT/ACT scores, student demographics (for example, gender, ethnicity, free- or reduced-price lunch indicator, English language learner indicator), graduation date, high school characteristics (for example, location, size, adequate yearly progress [AYP] status), smaller learning community status (yes or no)

College data: college enrollment indicator (yes or no), type of college enrolled (for example, two-year or four-year, public or private), enrollment status (part time or full time), degree(s) awarded, college major(s), coursework completed (including remediation coursework indicator), grades, GPA, Free Application for Federal Student Aid (FAFSA) data (for example, parental education level, parental income, parental assets), financial aid received

Possible data analysis:

First, create the desired high school variables from the high school transcripts (as described in Example 2). Second, create the desired college variables from the college transcripts. This could include creating a variable that indicates whether the student took a remedial English course, or creating a variable that indicates whether the student failed a course in college. Third, after creating the desired high school and college variables from the transcript data, the dataset may be collapsed from the course level to the student level. Fourth, once the dataset is at the student level, the following types of analyses can be performed to examine the relationship between high school course-taking patterns and college outcomes:

i. Perform bivariate correlations such as high school GPA and rate of college remediation; smaller learning community status and SAT score; free- or reduced-price lunch status and amount of financial aid awarded; high school GPA and college GPA. This information can be illustrated through tables, histograms, and line graphs. Tests can be performed to determine whether, for instance, the relationship between being in a smaller learning community and having a higher GPA in college is statistically significant.
ii. Perform multivariate analysis where, for instance, college graduation status is the dependent variable. Independent variables could include high school GPA, SAT/ACT score, gender, ethnicity, high school characteristics, and smaller learning community status. The objective would be to determine, for instance, whether being in a smaller learning community is correlated with higher rates of college graduation, holding other high school variables in the model constant.

Our mission is to ensure equal access to education and
to promote educational excellence throughout the nation.
www.ed.gov