

September 2010

POSTSECONDARY EDUCATION

Many States Collect Graduates' Employment Information, but Clearer Guidance on Student Privacy Requirements Is Needed





Highlights of GAO-10-927, a report to congressional committees.

Why GAO Did This Study

Postsecondary education plays an important role in producing a skilled workforce able to compete in the global economy. Some stakeholders have suggested that collecting information on graduates' employment outcomes-whether they are employed in their field of study, for example-will provide better information to help assess the impact of a postsecondary education. The **Higher Education Opportunity Act** directed GAO to study the information that states have on the employment outcomes of postsecondary graduates. This report describes (1) the extent and purposes for which states collect employment-related information and the challenges they faced in doing so, (2) potential approaches to expanding states' collection efforts across states and nationwide, and (3) how selected states and schools collaborate with employers to align education and workforce needs. To address these objectives, GAO reviewed relevant research and interviewed officials from the U.S. Departments of Education (Education) and Labor, as well as postsecondary institutions, state agencies, and employers in seven states and two countries selected based on their data collection capabilities.

What GAO Recommends

GAO recommends that Education clarify means by which states can collect and share graduates' employment information under the Family Educational Rights and Privacy Act and establish a time frame for doing so. Education agreed with the recommendation.

View GAO-10-927 or key components. For more information, contact Katherine Iritani, 202-512-7215, iritanik@gao.gov.

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What GAO Found

Twenty-six states collect some employment-related data, such as data on salary and industry, on individual postsecondary graduates by linking student databases with states' labor data, according to a national 2010 study of state education databases. Officials in seven states GAO contacted reported using graduates' employment data for a variety of purposes, including economic development and institutional feedback. For example, one state reported using the data to compile information on the educational level of the local workforce to accommodate an out-of-state employer interested in opening offices in that area. However, some stakeholders cautioned against potentially inappropriate uses of the data, such as holding institutions accountable for the employment outcomes of graduates, noting that such outcomes are often beyond schools' control. Additionally, some state officials said that they faced challenges in their data collection efforts, including the means by which they can appropriately link student and employment data and comply with the Family Educational Rights and Privacy Act (FERPA), which prohibits disclosing a student's education records without written consent. Education officials acknowledged that confusion exists among some states and said they are planning to provide further guidance through various means, but as of September 2010, these plans had not been implemented.

A review of relevant literature and interviews with state officials and experts helped identify three potential approaches for expanding the collection of graduates' employment data, but many stakeholders emphasized the need to decide upon the specific purposes of the system prior to creating it. Possible approaches include expanding direct state-to-state data sharing, using a third party to expand interstate data sharing, and expanding existing national education-related surveys. An advantage of state-to-state data sharing is to follow individual students who go to school in one state and get a job in another. However, many stakeholders noted that sharing student data across states raises privacy concerns under FERPA, much like sharing data across different agencies within the state. In Australia and the United Kingdom, postsecondary institutions conduct national surveys of all recent graduates to obtain employment and other outcome information.

States and schools that GAO contacted collaborate with employers to align education and workforce needs in several ways, including through workforce investment boards, advisory committees, and employer surveys. The extent of school efforts to partner with employers varied depending on the mission and goals of the institution, with community colleges and vocational schools with their emphasis on career and technical training—making greater use than 4-year schools of advisory committees. For example, a private, nonprofit technical school in one state has an advisory committee for each program that drives the curriculum for that program. On the basis of employer input, the school discontinued its auto body program because of a lack of opportunities and began networking with employers to identify programs in new areas.

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Abbreviations

B&B	Baccalaureate and Beyond
BPS	Beginning Postsecondary Students
ELS	Education Longitudinal Study
FERPA	Family Educational Rights and Privacy Act
HEOA	Higher Education Opportunity Act
K-12	kindergarten through 12th grade
SHEEO	State Higher Education Executive Officers
SUR	student unit record
TAFE	Training and Further Education
UI	unemployment insurance
WRIS	Wage Record Interchange System

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United States Government Accountability Office Washington, DC 20548

September 27, 2010

The Honorable Tom Harkin Chairman The Honorable Michael B. Enzi Ranking Member Committee on Health, Education, Labor and Pensions United States Senate

The Honorable George Miller Chairman The Honorable John Kline Ranking Member Committee on Education and Labor House of Representatives

While individuals may pursue postsecondary education for multiple reasons, one of the key reasons for doing so is to obtain employment.¹ Postsecondary education plays an important role in producing a skilled workforce able to compete in the global economy. To this end, the U.S. Department of Education (Education) provided more than \$110 billion in financial aid in fiscal year 2009 to help students finance the cost of a postsecondary education. In today's economic climate, and because of the escalating costs of postsecondary education, policymakers and consumers have noted the need for reliable information about what happens to students after they graduate. For instance, questions about college graduates from different programs arise. Among them are the following: Are the graduates employed? Are they working in their field of study? Are they working in another state? To follow students' progress from postsecondary education to the workforce over time and across state lines, there is growing interest in examining the employment information states currently are collecting, and the feasibility of collecting data across states to address student mobility.

¹Postsecondary education refers to the educational level that follows the completion of a school providing a secondary education, such as high school, and is often optional. Undergraduate, postgraduate, and vocational schools make up the various types of postsecondary education.

Section 1102 of the Higher Education Opportunity Act (HEOA) directed GAO to study the information that states have on employment of postsecondary education graduates.² Essentially, the mandate requires a study of the availability of information at the state level regarding postsecondary graduates' employment, possible options for collecting and displaying such data, and how industry evaluates postsecondary education programs. This report addresses the following questions: (1) To what extent and for what purposes are states collecting employment-related information on postsecondary graduates, and what challenges have they faced in doing so? (2) What are the potential approaches and challenges to expanding the collection of graduates' employment information across states and nationwide? (3) How do selected states and postsecondary institutions collaborate with employers to align education and workforce needs?

To determine the extent to which states collect employment information on postsecondary graduates and the methods used to collect such information, we reviewed relevant research and studies, and consulted with subject matter experts. We reviewed information from a 2007 report by the Lumina Foundation³ and a 2010 report by the State Higher Education Executive Officers (SHEEO),⁴ to obtain information on the extent to which states are collecting employment-related and other outcome information on postsecondary education graduates, and how states obtain such information. In addition, to further understand how states collect, use, and display graduates' employment-related information, we selected seven states-Colorado, Connecticut, Florida, Indiana, Michigan, North Dakota, and Washington—for a combination of site visits and telephone interviews. These states were selected to reflect a geographically diverse set of states with a range of abilities to collect student and employment information. Within each selected state, we interviewed officials from the departments of higher education and labor; representatives from selected public, private, and for-profit postsecondary institutions, such as 2-year and 4-year colleges; and one or more employers. Our findings from these states are for illustrative purposes only

²Pub. L. No. 110-315, § 1102, 122 Stat. 3078, 3491-92 (2008).

³Peter Ewell and Marianne Boeke, *Critical Connections: Linking States' Unit Record Systems to Track Student Progress*, New Agenda Series, Lumina Foundation for Education, National Center for Higher Education Management Systems (January 2007).

⁴Tanya I. Garcia and Hans Peter L'Orange, *Strong Foundations: The State of State Postsecondary Data Systems*, State Higher Education Executive Officers (July 2010).

and are not generalizable nationally. Additionally, while we asked states about what they did to validate the data they collect on students, we did not use data collected by states to substantiate any of our findings.

To identify the potential approaches and challenges for expanding efforts to collect graduates' employment information, we focused on the states' efforts to share data both internally and with other states.⁵ We also interviewed officials from federal and state education and labor departments, experts in the areas of state student data systems and postsecondary education, as well as representatives from postsecondary education organizations and institutions. We also examined postsecondary data collection systems of two selected countries-Australia and the United Kingdom—to obtain an international perspective (see app. IV). We selected these countries primarily on the basis of expert recommendations about countries known to be active in collecting outcome data on postsecondary graduates and preparing graduates for the workforce. In addition, we reviewed the Family Educational Rights and Privacy Act (FERPA), which includes requirements related to the use and disclosure of data on individual students.⁶ To determine how selected states, schools, and employers identify and address workforce needs, we interviewed subject matter experts and officials in our seven selected states, including members of local workforce organizations and employers, and reviewed relevant provisions of the Workforce Investment Act of 1998.⁷

We conducted this performance audit from July 2009 to September 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions

⁶20 U.S.C. § 1232g.

⁵We focused on state rather than federal efforts because the HEOA provided generally that nothing in the Higher Education Act of 1965 authorizes the U.S. Department of Education to create a federal unit record system to track individual college students. Sec. 113, § 134, 122 Stat. 3110-11 (codified at 20 U.S.C. § 1015c).

⁷Pub. L. No. 105-220, 112 Stat. 936 (codified in pertinent part as amended at 29 U.S.C. §§ 2801-2945). In addition, section 504 provided generally that nothing in the act was to be construed to permit the development of a national database of personally identifiable information on individuals receiving benefits under it. 112 Stat. 1245 (codified at 20 U.S.C. § 9274(b)).

based on our audit objectives. Appendix I discusses our scope and methodology in further detail.

A growing number of states are recognizing the potential of collecting data Background at the state level to inform changes in policy and practice that can lead to improved educational outcomes for students. State-level student unit record (SUR) data systems are one example of how individual students can be tracked over time—often called longitudinal data systems—as they move through the education system. In each state, a number of separate SUR data systems containing individually identified student data may exist at all levels of the education system. For example, a state may have multiple SUR systems that capture information on each student's educational data from kindergarten through 12th grade (K-12), with each school or school district maintaining its own SUR database, and other SUR systems that capture information on students at postsecondary institutions. Other state data systems capture information on people employed in the state. However, these systems historically have not been integrated with each other and therefore have not allowed for the tracking of students as they progress from one education level to the next and finally into the workforce. Furthermore, there is considerable variation across data systems with respect to the data elements collected. The focus of this report is on state-level SUR data systems containing postsecondary data that other research has found are generally maintained by the state's department of higher education or a similar agency that coordinates postsecondary education efforts. The types of student data maintained in postsecondary SUR data systems include the following: basic demographic and enrollment data such as name, gender, ethnicity, major, degree granted, and academic history and financial aid information such as family income, expected family contribution, and financial assistance from state, federal, and other sources. Because most SUR databases historically have contained only education information, states must use other sources to capture wage and other employment-related information. One such source is the unemployment insurance (UI) database, which contains wage records on certain workers in the state and is maintained by all states as part of their administration of the federal unemployment insurance program. States' UI wage records

generally include employees' wages, industry, and Social Security number. States compile UI wage records from data submitted each quarter by employers. Although UI wage records contain basic wage information for the majority of workers, certain categories of employees are excluded, such as self-employed persons, independent contractors, federal employees, and military personnel.⁸

At the time of our review, several federal initiatives were under way that promoted the linkage of education to employment databases. One such initiative is Education's Grant Program for Statewide Longitudinal Data Systems (SLDS), authorized by the Educational Technical Assistance Act of 2002,⁹ through which Education awards competitive grants to states for the development of longitudinal data systems based on individual student records. While the grants initially focused on integrating the various K-12 systems maintained by schools and school districts, the focus has recently shifted to following students from prekindergarten through postsecondary education and into the workforce. In fiscal year 2010, Education awarded \$250 million in SLDS grants to 20 states. Another initiative is the Department of Labor's (Labor) Workforce Data Quality Initiative, which supports the development of longitudinal data systems that integrate education and workforce data using funds provided under the Consolidated Appropriations Act, 2010.¹⁰ Labor announced the availability of approximately \$12.2 million to fund these competitive grants, for which applications were due by August 2010.

In establishing data linkages among agencies and sharing data from a student's education records, entities must be aware of and comply with FERPA, which generally affords parents and eligible students access to student education records while limiting the disclosure of those records to

⁹Pub. L. No. 107-279, § 208, 116 Stat. 1940, 1981.

¹⁰Pub. L. No. 111-117, 123 Stat. 3034, 3228.

⁸In prior reports, we found that there is a 6- to 9-month lag between the time employers report UI data and states update their UI wage records. See GAO-04-657, *Workforce Investment Act: State and Local Areas Have Developed Strategies to Assess Performance, but Labor Could Do More to Help* (Washington, D.C.: June 2004), and GAO-02-275, *Workforce Investment Act: Improvements Needed in Performance Measures to Provide a More Accurate Picture of WIA's Effectiveness* (Washington, D.C.: February 2002).

third parties.¹¹ Specifically, FERPA requires educational agencies and institutions that receive Education funds-such as schools, school districts, colleges, and universities-to provide parents and eligible students with access to education records and generally prohibits the disclosure of personally identifiable information from education records without the prior written consent of the parent or eligible student, unless an exception to the FERPA general consent requirement applies. One exception to the general consent requirement in FERPA permits educational agencies and institutions to disclose, without consent, personally identifiable information from students' education records to state and local educational authorities for the purpose of an audit or evaluation of federal- or state-supported education programs, or for the enforcement of or compliance with federal legal requirements that relate to those programs.¹² Representatives of state and local educational authorities—such as a state educational agency—may nonconsensually redisclose personally identifiable information from students' education records on behalf of the educational agency or institution in accordance with the redisclosure requirements of FERPA.¹³ That is, the redisclosure must meet the statutory and regulatory exceptions to consent in FERPA. Accordingly, Education has interpreted FERPA to permit an educational authority to redisclose personally identifiable information from education records to another educational authority if the latter entity has the legal authority to audit or evaluate the federal- or state-supported education program of the educational agency or institution that disclosed the education records in the first place.¹⁴

¹¹20 U.S.C. § 1232g. In addition, the rights under FERPA, including the right to access student education records, transfer from the parent to the student when the student becomes an eligible student. An eligible student is a student who has turned 18 years old or attends a postsecondary institution at any age.

¹²20 U.S.C. § 1232g(b)(3).

¹³34 C.F.R. § 99.33 (b) (2009).

¹⁴34 C.F.R. § 99.35(a) (2009). Within certain limitations, a state's K-12 educational agency that nonconsensually received personally identifiable information from education records to conduct an evaluation may nonconsensually redisclose the personally identifiable information to the state higher education authority. Such disclosure may be done on behalf of the educational agency that provided the information, in order for the state higher education authority to conduct another type of evaluation, as long as that state higher education authority has authority to conduct the evaluation of the disclosing districts' federal- or state-supported education program. There are other exceptions to FERPA's general requirements that may permit the sharing of information under certain circumstances. 20 U.S.C. § 1232g(b).

¹⁵According to SHEEO, 5 states do not have a SUR database: Delaware, Idaho, Michigan, Nebraska, and New Hampshire, and 1 state (Iowa) had limitations to its data system and enrollment numbers that precluded it from being included in the SHEEO report. Further, some states have multiple SUR databases, but for purposes of this report, we use states rather than individual data systems as the unit of analysis.

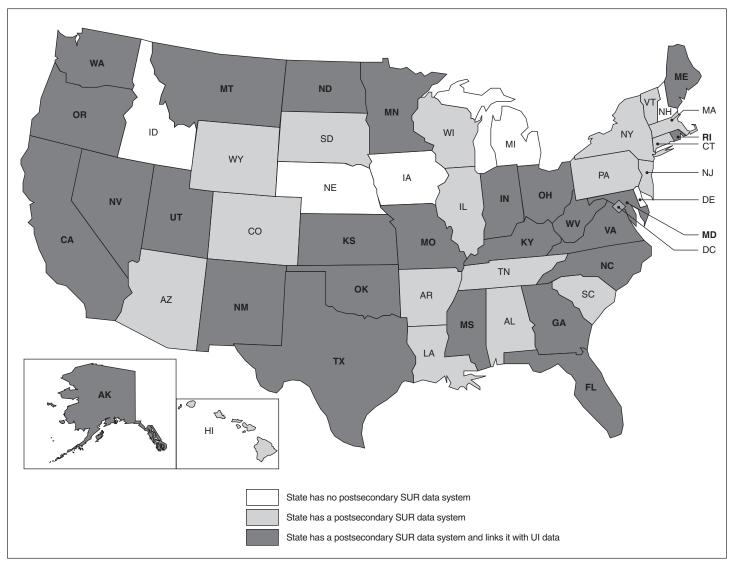


Figure 1: States Maintaining Postsecondary SUR Databases That Capture Employment-Related Data from Unemployment Insurance Wage Records

Sources: SHEEO Report: Strong Foundations: The State of State Postsecondary Data Systems, State Higher Education Executive Officers (July 2010); Art Explosion (map).

Note: According to SHEEO, Iowa had limitations to its data system and enrollment numbers that precluded it from being included in the report.

Further, according to the SHEEO report, most of the state postsecondary data systems include information on public institutions within the state.¹⁶ Of the 26 states with postsecondary data systems that linked to employment data, 24 collect data from both public 2- and 4-year institutions and the other 2 states collect data only from public 4-year institutions. Furthermore, 8 of the 26 states collect data from independent, nonprofit institutions, and 5 collect data from for-profit institutions.

The types of employment-related data collected by the 26 states that link student data with labor data include the following:

- whether graduates were employed in-state,
- wages earned,
- employer name, and
- industry of employment.

Of the 7 states we selected for review, 6 have one or more SUR data systems containing postsecondary data, and 4 states linked those data systems to labor data to capture employment information on graduates. Florida state education officials reported that they also link their postsecondary data system to federal databases such as those maintained by the U.S. Postal Service, Office of Personnel Management, and Department of Defense to obtain employment data on federal employees. Since UI wage records do not capture information for federal employees, this capability allows Florida officials to obtain employment information on postsecondary graduates who are employed by the federal government.

Some of the specific education and employment data elements collected on postsecondary graduates by the selected states include individual students' courses of study during college, job obtained within a particular industry, their salary once they were employed, and the type of financial assistance they received while in college (see table 1).

¹⁶State profiles from the SHEEO report indicated that of the 45 states with postsecondary SUR databases, 42 collect data from both public 2- and 4-year institutions and the other 3 states collect data only from public 4-year institutions. Furthermore, 19 states collect data from independent, nonprofit institutions, and 7 collect data from for-profit institutions.

Characteristics of selected states' postsecondary data	Selected states						
systems		Conn. [®]	Fla.	Ind.	Mich.	N.Dak.	Wash.
Has postsecondary data system	Х	Х	Х	Х		Х	Х
Links postsecondary data system to labor data			Х	Х		Х	Х
Data elements collected							
Course of study	Х	Х	Х	Х		Х	Х
Job obtained within employer's industry		Х	Х	Х		Х	Х
Whether job is related to course of study							
Salary		Х	Х	Х		Х	Х
Student satisfaction with job preparation							
Financial aid received	Х	Х	Х	Х		Х	Х

 Table 1: Data Capabilities of Selected States and Extent to Which These States' Postsecondary Data Systems Collect Certain

 Education and Employment Data on Graduates

Source: GAO analysis of data capabilities of selected states and the following data elements specified in HEOA mandate: type of job obtained, whether job was related to course of study, starting salary, student's satisfaction with his or her preparation for job, guidance provided with respect to securing job, and type of assistance received for recipients of federal student aid.

^aWhile Connecticut does not link its postsecondary SUR data system to UI wage records, a state labor official said that the state has linked postsecondary data provided directly from public postsecondary institutions to UI wage data to capture certain labor elements required for annual reporting requirements.

In contrast, we found that occupational information was generally not available in states' labor systems, in part because their UI wage records often do not capture this information. Such information can indicate whether an individual got a job in a field related to his or her course of study during school. The UI wage records maintained by states commonly contain data that identify the industry—such as health care or retail—that employed individuals, but according to Labor, state labor agencies generally do not require employers to identify occupations in a way that would reflect the type of job—such as nurse or cashier. An industry code would indicate, for example, that a graduate with a nursing degree or certificate is employed in the health care industry but not whether the graduate is employed as a nurse or an administrative assistant. Several state officials and experts we spoke with believed that collecting the occupation code from employers would be valuable. However, some also acknowledged that this would require burdensome and costly system changes for both states and employers. One official in Connecticut estimated that it would initially cost the state approximately \$800,000 to add occupation codes to its unemployment insurance data system, and about \$400,000 each year thereafter.

Our selected states also reported that they were not able to use their data systems to gauge students' satisfaction with the preparation they received for the job obtained. Instead, student satisfaction information was usually collected through surveys administered by postsecondary institutions. For example, state officials and representatives at some institutions we interviewed said that student satisfaction surveys were typically conducted by for-profit institutions and certain professional programs at 4-year universities in the state because these schools were required to collect outcome information, such as placement rates, in order to satisfy national accreditation requirements.

Federal grant funds could result in further changes to states' systems for capturing employment information on graduates. All 7 states we contacted had received federal SLDS grants from Education, and some have used or planned to use these grants in part to develop student data systems, or expand their efforts to capture employment data using existing SUR data systems, according to state officials. For example, Colorado, which had a SUR data system containing postsecondary data but was not capturing any employment data from its UI wage record system, had established in 2009 a Government Data Advisory Board to oversee, among other things, the development of a comprehensive data system that would allow data to be collected on students from prekindergarten through their entry into the workforce. According to officials in Michigan, which had no postsecondary SUR database in place, the state planned to use the grant to develop a data system that linked K-12, postsecondary, and workforce data.

Officials in Selected States Report Using Graduates' Employment Data to Promote Economic Development, Provide Institutional Feedback, and Raise Consumer Awareness

Selected states reported using graduates' employment-related data for a variety of purposes:

Promote economic development. One official in Florida mentioned that the state workforce agency used the data to compile information on the educational level of the local workforce population at the request of an out-of-state employer that was interested in opening offices in that area. State workforce officials in Indiana also said that they use the student unit record database to inform prospective employers about the educational attainment of local postsecondary graduates, their geographic location within the state, and whether these graduates are still seeking employment. Officials in North Dakota's Department of Commerce said that they combine graduates' employment information with labor market information to determine the extent to which graduates are prepared for employment in high-growth industries.

How Australia and the United Kingdom Use and Display Graduates' Employment Information

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Government officials we spoke with in Australia reported using education and employment information—collected through their Australian Graduate Survey-in a variety of ways. One way is to use the information as an accountability tool for overseeing universities that receive monetary incentives through a performance fund that is partly based on survey results. Australia also collects employment-related information on vocational education graduates and uses data collected at the time of enrollment and completion to determine how many students are trained in specific occupations, evaluate performance of training providers, and allocate funding, among other purposes. In the United Kingdom, employment information is also obtained through surveys of university and college graduates, which are used to help rank these institutions. Both countries make survey results publicly available through the Web sites of agencies that administer the surveys. For example, Australia publishes five annual reports based on information collected through the graduate surveys and made available online through the agency's Web site. These reports provide information on graduates such as earnings and course experiences. Prospective students can also use an online tool to view employment information on vocational schools, and can guery the data through this tool to customize the data to their needs.

- **Provide institutional feedback.** North Dakota used the database to provide feedback to institutions. Using the data, the state compiled reports on the total number of degrees awarded, by institution, and whether graduates who earned those degrees were employed in-state. Indiana used its database to approve a master of liberal arts program at a particular campus. To do so, the state analyzed employment outcomes of graduates of a similar liberal arts program at other campuses and determined that these individuals were more likely to be employed in-state and have higher earnings after completing their degree.
- **Raise consumer awareness.** To better inform prospective students, some states that collect employment information reported that they make aggregate data and annual reports on graduates' employment publicly available, generally through their state Web site. For example, according to a state education official in Florida, the state higher education agency publishes an annual outcomes report that provides information on numbers of graduates, average salary, and whether they are working in-state. This report provides aggregate employment information on graduates and is publicly available on the state's Web site. Furthermore, some institutions we contacted, including for-profit and 4-year schools, also reported providing outcome information on the school's or state's Web site such as placement rates and average salary.

However, some stakeholders cautioned against what they considered to be potentially inappropriate uses of the data. Stakeholders raised concerns that employment outcomes that are beyond a school's control should not be used as a basis for assessing the quality of the education provided by the school or adequacy of preparing students for employment. For example, several postsecondary institution representatives in Michigan mentioned that many external factors such as the local economy are not captured by data systems even though they might influence whether graduates can successfully obtain employment. In addition, stakeholders were also concerned that employment outcome data may not be comparable from one institution to another, depending on how specific data elements are defined, such as job placement rate. Finally, representatives from several 4-year institutions and higher education associations noted that there are other reasons students choose to go to college besides employment, including enhancing skills and engaging in lifelong learning.

Selected States Faced Challenges in Their Data Collection Efforts, Particularly Understanding Requirements for Protecting Student Privacy

One challenge cited by several state officials we interviewed was how to link postsecondary graduate student and employment data without violating student privacy requirements under FERPA. Linking student and employment data could entail sharing student records with entities outside education agencies, such as labor agencies, which in turn could violate FERPA. While FERPA may allow for the nonconsensual disclosure of personally identifiable information from student records with state educational agencies, as long as it is for a purpose permitted under one of FERPA's exceptions, such as for program evaluation to improve instruction,¹⁷ it does not explicitly address the nonconsensual disclosure of personally identifiable information from education records to a state department of labor for the purpose of linking student and employment records or how these linkages could be performed. Consequently, some states have been unwilling to link their education data systems to labor data. Officials in Colorado and Michigan—states not linking education data to UI wage records-cited FERPA as a roadblock to their states' efforts to develop a comprehensive database that follows students after graduation. Moreover, the SHEEO report found that over half of states cited FERPA as a barrier to linking postsecondary data systems with labor data.

The means by which state education agencies can link or share student data consistent with FERPA can be complicated. According to stakeholders, how a state captures, maintains, and uses SUR data can depend on the individual state's laws, systems, or databases, and state educational agencies may need to take certain steps, such as establishing data use agreements among state agencies that share data in order to comply with FERPA and applicable state laws. States such as Florida and Indiana have established systems whereby educational data are not shared with the labor agency;¹⁸ rather, the labor agency provides data to the

¹⁷20 U.S.C. § 1232g(b)(1)(C) and (F) and (b)(3).

¹⁸In Florida, this program is created by law and is referred to as the Florida Education and Training Placement Information Program. The purpose of the program is to compile, maintain, and disseminate information concerning the educational histories, placement and employment, and other measures of success of former participants in state educational and workforce development programs. Fla. Stat. § 1108.39 (2009).

educational agency, which then performs the linking function in-house within an education agency or state university system.¹⁹

Some state officials and other stakeholders we interviewed said that states' varying interpretations of FERPA have caused confusion, with one national stakeholder adding that the stakeholder has called upon Education to clarify FERPA so that states understand how they can link education and employment data. Education officials acknowledged that despite the agency's issuance of FERPA regulations in December 9, 2008, confusion remains among states in how to interpret FERPA's redisclosure provisions for sharing education data with noneducation entities.²⁰ Education officials said that they were taking steps to clarify how states can develop and use data in statewide longitudinal data systems consistent with FERPA. As previously discussed, many states are developing or enhancing statewide systems under Education's Grant Program for Statewide Longitudinal Data Systems, which supports data integration including education and workforce information. Education officials specifically said they were planning to improve the guidance and technical assistance available to education data stakeholders through activities that include issuing a Notice of Proposed Rulemaking; creating a Chief Privacy Officer position within Education; releasing technical briefs related to data security, confidentiality, and privacy; and launching a Privacy Technical Assistance Center. As of September 2010, Education said it was engaged in implementing these actions, with a timeline for completion expected to occur during fall 2010 and early winter 2011. At the time of this report, Education had not provided information on whether its guidance would specifically address linking education and employment data.

In addition, several state officials we spoke with were also challenged by trying to collect information on graduates who obtain employment outside of their state. Specifically, some state officials reported that existing postsecondary data systems are able to track students within the boundaries of a given state, but they have been rarely used to track

¹⁹In connection with other types of statewide longitudinal data systems, Education has explained that data maintained by a workforce agency is not an education record, so FERPA does not apply and does not present a barrier to the disclosure of such data by state workforce agencies to educational agencies. 74 Fed. Reg. 58,436, 58,452 (Nov 12, 2009).

²⁰73 Fed. Reg. 74,806. Education issued these regulations, in part, in an attempt to clarify permissible redisclosures by state and federal officials without consent for audit and evaluation purposes. 73 Fed. Reg. 74,821-22.

	students across state lines, in part based on the lack of common data elements, standardized definitions, and interoperable data systems.			
Several Potential Approaches Exist for Expanding the Collection of Graduates' Employment Data	On the basis of our review of relevant literature and interviews with numerous state officials and subject matter experts, we identified several potential approaches for expanding the collection of postsecondary graduates' employment information on a broad level, such as across states or nationwide. These include direct state-to-state or regional data-sharing arrangements, using third parties to assist state efforts in a variety of ways, and expanded national surveys that collect employment-related data. ²¹ Each approach presents challenges. Regardless of how collection efforts might expand, many state officials and other stakeholders we spoke to emphasized the importance of having a clear understanding of the specific policy questions that the data system should address prior to creating it. For example, state officials in Colorado noted that when the policy questions are known, it makes determining the required data elements needed to answer those questions easier and can decrease unnecessary data collection and costs.			
Expanding Direct State-to- State Data Sharing	One approach to expanding collection efforts is for states to directly share postsecondary graduates' employment data with each other, which can be done through data-sharing agreements. This approach allows states to expand their data on graduates' subsequent employment and allows analysis at the individual student or postsecondary institution level. ²² One example of the use of this approach is the data-sharing agreement between the Washington State Board for Community and Technical Colleges and Oregon's labor agency to provide UI wage data from the latter state. Board officials said this agreement allows the board to follow the employment progress of students who graduate from community and technical colleges in Washington and find a job in Oregon. This additional employment information has enabled Washington to better evaluate the education students received, since it has more data to determine whether			
	²¹ Education officials noted that they have not reviewed or endorsed the potential approaches or the specific examples used to illustrate how they have been implemented.			

²²A prior GAO report noted the challenges in following the employment progress of students because of the lack of data sharing across states. GAO, *Career and Technical Education: States Have Broad Flexibility in Implementing Perkins IV*, GAO-09-683 (Washington, D.C.: July 29, 2009).

Washington community college graduates are working in the field in which they were trained. The SHEEO report noted that only three statewide postsecondary data systems shared data with other states.

Several key challenges that affect interstate data-sharing agreements are similar to those associated with sharing data across agencies in the same state, including privacy concerns under FERPA, the lack of standardization of certain data elements, and coordinating ownership and allowable uses of the data, as well as other matters, sometimes referred to generally as governance issues. However, these challenges can be more complex when they arise across different states rather than within the same state. Education's current FERPA regulations do not explicitly address linking data between agencies of different states, so state officials told us they lack sufficient guidance on how data can be shared between states in a way that is consistent with the requirements of FERPA. Further, according to one stakeholder, many states have their own privacy laws in addition to FERPA, and this can create additional challenges for sharing data across states. Nonetheless, several national postsecondary education organizations have indicated that interstate data exchanges could be handled consistent with the requirements of FERPA if certain guidelines are followed, such as having state legislatures specifically authorize state agencies to create the exchanges. A second challenge is the lack of standard data elements among states that may use a different coding system: Even when a state's own agencies have agreed on what data to share with each other and how to standardize the coding, those same kinds of issues must be resolved again by agencies sharing data across states. Another challenge to sharing data across states involves governance issues such as who owns the data, who has the right to use them, and how data quality is managed and assured.

Washington's approach to complying with FERPA--in seeking information on the employment of college graduates that had moved to a neighboring state, Oregon--entailed close supervision of the data and data-linking process. To maintain complete control over the student records and matching process, a staff member from one of the educational authorities in Washington will drive to the Oregon Employment Security Department and personally oversee the match and deliver the data back to the Washington board, according to a Washington state board official. The official said that the current agreement would comply with FERPA requirements. The official also noted that Washington will no longer obtain data from Idaho and Montana, as it had through separate agreements in the past, because it would take too much time to drive to those locations

	to conduct the match and the current procedure requires personal oversight of the matching process.
Using a Third Party to Help Expand Interstate Data Sharing	A second potential approach for expanding data collection may be to have third parties help, by coordinating interstate data sharing, or by warehousing the relevant data from institutions or states. This involves having states select one or more unrelated entities to serve various functions such as facilitating data-sharing agreements and analyzing or warehousing data. Similar to the first approach, this approach allows states to follow students across state lines and analyze outcomes at student and institution levels; however, it also presents FERPA and other challenges. ²⁰ In 2007, Kentucky, Ohio, Tennessee, and West Virginia used the National Center for Higher Education Management Systems, a private nonprofit organization, to facilitate a data exchange designed to help the states examine postsecondary student mobility across their borders. ²⁴ Serving as a third party "broker," the center created exchange agreements with each state individually to resolve governance issues such as how the data would be shared and used. The states also used an independent "administrator" that received data from each state, matched data across states, and constructed database tables based on the designated data elements. A third party, according to officials from the center, can also develop standard data- sharing methodology that can be applied to multiple states. Another example of using a third party approach for sharing data is Labor's Wage Record Interchange System (WRIS). The WRIS facilitates the exchange of wage data among participating states for the purpose of assessing and reporting on employment and training under the Workforce Investment Act of 1998, among other purposes. States voluntarily participate in the WRIS, which acts like a third party by using the WRIS Clearinghouse to exchange wage data. According to Labor officials, the WRIS permits state workforce agencies to obtain wage data of individuals
	²³ Using a third party administrator can also help states avoid giving one state access to other states' records. Accessing another state's records can raise FERPA issues, according to documentation from the National Center for Higher Education Management Systems. However, a third party that has education records, such as a contractor, must comply with FERPA with regard to any nonconsensual redisclosures of that information. Education had not issued any guidance on whether third parties may be utilized to facilitate the averlappa.

 $^{24}Tracking$ Postsecondary Students Across State Lines, National Center for Higher Education Management Systems, (March 2008).

of education records and employment records at the time of this review.

not issued any guidance on whether third parties may be utilized to facilitate the exchange

who have participated in workforce investment programs in one state, then subsequently taken a job in another. By participating in the WRIS, states can have a more robust picture of the effectiveness of their workforce investment programs, and are able to report more comprehensive outcomes against their performance measures, according to Labor documentation.²⁵

In addition to performing these coordination and administrative functions, a third party could serve as a warehouse, maintaining all or some of the data content submitted by other databases, such as those maintained by state agencies' SUR databases or postsecondary institutions. Stakeholders suggested, for example, that the National Student Clearinghouse, a nonprofit institution that verifies student enrollment and other records on behalf of postsecondary institutions, could serve as a third party warehouse of a system that would expand current collection efforts.²⁶ The Clearinghouse maintains enrollment data on over 92 percent of all postsecondary students, obtained directly from institutions, including public, private, and proprietary institutions, according to Clearinghouse officials. However, these data would still need to be linked to state department of labor wage records in order to furnish employment information on graduates. Clearinghouse representatives responded to this idea by emphasizing that all the parties, including the postsecondary institutions themselves, would have to agree to the arrangement, since local postsecondary institutions own any data that would be provided to the Clearinghouse.

One challenge associated with the third party approach that some officials raised is how to pay for the third party, in addition to some of the same challenges with the state-to-state approach, including FERPA compliance and governance challenges, like data ownership. Recent data-sharing discussions among Hawaii, Idaho, Oregon, and Washington highlight

²⁵The WRIS does not allow for the sharing of aggregate wage record results obtained through WRIS to third party entities, such as state education agencies. However, a proposal before the WRIS Advisory Group would allow states to participate in a process to share aggregate wage record results with education agencies to obtain information on behalf of workforce and economic development partner public agencies. Labor officials emphasized that participation by any state in such a process would be on an entirely voluntary basis.

²⁶The National Student Clearinghouse, established by the higher education community in 1993, serves as a central repository and single point of contact for the collection and exchange of enrollment, degree, diploma, and certificate records on behalf of participating postsecondary and secondary institutions.

governance issues in the third party context. Those states have initiated an effort to develop a "prototype" multistate data exchange to follow students from K-12 through employment, according to an official from the third party coordinating the effort, the Western Interstate Commission for Higher Education.²⁷ In addition to data ownership, use, and quality, those states have discussed other governance challenges:

- How would the data system be organized (e.g., would the data reside with a third party)?
- How can the states establish a governance board in a cost-effective way, who should sit that board, what kind of authority for that board is needed (such as individual state legislation), and what kind of agreements are needed?
- How can the parties be motivated to continue working together, particularly in the event the shared data make some states appear better than others?

Likewise, states would have to resolve how to analyze results once the data system is in place. The commission's report on this data exchange effort highlighted the magnitude of governance challenges, noting that the time and effort needed to establish governance rules for data exchange systems generally will likely be significantly greater than the time and effort needed to actually match the data from one state's database to another.

²⁷Brian T. Prescott and Peter Ewell, *A Framework for a Multi-State Human Capital Development Data System*, Western Interstate Commission for Higher Education, 2009. While state officials met together to discuss these issues, states had not progressed past this initial discussion and, as of May 2010, were seeking funds to continue the work.

Expanding National Surveys That Track Postsecondary Education Outcomes

National Data Collection Approach Taken by Australia and the United Kingdom

In Australia, the primary mechanism to obtain employment outcome information on recent graduates of the country's 4-year universities and vocational education sector is a survey of all such graduates, according to Australian officials. Universities administer the survey 4 months after graduation, and information collected includes

- education (e.g., institution attended, degree earned, and major field of study),
- satisfaction with the quality of graduates' educational experience, and
- employment (e.g., employment status, job type, relation to course of study, and annual salary).

Similarly, the United Kingdom obtains outcome information from graduates of universities on whether they are employed, are taking part in further study, or are not available for employment; the type of industry they are working in; and their salary. See appendix IV for details of the information collected in these two countries.

A third potential approach for collecting more employment-related data on a larger number of postsecondary graduates is to expand existing national surveys.²⁸ Several federal agencies and private organizations conduct national surveys to gather information on numerous education and workforce topics, including graduates' postsecondary education, employment, and other life experiences. (See app. III for examples of relevant national surveys that collect information on postsecondary students and graduates.) For instance, Education's Baccalaureate and Beyond Longitudinal Study surveys a sample of graduating seniors to examine students' education and work experiences after they complete a bachelor's degree. That study gathers information on students' undergraduate experience and demographic background and follows groups of students over time to look at their workforce participation, income, and participation in graduate school programs, among other indicators. The study is designed to answer questions such as the following:

- Ten years after college, what percentage of graduates work full-time at one job?
- What percentage of recent graduates view their job as the start of a career?
- What is the unemployment rate among college graduates 1 year after graduation?

Additionally, officials we interviewed at one university mentioned that one private survey, conducted by the National Association of Colleges and Employers, already provides information on average salaries of recent

²⁸We also spoke with a few employers and national associations representing employers or for-profit institutions about surveying employers online to obtain information on employer satisfaction with graduates they hire. They said that they would be willing to complete this type of survey if it would provide them with benefits such as access to aggregated information about graduates' institutions of postsecondary education attended, degrees, or starting pay. However, one association official stated that access to this information might not be enough of an incentive to compel employers to complete the online survey.

graduates and has information categorized by major and institution.²⁹ One major advantage of surveys is that because students themselves provide the information, FERPA compliance is not an issue. However, existing surveys have limitations. For example, surveys that are able to bridge postsecondary education and employment, like the Baccalaureate and Beyond Longitudinal Study, are compiled infrequently: That study has followed groups of students who graduated in 1993 and 2000, and data collection is under way for a third group of 2008 graduates. Further, the Baccalaureate and Beyond Longitudinal Study is representative for graduating seniors nationally and across all majors, but is not representative of any given state or institution, precluding analyses at those levels.³⁰ A few stakeholders also said that because surveys rely on self-reported information, they might be less reliable than other data sources. Other stakeholders noted that surveys sometimes have low response rates, and results might have significant lag time between data collection and data publication, and incur costs each time a survey is administered. (See table 2 for a summary of the various approaches.)

²⁹The National Association of Colleges and Employers Salary Survey compiles data from career planning and placement offices of colleges and universities across the United States. The reports consist of starting salary offers made to new graduates by employing organizations in business, industry, and government, and by nonprofit and educational institutions. The figures reported are for base salaries only and do not include bonuses, fringe benefits, or overtime rates. The Salary Survey reports offers, not acceptances. It does not distinguish between single and multiple offers to individual students and, consequently, offers reported by the study cannot be equated with actual hires.

³⁰Additionally, the survey may not be representative of all majors in follow-up surveys.

Possible approach	Benefits of approach	Challenges	Example of approach		
State-to-state data- sharing agreements: link one or more states' individual SUR data to other states' data	states' state lines, expanding the data states' states have on graduates' JR data to employment	Compliance with FERPA and differing individual state privacy laws across states	Washington state has a data-sharing agreement with Oregon to obtain		
		Lack of standardization of data elements across states	employment data on its graduates		
		 Coordination of governance structure, such as who controls the data and analyses 			
		 Limited to states with SUR data systems that link graduates' education and employment data 			
		 Limited institutional coverage of many SURs with respect to private and proprietary institutions 			
		Paying for states to create and follow these agreements			
Third party intermediary: states use third parties to coordinate data sharing, linking, or housing graduates' employment data	 Follows individual students across state lines, expanding the data states have on graduates' employment 	Compliance with FERPA and differing individual state privacy laws across states and with a third party	Kentucky, Ohio, Tennessee, and West Virginia used a third party to help create		
	 Facilitates coordination of state agreements and analysis of data, according to some stakeholders Builds on state systems already in place Makes data available at student, institution, and state levels, allowing for more detailed analyses Could increase breadth of student 	Coordination of governance structure, including who the third party will be, in addition to other governance issues	postsecondary data sharing agreements among the four states, and to analyze the data		
		 Lack of standardization of data elements across states 			
		 Limited to states with SUR data systems that link graduates' 			
		education and employment dataPaying for the third party assistance			
	according to some stakeholders	 If using the Clearinghouse, might need postsecondary institutions' permission to use the data 			

Table 2: Description of Selected Possible Approaches to Expand the Collection of Graduates' Employment Information

Possible approach	Benefits of approach	Challenges	Example of approach
Expand existing national education-related surveys	 Provides information to policymakers to guide education and workforce policy Eliminates FERPA issue, since respondents themselves voluntarily provide information Could provide more information than could be obtained using only the UI wage records linked to SUR data, because UI wage records generally contain only whether a person is employed, the salary, employer name, and industry of employment 	 Low response rate and time delay between conducting survey and survey results can affect ability to capture current trends of overall population or generalize findings to all postsecondary graduates Self-reported data may be less reliable than linked SUR and UI information Paying for the survey, which incurs costs every time it is administered May not be representative at state or institution level, precluding analyses at that level 	Australia and the United Kingdom, use surveys as a main source of their postsecondary graduates' employment information

Source: GAO interviews.

States and Schools Collaborate with Employers in Several Ways to Align Education and Workforce Needs State and local workforce officials and postsecondary school representatives we interviewed said they collaborate with employers in various ways to keep abreast of workforce needs. At the state and local levels, these partnerships were generally facilitated through workforce investment boards established under the Workforce Investment Act of 1998,³¹ or in some cases by the state's department of labor, though other means were also used to cultivate ties with employers.

Workforce officials in some states said that local workforce investment boards use the state workforce agency's labor market analysis to project high-growth occupations by industry in order to align education and training programs with employers' anticipated needs. For example, Michigan's No Worker Left Behind initiative uses labor market information to identify occupations that are in demand and will fund training only for those occupations. The state's 25 local workforce investment boards then work with the business sector and postsecondary schools to help equip workers with skills required for those occupations. Similarly, Connecticut's Department of Labor uses labor market information to

³¹This 1998 act required, in part, that states and localities unify federally funded employment and training programs and deliver them through a single service system known as the one-stop system. § 121(a), 112 Stat. 963 (codified at 29 U.S.C. § 2841). It also required establishment of business-led state and local workforce investment boards to assist in the development of state one-stop system plans and set policy, respectively. §§ 111(a) and 117(a), 112 Stat. 944-46 and 954 (codified at 29 U.S.C. §§ 2821 and 2832), respectively.

project occupational needs in the state and develops a profile for each industry. Local workforce investment areas then use this information to plan their education and training programs, some of which are delivered by community colleges.³²

To promote partnerships with industry, Florida set up steering committees guided by local chamber of commerce and business leaders and embedded 13 centers—known as Banner Centers—at selected postsecondary institutions to promote coordination among local economic developers, employers, and schools. In Washington, the state workforce investment board, in conjunction with the state board representing public and private postsecondary schools, conducts an assessment every 2 years of the education and training credentials required to meet employer demand. The 2009 assessment showed that the largest gaps between supply and demand were in engineering, computer science, and the medical professions. It noted that the education system will need to expand in these fields to meet employer demand as would the number of students who are interested in and prepared for pursuing careers in these fields. Washington plans to survey employers as part of all subsequent assessments. In North Dakota, the oil and gas industry collaborated with the state workforce development office to assess the industry's workforce needs in light of a projected shortage of qualified workers in the state's labor pool. The industry's trade association partnered with the state to help identify skills needed—such as well drilling—and the state college designed a program around those skills. Another state college created a power plant technology program in response to industry demand for qualified power plant operators and hired one of the employer's retirees to head up the program, given his substantial experience in the industry. In turn, the industry contributed funding and equipment, such as simulators, for the classroom. North Dakota plans to conduct similar assessments for other industries, such as information technology and manufacturing, to help ensure that employers have access to a skilled labor pool.

At the school level, the vast majority of the postsecondary schools we contacted relied on program advisory committees or informal discussions to obtain employer input in designing or updating academic programs.

³²For more information on how community colleges collaborate with the workforce investment system to develop career and technical training programs that meet industry needs, see GAO, *Workforce Development: Community Colleges and One-Stop Centers Collaborate to Meet 21st Century Workforce Needs*, GAO-08-547 (Washington, D.C.: May 15, 2008).

Fourteen of the 25 schools also surveyed employers in part to determine skills sought and satisfaction with recently hired graduates. Such collaboration often occurred at community colleges and for-profit vocational schools, given their focus on career and technical training, compared with 4-year schools whose stated mission is to provide a broad, comprehensive education. Nevertheless, officials from one 4-year university in Colorado said that certain programs, such as engineering, used advisory boards to inform program design, while at another university, in Washington, all of its degree programs had advisory boards to ensure classes were relevant to employer needs.

- Advisory committees. Twenty-one of 25 postsecondary schools we contacted reported using advisory committees, which include business and industry leaders, to plan and develop their programs and curricula.³³ A 4-year public school in Michigan has an employer advisory board consisting of 15 major corporations that advise the entire school and not just individual academic departments. At a private, nonprofit technical school in Washington, there is an advisory committee for each program that drives the curriculum for that program. On the basis of employer input, for example, the school discontinued its auto body program because of a lack of sufficient job opportunities and began networking with potential new employers. A for-profit school in Michigan meets with its advisory committees each year, in part to ensure that technology being used in the classroom is up to date.
- **Informal communication.** Twelve of the 25 schools we contacted said they cultivated ties with employers through informal communication. Schools maintained open lines of communication, for example, through luncheons with local business leaders to solicit feedback on the school and its graduates. The faculty of one community college in Indiana has built individual relationships with local businesses and meets directly with them. Fostering close relationships with employers enabled the faculty to incorporate employer needs into the classroom while helping students understand how classroom learning can be applied to the work world. In addition,

 $^{^{33}}$ Secondary and postsecondary career and technical programs establish and rely on advisory committees to meet requirements under the Carl D. Perkins Career and Technical Education Act of 2006 that involve parents, faculty, guidance counselors, local business, and local labor organizations in the planning, development, implementation, and evaluation of career and technical education programs in the state. Pub. L. No. 109-270, § 122(c)(5), 120 Stat. 683, 719 (codified at 20 U.S.C. § 2342(c)(5)).

School and Employer Partnerships in Australia and the United Kingdom

One university in Australia that offers vocational education categorizes its courses according to the specific industry. It then seeks input from industry representatives to inform the programs and to keep apprised of emerging skill needs. Another university obtains employer feedback on the curriculum and faculty of its biomedical and science programs, and also surveys employers on the quality of university graduates hired. An administrator at a university in the United Kingdom told us that 6-8 employers serve as members of the school's governing committee, and as many as 120 employers participate in an employer group that advises the school's career services office. The university also surveys employers and uses other means to gauge their satisfaction with graduates hired.

several employers we spoke with said they had a good working relationship with schools, enabling them to provide school administrators with informal feedback on the quality of graduates they hired and whether the curriculum needed to be adjusted to meet employer needs.

• Employer and graduate surveys. Surveying employers was a commonly used method among schools to determine what skills employers sought and employers' perception of how adequately recently hired graduates were prepared. In Indiana, a for-profit school surveyed its graduates to gauge how satisfied they were with the guidance they had received in preparing for and obtaining employment, while a community college surveyed graduates on how beneficial their coursework had been in helping them prepare to enter the job market. A community college in Indiana developed a workplace readiness certificate after survey results showed that employers' biggest demand was that graduates possess soft skills—the nontechnical skills and traits needed to function in a job, such as punctuality, teamwork, and work ethic. A for-profit school also in Indiana said it offers remedial training for graduates if employers are dissatisfied with their skills.

Some community college officials said that once employer input is obtained, the colleges can adjust their curricula and add new training or degree programs very quickly (e.g., anywhere from under 2 months to 1 year) to respond to employer needs. For example, officials at a community college in Indiana said they developed a new industrial technology program that met employers' needs for courses in advanced manufacturing. In contrast, officials at a 4-year school said that faculty, particularly if they are tenured, can be resistant to changing their program because their focus is on teaching rather than on the quality of jobs their graduates obtain.

Conclusions

In an era of increasing focus on educational accountability and on U.S. competitiveness in a global economy, there are many merits to collecting employment data on postsecondary graduates and expanding on existing state data collection efforts. For example, collecting employment information on students that moved out of state could help close a knowledge gap when they obtain employment in another state. Some state officials and subject matter experts agree that such enhanced information could provide a more comprehensive picture, across states, of what happens to graduates when they enter the workforce, shedding light on the outcomes of education programs. A system that provides detailed

	information on the percentage of a school's graduates that land jobs, average starting salary, and whether they are employed in another state could also raise consumer awareness about education and employment outcomes, as long as this information is made public, for example, by posting the information on the state's or school's Web site. Just over half of the states collect employment information on their postsecondary graduates, and while there could be significant advantages in expanding current data collection efforts, there are also several inherent challenges in doing so. In particular, many states are unsure about how to collect and share the information while still protecting student privacy under FERPA. Education is planning to take several steps to clarify FERPA guidance and provide technical assistance. These are positive steps toward improving guidance, but it is not clear when the guidance will be available and whether it will specifically address states' concerns regarding how to develop or broaden their existing data collection systems in accordance with FERPA. Developing such guidance is important to addressing ongoing confusion and is particularly needed in view of federal grants that require states to specify how they will link their education and employment systems. Until such guidance is in place, the full potential of collecting longitudinal data within and across multiple states, while still ensuring necessary privacy protections, cannot be realized.
Recommendation for Executive Action	To help address states' information needs, we recommend that the Secretary of Education develop and disseminate guidance that clarifies the means by which state education agencies can share student records to facilitate obtaining graduates' employment information while ensuring appropriate privacy protection under FERPA. In addition to establishing a time frame for implementation, this guidance should include how student records could be shared with state labor agencies, and how states can share data with one another.
Agency Comments and Our Evaluation	We provided a draft of this report to officials at the Departments of Labor and Education for their review and comment. Labor had no comments. Education provided a response, which is included as appendix V of this report, and technical comments, which we incorporated as appropriate. In its comments, Education agreed with our recommendation and noted that it has started several initiatives that are in various stages of action. Specifically, Education intends to propose amendments to FERPA regulations to clarify what is permissible under FERPA. According to Education, these amendments, if adopted, would clarify how states can effectively develop and use data in statewide longitudinal data systems

while ensuring protection of individual privacy under FERPA. Education also stated it was creating a Chief Privacy Officer position and establishing a Privacy Technical Assistance Center to serve as a one-stop shop for state educational agencies and others for questions related to protecting privacy, confidentiality, and data security. In addition, Education is planning to release a new series of technical briefs on various issues related to the protection of personally identifiable information in student education records.

We are sending copies of this report to the Secretaries of Education and Labor, as well as to relevant congressional committees. In addition, this report will also be available at no charge on GAO's Web site at http://www.gao.gov/. Contact points for our Office of Congressional Relations and Public Affairs may be found on the last page of this report. Major contributors to this report are listed in appendix VI.

Kotherne Sintani

Katherine M. Iritani Acting Director, Education, Workforce, and Income Security

Appendix I: Scope and Methodology

To address the objectives of this study, we used a variety of methods. Our overall approach included a review of relevant federal laws, literature, studies, and reports, as well as interviews with state education and workforce agency officials, representatives at all types of postsecondary education institutions (i.e., vocational, 2-year, and 4-year schools that were either public, private not-for-profit, or private for-profit), employers, and database and postsecondary education experts. To provide an international context for our work, we reviewed relevant reports and studies and obtained recommendations from postsecondary education experts to identify countries that collect significant information on postsecondary students and that may have strong workforce development programs in place. We judgmentally selected seven states and two countries—Australia and the United Kingdom—where we spoke with officials from relevant education and workforce agencies, as well as postsecondary institutions, to help us understand their methods of data collection and workforce development planning. In conducting our review of states and other countries, we did not conduct independent reviews of their laws, but rather relied on statements attributable to government officials from those states and countries and reliable secondary sources, such as selected researchers, subject matter experts, and employers. We also contacted two accrediting bodies for their perspectives on our work.

To identify the extent to which and for what purposes states collect employment-related information on postsecondary graduates, we identified a sample of seven states for site visits and telephone interviews and, within these states, interviewed state education and labor officials to determine what information is available on the employment outcomes of college graduates and how states are capturing this information. We also met with selected postsecondary education institutions to discuss the types of outcome data they report to the state, any additional outcome information they collect for internal purposes, and the methods used to collect such information. Additionally, we asked state officials, postsecondary institution representatives, and other subject matter experts about how states and institutions collect graduates' employment outcome information, any barriers or challenges they face in doing so, how this information is displayed, and for what purposes the information is used.

To select our sample of states for review, we primarily relied on recommendations from postsecondary education experts and information from an external report published in 2007 by the Lumina Foundation entitled *Critical Connections: Linking States' Unit Record Systems to Track Student Progress.*¹ This report is based on the results of a 50-state survey completed in 2006 by the National Center for Higher Education Management Systems that identifies the states that have postsecondary student unit record databases, the ability of these databases to link to employment-related data systems such as states' unemployment insurance wage records, and other data sources such as military records, federal employment data, and department of social services data, that provide employment outcome information. On the basis of a review of the Lumina Foundation report's state survey results, we grouped the states into the following four categories according to their data system capabilities:

(1) Advanced data capabilities. States in this category had an operational student unit record data system for postsecondary students, experience linking student data to unemployment insurance wage records, and experience linking student data to additional sources that provide employment outcome information.

(2) Emerging data capabilities. States in this category had an operational student unit record data system for postsecondary students and experience linking student data to unemployment insurance wage records, but did not have experience linking student data to other additional sources that provide employment outcome information.

(3) Minimal capability. States in this category had an operational student unit record data system for postsecondary students, but did not have experience linking to unemployment insurance wage records or other sources that provide employment outcome information.

(4) No capabilities. States in this category did not have an operational student unit record data system.

In selecting our sample of states, we also considered additional database functionality (such as including data from private and proprietary institutions), state participation in a regional data sharing agreement, and geographic and demographic diversity (e.g., rural, urban, and makeup of student population). On the basis of these considerations, we judgmentally

¹Peter Ewell and Marianne Boeke, *Critical Connections: Linking States' Unit Record Systems to Track Student Progress*, New Agenda Series, Lumina Foundation for Education, National Center for Higher Education Management Systems (January 2007).

selected seven states with a range of capabilities for in-depth review: Colorado, Connecticut, Florida, Indiana, Michigan, North Dakota, and Washington. We used the information gathered from these states for illustrative purposes only, and that information is not generalizable to a larger group of states, including a group of states with similar database capabilities or attributes. Additionally, while we asked states about what they did to validate the data they collect on students, we did not use data collected by states to substantiate any of our findings. We supplemented this information with findings from the July 2010 report by the State Higher Education Executive Officers (SHEEO), *Strong Foundations: The State of State Postsecondary Data Systems*, which updated and expanded similar information in the 2007 Lumina report.² We corroborated the SHEEO report findings for the seven states we selected for in-depth review. However, we did not corroborate the findings for any other state.

To describe the potential approaches and challenges to expanding the collection of graduates' employment information, we interviewed state officials and subject matter experts. In conjunction with those stakeholders, we identified a number of nationally administered surveys, including surveys administered by federal agencies such as the U.S. Department of Education, the Bureau of Labor Statistics, the National Science Foundation, and others. We examined the extent to which these surveys include education and employment information and whether they could be expanded to collect certain outcome information on graduates. In addition, we analyzed the Family Educational Rights and Privacy Act. We did not examine whether these potential approaches are consistent with all requirements of FERPA, because such a review was beyond the scope of our work.

To identify how selected states and postsecondary institutions collaborate with employers and use graduates' employment-related information to align education and workforce needs, we relied on our state site visits and interviews with expert stakeholders. Because the Workforce Investment Act is the primary vehicle for delivering federally funded employment and training services, we also reviewed relevant information and provisions of that act. In addition, we reviewed prior GAO work on community colleges and workforce development to understand coordinated efforts between postsecondary education and workforce systems to meet employers'

²Tanya I. Garcia and Hans Peter L'Orange, *Strong Foundations: The State of State Postsecondary Data Systems*, State Higher Education Executive Officers (July 2010).

needs. Within the selected states, we interviewed state education and labor officials, representatives from 25 postsecondary institutions, and 16 employers. We asked these stakeholders how, if at all, state and local governments identified workforce needs and developed partnerships between employers and postsecondary institutions to meet those needs. Our meetings with employers and postsecondary institutions also focused on how local postsecondary institutions have tried to serve the needs of employers.

Overall, we conducted this performance audit from July 2009 to September 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Selected Characteristics of States' Postsecondary Student Unit Record Data Systems

	Fatablished	Institutional coverage				Links
State	Established – postsecondary student unit record database	Public, 4-year	Public, 2-year	Nonprofit private	For-profit proprietary	postsecondary student data to workforce data
Alabama	Yes	Yes	Yes	Yes	No	No
Alaska	Yes	Yes	Yes	No	No	Yes
Arizona	Yes	Yes	Yes	No	No	No
Arkansas	Yes	Yes	Yes	Yes	No	No
California	Yes	Yes	Yes	No	No	Yes
Colorado	Yes	Yes	Yes	Yes	No	No
Connecticut	Yes	Yes	Yes	No	No	No
Delaware	No	N/A	N/A	N/A	N/A	N/A
District of Columbia	Yes	Yes	Yes	Yes	No	No
Florida	Yes	Yes	Yes	No	No	Yes
Georgia	Yes	Yes	Yes	No	No	Yes
Hawaii	Yes	Yes	Yes	No	No	No
Idaho	No	N/A	N/A	N/A	N/A	N/A
Illinois	Yes	Yes	Yes	Yes	No	No
Indiana	Yes	Yes	Yes	No	No	Yes
Iowa	No	N/A	N/A	N/A	N/A	N/A
Kansas	Yes	Yes	Yes	No	Yes	Yes
Kentucky	Yes	Yes	Yes	Yes	No	Yes
Louisiana	Yes	Yes	Yes	Yes	No	No
Maine	Yes	Yes	No	No	No	Yes
Maryland	Yes	Yes	Yes	Yes	No	Yes
Massachusetts	Yes	Yes	Yes	Yes	Yes	No
Michigan	No	N/A	N/A	N/A	N/A	N/A
Minnesota	Yes	Yes	Yes	Yes	Yes	Yes
Mississippi	Yes	Yes	No	No	No	Yes
Missouri	Yes	Yes	Yes	No	Yes	Yes
Montana	Yes	Yes	Yes	No	No	Yes
Nebraska	No	N/A	N/A	N/A	N/A	N/A
Nevada	Yes	Yes	Yes	No	No	Yes
New Hampshire	No	N/A	N/A	N/A	N/A	N/A
New Jersey	Yes	Yes	Yes	Yes	No	No
New Mexico	Yes	Yes	Yes	Yes	No	Yes
New York	Yes	Yes	Yes	Yes	Yes	No
North Carolina	Yes	Yes	Yes	No	No	Yes

Appendix II: Selected Characteristics of States' Postsecondary Student Unit Record Data Systems

	Established – postsecondary student unit record database	Institutional coverage				Links
State		Public, 4-year	Public, 2-year	Nonprofit private	For-profit proprietary	postsecondary student data to workforce data
North Dakota	Yes	Yes	Yes	No	No	Yes
Ohio	Yes	Yes	Yes	No	No	Yes
Oklahoma	Yes	Yes	Yes	Yes	No	Yes
Oregon	Yes	Yes	Yes	No	No	Yes
Pennsylvania	Yes	Yes	Yes	Yes	No	No
Rhode Island	Yes	Yes	Yes	No	No	Yes
South Carolina	Yes	Yes	Yes	Yes	Yes	No
South Dakota	Yes	Yes	No	No	No	No
Tennessee	Yes	Yes	Yes	Yes	No	No
Texas	Yes	Yes	Yes	Yes	Yes	Yes
Utah	Yes	Yes	Yes	No	No	Yes
Vermont	Yes	Yes	Yes	No	No	No
Virginia	Yes	Yes	Yes	Yes	No	Yes
Washington	Yes	Yes	Yes	No	No	Yes
West Virginia	Yes	Yes	Yes	No	No	Yes
Wisconsin	Yes	Yes	Yes	No	No	No
Wyoming	Yes	Yes	Yes	No	No	No

Source: State profiles from the State Higher Education Executive Officers (SHEEO) report, Strong Foundations: The State of State Postsecondary Data Systems, SHEEO (July 2010), and GAO analysis.

Note: N/A stands for Not Applicable, because the state did not have a postsecondary student unit record database.

Appendix III: Examples of Selected National Surveys of Postsecondary Education Students

Name of survey	Sponsoring entity	Survey information and analysis
National Postsecondary Student Aid Study	Department of Education's National Center for Education Statistics	A recurring survey that examines how students and their families pay for postsecondary education. It includes nationally representative samples of undergraduate and graduate students enrolled at all types of postsecondary institutions. Compiles a comprehensive research dataset, based on student-level records, on financial aid provided by the federal government, the states, postsecondary institutions, employers, and private agencies, along with student demographic and enrollment data.
Baccalaureate and Beyond Longitudinal Study (B&B)	Department of Education's National Center for Education Statistics	Examines students' education and work experiences after they complete a bachelor's degree, with a special emphasis on the experiences of new elementary and secondary teachers. Follows several cohorts of graduating seniors over time. The most recent B&B study, in summer 2009, surveyed more than 17,000 bachelor's degree recipients from 1,100 U.S. colleges and universities, and collected information about these graduates' demographic background, postsecondary education, employment, and other life experiences since leaving college in 2008. In 2012, the survey will contact the same graduates to find out about their longer-term experiences.
Beginning Postsecondary Students (BPS) Longitudinal Study	Department of Education's National Center for Education Statistics	Captures a national perspective of persistence, multiple enrollment, transfer, and attainment using students as the unit of analysis. This survey follows several cohorts of students who enrolled in postsecondary education for the first time. The study collects data on student persistence in and completion of postsecondary education programs, their transition to employment, demographic characteristics, and changes over time in their goals, marital status, income, and debt, among other indicators. BPS draws its initial cohorts from the National Postsecondary Student Aid Study and then they are surveyed through BPS 2 and 5 years after their first enrollment in postsecondary education.
Education Longitudinal Study of 2002 (ELS)	Department of Education's National Center for Education Statistics	The study is designed to monitor the transition of a national sample of young people as they progress from 10th grade through high school and into postsecondary education and/or their careers. The ELS is a longitudinal study, which means that the same individuals are surveyed repeatedly over time, and the information is collected from multiple respondent populations that represent students, their parents, their teachers, their librarians, and their schools. As a longitudinal study, ELS 2002 follows a nationally representative cohort of students from the time they were high school sophomores through the rest of their high school careers. By surveying the same young people over time, it is possible to record the changes taking place in their lives and help to explain these changes—that is, to help understand the ways in which earlier achievements, aspirations, and experience influence what happens to them later.

Name of survey	Sponsoring entity	Survey information and analysis
The National Survey of Recent College Graduates	National Science Foundation	Provides information about individuals who recently obtained bachelor's or master's degrees in a science, engineering, or health field. Represents individuals who have recently made the transition from school to the workplace. It also provides information about individuals attending graduate school. The survey results are used by educational planners and employers to understand and predict trends in employment opportunities and salaries in science, engineering, and health fields for recent graduates and to evaluate the effectiveness of equal opportunity efforts. The survey sample is a two-stage sample, in which a sample of institutions is selected at the first stage and a sample of graduates is selected at the second stage from lists provided by the sampled institutions.
National Survey of College Graduates	National Science Foundation	Longitudinal survey designed to provide data on the number and characteristics of individuals with education and/or employment in science, engineering, and related fields in the United States. The survey provides information on various characteristics of college-educated individuals in the workforce such as salaries, whether the college-educated population was working in their highest degree field of study, specific occupations, and a gender breakdown of the workforce.
Survey of Earned Doctorates	National Science Foundation	Annual survey, begun in 1957–1958, that collects data continuously on the number and characteristics of all individuals receiving research doctoral degrees from accredited U.S. institutions. The results are used to assess characteristics and trends in doctorate education and degrees. Each accredited U.S. graduate school is responsible for providing the survey to its graduates and then submitting completed forms to the survey contractor for editing and processing.
Salary Survey	National Association of Colleges and Employers	Compiles data from career planning and placement offices of colleges and universities across the United States. The reports consist of starting salary offers made to new graduates by employing organizations in business, industry, government, and nonprofit and educational institutions. The Salary Survey reports base salary and the number of offers, not acceptances. It does not distinguish between single and multiple offers to individual students, and therefore offers cannot be equated with actual hires.

Source: GAO analysis of surveys administered to students and graduates on a nationwide basis.

Appendix IV: Structure of Postsecondary Education in Australia and United Kingdom and Data Collection Methods

Australia	
Postsecondary education structure	Australia's postsecondary education system is made up of a university system that is managed and funded primarily at the Commonwealth level, and a vocational education and training sector that is managed and funded primarily by state governments.
System size	The university system includes 39 universities, of which 37 are public and 2 are private. According to government officials, there are about 4,000 providers of vocational education of various sizes in Australia. Of these providers, 85 percent of the training is provided through about 58 public institutions, known as Training and Further Education (TAFE) institutes, which are funded and operated through the state governments.
Postsecondary data collection method	The university and vocational systems each maintain a student information data system to track students while they are enrolled in school. According to government officials, all universities and vocational institutions that receive government funding must collect data on their students. These data systems, however, do not track students beyond the point of program completion, and thus provide no employment outcome information on graduates. To capture employment outcome information on graduates, each educational system conducts its own national graduate surveys.
University system	According to officials we interviewed, the Australian Graduate Survey is the primary mechanism through which the Australian government obtains outcome information on university graduates. All of the universities participate in the survey.
·	• Each university is responsible for administering the survey to its graduates 4 months after they complete an undergraduate program, and the responses are sent to Graduate Careers Australia, a nonprofit entity, for processing.
·	• The institutional response rate of 70 percent is desirable and achievable, but data cannot be disclosed publicly or published if the response rate falls below 50 percent.

•	Education data collected include institution attended, degree earned, and major field of study, as well as satisfaction with the quality of graduates' educational experience.
•	Employment outcome data collected include employer name, industry of employment, job title, primary job tasks, annual salary, hours worked per week, importance of major course of study to the current employment, and satisfaction with course experience.
Vocational system	According to government officials, the Student Outcomes Survey is the primary mechanism through which the Australian government obtains outcome information on the vocational education and training sector graduates. This survey is a sample survey conducted annually to assess the success of the vocational education and training sector in improving employment outcomes.
•	Australia's National Centre for Vocational Education Research (NCVER) is responsible for administering the survey, which is sent to graduates 6-9 months after they complete training programs.
•	The response rate is about 40 percent.
•	Employment outcome data collected include industry of employment, job title, primary job tasks, salary, relevance of training to current employment, and overall satisfaction with the training.
•	These data are available through the NCVER Vocational Education and Training Provider Collection (released on an annual basis) and the NCVER Apprentice and Training Statistics collection (released on a quarterly and annual basis).
•	Employer survey: Every 2 years, the National Centre for Vocational Education Research uses a contractor to survey a sample of Australian employers over the phone. This survey helps officials determine why employers do or do not use the vocational education system.

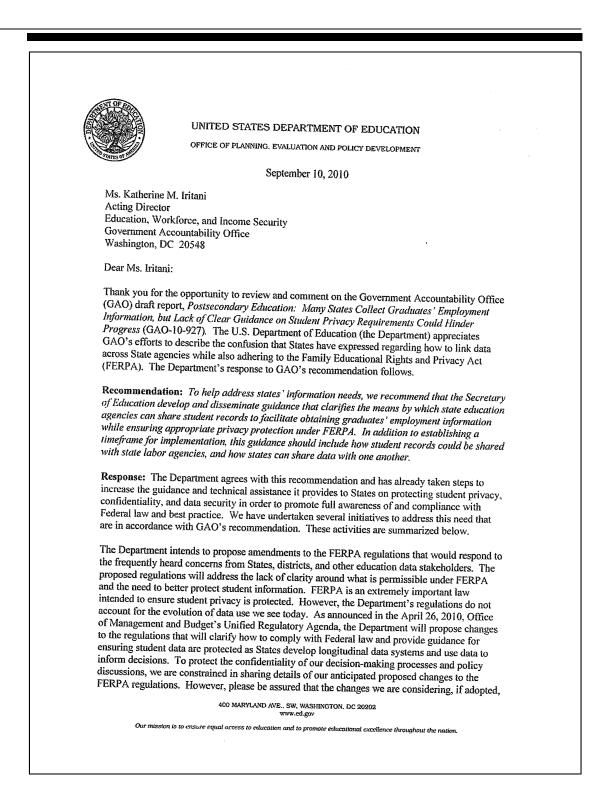
United Kingdom

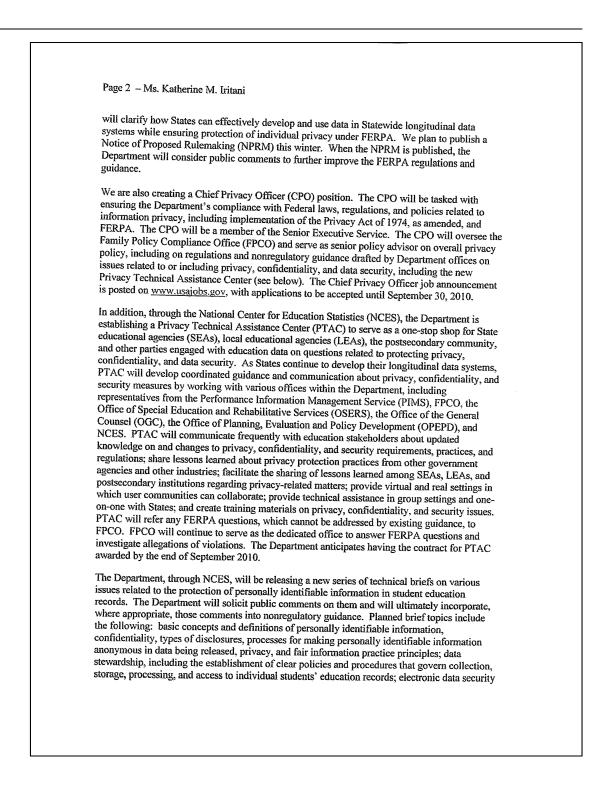
Postsecondary education structure	The United Kingdom's postsecondary system consists of a higher education system (universities and colleges similar to those in the United States) and a further education system (institutes of further education, similar to community colleges or vocational schools in the United States), according to officials from the United Kingdom Department for Business Innovation and Skills. Officials said that both parts of postsecondary education are primarily federally funded, though the individual countries (England, Northern Ireland, Scotland, and Wales), and local areas also have some control over postsecondary education.
System size	The higher education system is composed of 165 universities and higher education colleges. According to the Business Innovation and Skills officials, there are approximately 430 further education colleges in the United Kingdom. ¹
Postsecondary data collection method	According to officials from the United Kingdom Department for Business Innovation and Skills, annual national surveys are conducted of postsecondary education leavers, as well as an employer satisfaction survey.
Higher education system	The United Kingdom's Higher Education Statistics Agency conducts its <i>Destinations of Leavers from Higher Education</i> survey in two stages.
	• In the first stage, every higher education institution surveys all students 6 months after they graduate. Information is gathered on their current activity: employed, unemployed, in further study, or something else/not available for employment. Employment data collected include graduates' area of employment, occupation, salary, and whether the education was necessary for the job obtained, and reasons the student took the job.
	• In the second stage, the country's Higher Education Statistics Agency uses a private contractor to send a survey to a sample of graduates 3½ years
	¹ According to officials from the Department for Business Innovation and Skills

¹According to officials from the Department for Business Innovation and Skills, approximately 10 percent of higher education is carried out within further education colleges, and generally overseen by a higher education institution.

	after graduation, and collects similar employment outcome data. This is not an annual survey; there have been two such longitudinal surveys, and a third one is under way as of September 2010, according to officials at the Department for Business Innovation and Skills.
	The target response rate for each institution is 80 percent for full-time students (and 70 percent for part-time).
Further education system	According to officials from the United Kingdom Department for Business Innovation and Skills, the United Kingdom surveys all further education leavers who complete a substantial amount of learning and/or basic skills programs and asks them about the impact of that coursework. Officials said that the survey asks, for example, about whether leavers are continuing their education or have obtained employment or better employment and whether the course was essential to that outcome. The surveys are conducted by phone. The results of the survey can be used to evaluate each institution's performance, according to officials.
Employer survey	Employment information is obtained through surveys of university and college graduates, and the results are publicly available through the Web sites of the agencies that administer the surveys. The United Kingdom Commission for Employment and Skills administers the National Employer Skills Survey, which asks, among other things, employers to evaluate how well prepared these postsecondary graduates are for their occupations. Other areas the survey asks employers about include recruitment difficulties and skill gaps. The results for the 2009 National Employer Skills Survey for England were published in March 2010.

Appendix V: Comments from the Department of Education





Page 3 - Ms. Katherine M. Iritani related to the transmission of data with personally identifiable information between different entities; statistical methods to protect the identity of individual students in publicly available information; recommended components of written agreements that permit State and local educational authorities to redisclose personally identifiable information from education records to organizations conducting studies pursuant to the terms of FERPA; and privacy and confidentiality training needs for relevant staff at the State, district, and school levels, including disclosure limitation procedures and internal access rules. NCES will create additional briefs in response to public requests for guidance on related topics. The briefs will be released as individual documents for each topic over time, starting fall 2010. We believe that we must remain vigilant about safeguarding data and protecting privacy as the reliance on using data to inform decisions grows and as States expand their longitudinal data systems. The above-listed initiatives are the first steps in what will be continuous development and improvement of the technical assistance and guidance that the Department will provide to ensure that States, districts, and schools are safeguarding personally identifiable information in data systems and complying with Federal privacy laws. Although we agree with GAO's recommendation for executive action, there are several technical points of clarification needed in the draft report related to the Department and FERPA. Enclosed is an addendum outlining these points, which I trust GAO will find useful. Thank you for the opportunity to provide comments on the draft report. Sincerely, Semel Mart Carmel Martin Assistant Secretary Enclosure

Appendix VI: GAO Contacts and Staff Acknowledgments

GAO Contact	Katherine M. Iritani, Acting Director, (202) 512-7215 or iritanik@gao.gov
Staff Acknowledgments	In addition to the contact named above, Meeta Engle, Assistant Director, and Susan Chin, Analyst-in-Charge, managed all aspects of the assignment. Jason Holsclaw, Andrew Nelson, Nancy Purvine, and Katy Trenholme made significant contributions to this report in all aspects of the work. Kate Van Gelder contributed to writing this report. Ronald Fecso and Luann Moy provided technical support, and Craig Winslow provided legal support. Mimi Nguyen developed the graphics for the report.

Related GAO Products

Career and Technical Education: States Have Broad Flexibility in Implementing Perkins IV. GAO-09-683. Washington, D.C.: July 29, 2009.

Workforce Development: Community Colleges and One-Stop Centers Collaborate to Meet 21st Century Workforce Needs. GAO-08-547. Washington, D.C.: May 15, 2008.

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