

RECOMMENDATIONS TO IMPROVE THE QUALITY OF PERKINS IV DATA IN COLORADO

Submitted by:

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BACKGROUND

In December 2006, the Office of Vocational and Adult Education (OVAE), U.S. Department of Education, invited state directors of career and technical education (CTE) to submit requests for individualized technical assistance to improve the quality of their Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) accountability systems. In response, the Colorado Community College System (CCCS) submitted an application requesting technical assistance in designing its secondary and postsecondary measures for submission in its Perkins IV five-year plan.

The CCCS office is the designated Perkins administering agency for the state, with governance responsibility for 13 community colleges offering a range of career and academic programs. Additionally, CCCS assists the State Board for Community College and Occupational Education in exercising curriculum and funding authority for 4 area vocational schools, 2 local district community colleges, and CTE programs in over 160 school districts throughout the state.

Following communications with Julie Eddy, Manager of CTE Data & Research, it was determined that the state would benefit from an on-site consultation with MPR researchers. A two-day meeting was held September 20–21, 2007, with Dr. Steven Klein, Director of Preparation for College and Careers at MPR Associates, Inc., during which time technical assistance services were provided. Meeting discussions focused on reviewing system reporting capabilities and constraints, and considering state options for reporting on Perkins IV measures.

This paper summarizes proposed transition plan approaches and offers recommendations for structuring population definitions and measures to enhance the quality of Perkins IV data in Colorado.

POPULATION DEFINITIONS

To assist states in developing their Perkins IV accountability systems, in March 2007 OVAE issued nonregulatory guidance on defining CTE participant and concentrator populations. Subsequent information, provided at OVAE's June 2007 Data Quality Institute in Savannah, Georgia, offered strategies for converting student attainment of state-approved CTE standards or completion of CTE program area coursework into Perkins credits to identify CTE populations.¹

Colorado administrators consulted federal nonregulatory guidance in proposing its CTE populations, with state definitions for secondary and postsecondary participants, and secondary concentrators, closely paralleling OVAE's suggested approaches. Although the state should be able to report on all students who attain CTE concentrator status beginning in the 2008–09 program year, for the one-year transition period, the state is limited to reporting on students who

- (1) demonstrated attainment of all competencies identified in a district's Program Approval form, or who
- (2) achieved more than 50 percent of the identified competencies in a district's Program Approval form, but who were not expected to re-enroll in a program.

Until new data fields are incorporated into the VE-135 in 2008–09, a small subset of students—those who achieved more than 50 percent of the identified competencies, but who were expected to re-enroll in a program—are excluded from the state transition measures.

While CCCS will build capacity to report on secondary CTE concentrators over time, the state's definition for a postsecondary CTE concentrator differs from OVAE recommended guidelines.

Recommendation: Align the postsecondary concentrator population definition to parallel OVAE nonregulatory guidance

The existing state definition of a postsecondary CTE concentrator calls for limiting state reporting to students who have already completed a CTE program sequence.

Postsecondary CTE Concentrator: A concentrator/completer is a participant who has completed a CTE program that terminates in a certificate or degree within the reporting year.

Nonbinding federal guidance suggests that states structure their concentrator definition to include postsecondary or adult students who complete at least 12 academic or CTE credits within a single program area sequence—comprised of 12 or more academic and technical credits—as well as students who enroll in short-term CTE program sequences of less than 12 credit units.

As such, MPR recommends that Colorado consider the following definition for identifying a postsecondary CTE concentrator:

¹ The March 13, 2007 memo, *Student Definitions and Measurement Approaches for the Core Indicators of Performance Under Perkins IV*, may be accessed at: <http://www.ed.gov/policy/sectech/guid/cte/perkinsiv/studentdef.pdf>. The memo circulated at the Savannah conference may be downloaded at <http://www.edcountability.net/DQImaterials.cfm>.

Postsecondary CTE Concentrator: A concentrator is a student who (1) completes at least 50 percent of the academic or CTE credits identified within an approved CTE program sequence that terminates in the award of a certificate or degree, or who (2) completes a short-term CTE program sequence of less than 12 credit units that terminates in the award of an industry-recognized credential, certificate, or degree.

Federal nonregulatory guidance also suggests that states include in their concentrator definition information on students enrolling in additional credits, courses, hours, or units to meet program standards. In practice, this would mean that a student who completed 50 percent of the hours of instruction associated with a program sequence and who enrolled in a subsequent class should be classified as a CTE concentrator. Recognizing that it is often not possible for states to generate fall course enrollment data in time for use on the Consolidated Annual Report (CAR), which is submitted in December following the academic year, OVAE has suggested that it is willing to drop this requirement if states adopt the 50 percent threshold level for CTE concentration.

INDICATOR CONSTRUCTION AND DATA COLLECTION

State technical assistance meetings were used to review CCCS reporting approaches and to identify potential obstacles to collecting valid and reliable data. The following section describes the state's proposed approach for reporting Perkins IV data, as submitted to OVAE in its one-year transition plan, and offers recommendations to improve measure quality for five-year plan development.

1S1/1S2—Secondary Academic Skill Attainment

State reporting of secondary academic skill attainment is based on the number of CTE concentrators who have met the 'partially proficient,' 'proficient,' or 'advanced' level on the Colorado Student Achievement Program (CSAP). Although this approach differs slightly from OVAE-issued nonregulatory guidance, which stipulates only two proficiency levels, the CCCS measurement approach aligns with the state's federal Annual Measurable Objectives under the No Child Left Behind Act. Consequently, MPR recommends that the state continue using this three-level measure for Perkins reporting purposes.

To establish performance baselines, CCCS programmers analyzed CSAP assessment scores for all students enrolled in CTE coursework in the 2006 academic year. Analysis suggested that nearly two-thirds of students met one of the three state performance levels; as such, CCCS initially proposed setting state concentrator performance targets for years one and two of Perkins IV at 65 percent.

Recommendation—Use statewide CSAP data to set year two performance targets

Until state data on secondary CTE concentrator population is available, MPR recommends that CCCS policymakers consider aligning its 1S1 and 1S2 performance levels for year two (i.e., for

the 7/1/08–6/30/09 academic year) with statewide average CSAP performance levels recorded for all Colorado students. That is, year two performance targets should be set at 85 percent for reading/language arts and 60 percent for mathematics, thereby avoiding the appearance that the state has lower academic expectations of CTE concentrators. Once CTE concentrator data become available in 2008–09, the state may wish to renegotiate its Perkins measures to account for updated data.

2S1/IP1 Secondary and Postsecondary Technical Skill Attainment

Colorado is planning to assess the number of secondary CTE concentrators who completed their program and who met state-recognized CTE standards in CCCS-approved programs. At the postsecondary level, the state plans to report on CTE concentrators who completed an approved CTE program, as compared to all students enrolled in approved CTE programs in the reporting year. This approach, which would serve as a proxy for technical skill attainment, is identified by OVAE as the least desirable approach for assessing skill mastery.

Recommendation—Align technical skill attainment measures with OVAE guidance

Colorado’s proposed measure for secondary technical skill attainment calls for reporting the number of CTE completers who have met state-recognized CTE standards in CCCS-approved programs, divided by the number of CTE concentrators and completers who have these same standards. It is not clear how this construction will assist the state in determining the extent to which CTE concentrators who complete a program demonstrate skill mastery of program standards.

To improve data quality, MPR recommends that the state use the following construction for 2S1:

Numerator: Number of CTE concentrators who completed their CTE program and who passed state-approved technical skill assessments that are aligned with industry-recognized standards during the reporting year.

Denominator: Number of CTE concentrators who completed their CTE program and who took assessments during the reporting year.

Since the state presently does not have state CTE standards, CCCS will also need to initiate efforts to identify content standards within CTE cluster or program areas, or for pathways or specific occupations within a cluster area. The state will also need to create strategies for assessing student skill, which may range from adopting third-party or state-developed exams, to creating procedures for state approval of locally developed and administered assessments.

At the postsecondary level, MPR believes that CCCS has two options for structuring reporting. The first would be for the state to base reporting on program concentrators who completed an approved CTE program in the reporting year, as proposed in the state’s one-year transition plan. Since OVAE will permit states to use such proxy measures for a limited time, CCCS will need to

begin developing alternative strategies for measuring skill attainment.² A second option would be for the state to adopt third-party exams or to develop procedures for approving locally developed and administered assessments.

Recommendation—Create an approval process for locally developed assessments

To support states in identifying technical skill assessment systems, OVAE has developed nonregulatory guidance describing three approaches for measuring student skill mastery. The so-called *Gold Standard* encompasses (1) national skill assessments, developed by third-party agencies; (2) state or national credentialing or licensing exams, typically used to control entry into a profession; or (3) standardized statewide assessments, created by state administrators for local use.

The *Silver Standard* applies to state-approved, locally developed assessments, in which the state develops formal procedures for reviewing tests developed by secondary teachers or postsecondary faculty. The *Bronze Standard* applies to proxies of skill attainment, including the use of program completion and student grade point averages. See appendix A for a draft copy of the OVAE nonregulatory guidance.

Since Colorado has neither adopted CTE standards for secondary or postsecondary education, nor has any plans to develop a statewide assessment system, CCCS administrators will need to develop procedures for assessing student mastery of technical skills. One means of complying with federal reporting requirements would be for the state to establish a state approval process to rate locally developed assessments for their technical rigor, as well as their alignment to state or locally identified content standards.

Implementing this process would likely require that Colorado develop procedures for approving locally proposed assessments and test administration strategies. This could be incorporated into the state’s program approval process, for example requiring that local agencies provide evidence that they have consulted with state or national employers and industry associations to provide expert guidance and/or have a seated industry advisory board that has approved program standards and assessments.

It is beyond the scope of this technical assistance project to identify all of the steps that Colorado would follow to create a state approval process for locally generated assessments. However, the state would likely need to address the following types of issues:

1. *Assessment committee membership*—Should third-party representatives serve on a statewide assessment committee and, if so, from which sectors should membership draw (i.e., employers, unions, secondary and postsecondary CTE educators, state administrators)? Also, what type and level of expertise should members hold?
2. *Identification of CTE content standards*—Should statewide content standards be developed and, if so, to what level of skill specificity should learners be held at the

² Although OVAE has not yet set a time limit for using proxy measures of technical skill attainment, it is unlikely that states will be able to use program completion or GPA for more than the first two-to-three years of the Act.

secondary and postsecondary levels? How should national standards be integrated into local program design? How will local agencies justify their adoption of program standards and what criteria will be used to judge proposed standards? Is there a role for industry experts or consultants in the standards review process?

3. *Assessment types*—What forms of local assessments are acceptable? For example, should proposed assessments include a performance component or are paper-and-pencil exams sufficient? If written exams are administered, what types of questions are acceptable (i.e., multiple choice versus open response)? How will the validity and reliability of testing instruments be documented?
4. *Alignment of standards and assessments*—What procedures should local agencies follow to demonstrate that their assessments align with state or locally identified standards? Will agencies be required to submit an example of each assessment, or complete forms showing the types of assessments that have been reviewed, along with assurances that their assessments meet state-established criteria?
5. *Assessment administration and scoring*—What are acceptable approaches for administering exams? How is test security ensured? Are students given a time limit for tests or project-oriented work? Who will score assessments and what criteria and passing thresholds will be used to rate project work?

Establishing a standardized, auditable assessment review process can help ensure that local agencies are employing consistent testing methodologies that comply with federal intent, while maintaining local control over curriculum and assessment. Creation of an oversight committee that develops and polices assessment guidelines and establishes testing controls would also assure that all students are held to industry-recognized standards. This would presumably present less of an issue at the postsecondary level, where programs are subject to accreditation reviews to assess curricular relevance and delivery.

In addition to transitioning to state-approved, locally developed exams, OVAE has asked that states identify, in Part A, Section VI (Accountability and Evaluation) of its new Perkins IV State plan, the programs for which technical skill assessments exist, the percentage of CTE concentrators who took such assessments, and the state's plan and timeline for increasing program and student coverage in the future. Consequently, CCCS administrators will need to collect data on the number of secondary and postsecondary CTE concentrators assessed using industry-recognized or third-party exams (e.g., NOCTI, NIMS for metalworking) as part of its statewide data collection.

3S1—Secondary School Completion

Colorado is intending to report on the number of CTE concentrators and completers who, as of their fourth or greater high school year, have met locally defined requirements for a high school diploma in the reporting year.

Recommendation—Include GED and other state recognized approaches

Federal nonregulatory guidance suggests that states report on the number of CTE concentrators who earned a

- regular secondary school diploma;
- General Education Development (GED) credential as a state-recognized equivalent to a regular high school diploma (if offered by the state); or
- other state-recognized equivalent (including recognized alternative standards for individuals with disabilities).

To ensure that state measures parallel those used in other states, MPR recommends that CCCS administrators modify their definition to include concentrators who complete a high school education with different types of terminal diplomas. It may also be advisable for the state to restrict reporting to students who left secondary education during the reporting year, and net students who transferred out-of-state or who became deceased. This would mean that CCCS would report on youth who graduated as well as those who dropped out, prior to reaching their fourth year of schooling. Restricting reporting to individuals who left in the reporting year would also prevent double counting fifth year seniors, who otherwise would be reported in multiple years.

4S1—Student Graduation Rates

Colorado does not presently have the capacity, using the VE-135, to track all concentrators who meet the ESEA graduation rate defined by the state. The state is in the process of working with the Colorado Department of Education (CDE) to migrate appropriate data fields in the CDE student record system into the VE-135, and it is anticipated that CCCS will merge these new fields beginning with the 2008–09 academic year.

Recommendation—Adopt the statewide ESEA performance level for all students until such time that accurate data for CTE concentrators exist

To define a performance benchmark for this measure, CCCS programmers should seek to identify CTE concentrators who entered 9th grade in the 2003–04 school year and who were recorded as graduates as of the 2006–07 school year. Students who transferred out-of-state or who became deceased should be netted out of the calculation. Until the state is able to perform this calculation, MPR recommends that the state set its CTE concentrator performance target at 80 percent, the number used for its statewide No Child Left Behind graduation rate for the class of 2005.

Although the state is committed to improving student performance associated with this measure, several issues may affect state reporting. One issue is that the state presently has legislation pending that will redefine the state’s graduation rate definition. If this were to occur, and if this new definition changes the data fields required to report, then CCCS would need to reopen dialogue with CDE to identify and migrate new data fields. State data administrators are monitoring the development of language in the pending legislation, and, to the extent possible,

are working to ensure that fields corresponding to the new state definition are identified. However, it is difficult to predict how this state legislative effort will be resolved.

Further, changes to the state definition in the past have delayed federal AMO performance negotiations within CDE, which in turn, have delayed receipt of the data needed to assess CTE concentrator graduation rates. One additional complication is that the state has seated a new K–20 taskforce that is reviewing the elements contained within the state’s secondary and postsecondary data systems. It is possible that taskforce discussions could lead to sweeping changes to the state’s data systems, which could affect Perkins reporting. State data programmers should continue to monitor taskforce work to ensure the state can continue to collect quality data.

2P1—Credential, Certificate, or Diploma

Colorado plans to report for indicator 2P1 on the number of CTE concentrators who received or were eligible to receive an industry-recognized credential, certificate, or degree, and who left postsecondary education in the reporting year. The base for this measure would be the total CTE enrollment in approved CTE programs in the reporting year.

Recommendation—Base measurement on the number of CTE concentrators who left postsecondary education during the reporting year

The proposed CCCS measure construction would include all students enrolling in an approved CTE program, irrespective of whether they were eligible to leave postsecondary education in the reporting year. Since the number of students enrolling in CTE programs is not necessarily associated with the number of students completing,

MPR recommends that CCCS modify its denominator to comply with OVAE guidance. Specifically, the state should consider basing measurement on the number of CTE concentrators who left postsecondary education during the reporting year. Excluded would be students who were retained in their originating institution or who transferred to another 2-year or 4-year college or university (in-state or out-of-state) in the reporting year. This approach would enable the state to assess the extent to which students who leave postsecondary education are successful in obtaining a recognized institutional award.

3P1—Postsecondary Retention or Transfer

The state proposes assessing postsecondary retention or transfer of participants, concentrators, and completers who were enrolled in postsecondary education in the fall of the previous year, divided by the number of CTE participants who did not earn a certificate or degree in the previous reporting year.

Recommendation 1—Adopt OVAE nonregulatory guidance on student retention and transfer

Federal intent is to assess the extent to which postsecondary students who achieve concentrator status remain enrolled over time. To bound measurement, OVAE has recommended that states track students over one year, identifying concentrators in the fall of the previous reporting year

and assessing their status again in the fall of the current year. The suggested measure construction would consist of:

Numerator: Number of CTE concentrators who remained enrolled in their original postsecondary institution or transferred to another 2- or 4-year postsecondary institution during the reporting year and who were enrolled in postsecondary education in the fall of the previous reporting year

Denominator: Number of CTE concentrators who were enrolled in postsecondary education in the fall of the previous reporting year and who did not earn an industry-recognized credential, certificate, or degree in the previous reporting year.

MPR recommends that CCCS policymakers consider modifying their proposed one-year transition plan measure by removing participants and completers from the measurement population and basing measurement on identified students who either were identified as still enrolled in their originating institution or transferred to another 2-year or 4-year institution—in-state or out-of-state—as of the fall of the reporting year.

Recommendation 2—Conduct administrative record matching with the National Student Clearinghouse to track student transfer

The National Student Clearinghouse (NSC) maintains student enrollment and degree attainment data for 2,900 higher education institutions that account for over 91 percent of college students in the U.S. Data exist for public and private 2-year and 4-year colleges and universities, and most large trade, vocational, and proprietary schools.

In exchange for voluntarily submitting data on enrollment and degree completion, the Clearinghouse offers postsecondary agencies access to a variety of services. For example, to free staff from responding to information requests, higher education institutions may refer enrollment and degree verification requests from employers, credit grantors, and other commercial vendors to the Clearinghouse for fee-based processing. Students and alumni may also be referred for transcript copies, as well as banks and other agencies seeking to assess the enrollment status of financial aid students.

The Clearinghouse also offers StudentTracker, a fee-based service that provides up-to-date information on students' enrollment status and degree attainment in any institution included in its database. StudentTracker data can be used to address Perkins core indicators for secondary placement and postsecondary student completion, along with placement and retention in higher education or advanced training. And because longitudinal data exist for most institutions, state and institutional administrators can track students who enroll anywhere in the country or who transfer among institutions, including those who make lateral transitions that might otherwise be classified as stopouts. A more detailed description of these services can be found on the Clearinghouse website at: <http://www.studentclearinghouse.org>.

Although Clearinghouse data can play an important role in responding to Perkins accountability measures, longitudinal information contained within the repository can also provide useful information that extends beyond Perkins. For example, in addition to tracking CTE concentrators' college placement two quarters following high school graduation, Clearinghouse data can also be

used to assess all students' postsecondary persistence and time to graduation. This can help secondary educators gauge whether students who succeed in entering college have the skills needed to persist and complete their studies.

Matching Against Clearinghouse Records

Clearinghouse matches are performed using directory information, such as a student's name, high school, birth date, and/or graduation date, to generate a probabilistic match with Clearinghouse records. According to Clearinghouse staff, probabilistic matching usually returns a hit rate of between 60 and 70 percent. The Clearinghouse also complies with FERPA regulations to ensure that student rights governing education records are protected, and as such, the agency provides only for the release of unblocked directory information unless FERPA authorizes release without consent.

Clearinghouse queries are initiated either through batch file exchange, in which agencies submit an electronic file containing information on multiple students, or via a secure password protected website for individual student queries. To initiate batch file exchange, CCCS would exchange files with the Clearinghouse via a secure file transfer protocol site, encoding data in either an Excel or flat file format.

Once the matching process is completed, the Clearinghouse sends a report that contains an overview of match results and a detailed report containing individual student data. This batch file—returned in a comma-delineated file (.CSV format)—contains the following types of data:

- Institution name
- Institution location by state
- Institution type (i.e., less than 2-year, 2-year, or 4-year or higher institution)
- Institution affiliation (i.e., public or private)
- Attendance dates
- Attendance sequence (if multiple colleges attended, order in which attended)
- Enrollment status (i.e., full-time, half-time, less than half-time, leave of absence, withdrawn, deceased)
- Graduation status
- Graduation date
- Degree title
- Degree major

Matching Strategies

Participation in the Clearinghouse is voluntary, meaning that not all colleges or universities currently submit student enrollment or graduation data. A large number of postsecondary institutions in Colorado presently contribute core data to the Clearinghouse (a list of these schools can be found at: <http://www.studentclearinghouse.org/colleges/coreserv/default.htm>). Colleges that opt not to participate for cost or other reasons negatively affect state capacity to track students, because students who enroll in a noncontributing institution cannot be identified.

To assess CTE concentrator outcomes, state administrators would compile information on CTE concentrators sent to them by either high school or college administrators. The state would then send a single batch file to the Clearinghouse, which would attempt to match listed students against its national database. A file containing positive matches would be returned to state administrators, who would report this information for Perkins accountability purposes.

Since postsecondary colleges providing data to the Clearinghouse face reduced or no fees in accessing Clearinghouse data, CCCS may consider requiring each postsecondary institution to track and report on student outcomes when completing the VE-135 database. Alternatively, the state could choose to identify qualifying concentrators from the VE-135 database and conduct its own match against Clearinghouse records. Assuming the Clearinghouse were to charge its posted rate of \$0.54 per record submitted, the state would face a cost of \$540 per 1,000 records submitted.

5S1//4P1—Secondary and Postsecondary Placement

Colorado has proposed collecting placement data for secondary and postsecondary CTE concentrators completing a CTE program and graduating from high school or college as stipulated in the OVAE nonregulatory guidance. One exception is that the state plans to conduct follow-up on students who completed their education by June 30 of the previous reporting year, with data collection beginning in December of the second quarter following student exit.

Recommendation 1—Adopt OVAE nonregulatory guidance on student retention and transfer

MPR recommends that the state collect unduplicated counts of students enrolled in postsecondary education or advanced training (secondary concentrators), employed, enlisted in the military, or participating in apprenticeship programs (postsecondary concentrators) at any point in the second quarter following student exit. Specifically, data on students completing their education in the 2006–07 academic year would be collected between October 1, 2007 and December 31, 2007, with results reported on the December 2007 Consolidated Annual Report (CAR).

Pending OVAE guidance, MPR recommends that CCCS unduplicate placement using the following criteria:

- Classify completers as enrolled in postsecondary education or advanced training if at any point in the second quarter following program completion they are found to be either (A) enrolled in postsecondary education or advanced training alone, or (B) enrolled in postsecondary education or advanced training, and (1) employed, and/or (2) on active duty in the military, and/or (3) participating in an apprenticeship program.
- Classify completers as employed or retained in high skill, high wage, or high demand occupations or professions if at any point in the second quarter following program completion they are found to be (A) employed alone, or (B) employed and (1) on active duty in the military, and/or (2) participating in an apprenticeship program.

- Classify completers as active duty in the military if at any point in the second quarter they are found to be (A) on active duty in the military alone, or (B) on active duty in the military and participating in an apprenticeship program.
- Classify completers as participating in an apprenticeship program if at any point in the second quarter they are found to be in an apprenticeship program only.

Recommendation 2—Conduct administrative record matching with the National Student Clearinghouse to track student transfer

To date, Colorado has relied on local agencies to report placement data on program completers. To improve data quality, MPR recommends that the state conduct administrative record matching of VE-135 data with records contained in the state unemployment insurance (UI) wage record agency, the Federal Employment Data Exchange System (FEDES), as well as the National Student Clearinghouse. Performing administrative record matching with UI wage records and FEDES hinges on having students or their parents voluntarily disclose their Social Security Number (SSN) to school or institution officials. Colorado currently includes SSN as a data field in its VE-135 database, although the frequency and validity of existing numbers is unknown.

Collecting SSN Data

The federal government has provided legal guidance on states' use of SSNs for educational reporting purposes. For example, on January 30, 2003, the U.S. Department of Education updated its guidance on the interaction between the Family Educational Rights and Privacy Act (FERPA) and accountability requirements contained in the Carl D. Perkins Vocational and Technical Education Act of 1998. Specifically, the 2003 guidance clarified the manner in which state or local education authorities may disclose protected information contained within a student's educational record without prior written consent.³

In its 2003 guidance, the Department advised state education agencies that personally identifiable information within a student's secondary or postsecondary educational record must be protected from outside review. Under limited circumstances, for example in connection with an audit or evaluation of a federally-supported education program, protected student information, such as a student's SSN, may be disclosed without the prior written consent of the student or his or her parent. To ensure student privacy, protected information must, however, remain under the direct control of an authorized representative of the state agency during the audit or evaluation process.

Perhaps the most efficient approach to obtaining students' SSNs would be to ask for the number upon initial student enrollment in public school or college. Given that there are no FERPA provisions that prevent asking individuals to disclose their SSN, CCCS administrators may consider issuing guidance to school district and postsecondary administrators clarifying state collection procedures.

³ To date, the Department has not issued new guidance to cover the Perkins 2006 reauthorization, suggesting that the existing 2003 guidance continues to apply to the new legislation.

As an example of the type of guidance that may be provided, appendix B includes a copy of an informational memo originally sent to Virginia school districts in 1988, and subsequently updated in 2003 to account for changes in state law. Clarifying federal law and acceptable approaches for collecting SSNs, as done in Virginia, can help remove any confusion at the local level as to what is, and is not permitted, when collecting protected student information.

Since Perkins reporting requirements are unlikely to provide sufficient justification for changing state policy on SSN collection, CCCS administrators might consider working with secondary and postsecondary CTE staff and faculty to improve SSN collection for CTE concentrators. This could be accomplished by providing information at statewide technical assistance workshops, providing models for SSN disclosure forms, or by developing an informational booklet that can be distributed to educators and parents, summarizing the reasons for collecting a SSN and rules governing its use. If desired, the state could also develop a form that eligible students or their parents could sign to authorize prior written consent for the release of their SSN; however, since education agencies or institutions can disclose SSNs for Perkins reporting purposes without prior consent, this additional step may be unwarranted.

As a first step in determining the need for improved SSN collection, MPR suggests that CCCS analysts conduct a review of student records to determine the number of student files containing a SSN and to assess the accuracy of this data.

1. Conducting Unemployment Insurance (UI) Wage Record Matching

To ensure student privacy is protected, CCCS will need to delegate an employee or contractor to oversee the transfer and use of SSNs in students' files. This authorized state representative will be required to either conduct the computerized match at the state education agency or travel with CTE concentrators' SSNs to another facility to conduct or supervise the computer matching process.

To initiate UI wage record matching, CCCS administrators will need to establish a memorandum of understanding with the Colorado Department of Labor and Employment to stipulate the procedures for conducting UI wage record matching.⁴ Once an agreement is in place, CCCS analysts would identify CTE concentrators eligible for inclusion in the measure and create a file containing SSNs for these individuals. Once a sufficient period of time has passed (i.e., at least two quarters following completion), analysts would share this file with the state UI agency, which would conduct administrative matching against state UI wage record files to identify individuals placed in state employment.

2. Accessing the Federal Employment Data Exchange System

The federal data exchange system is a pilot initiative, funded through a grant to the state of Maryland by the U.S. Department of Labor, to conduct administrative record matches using state

⁴ An example of a memo used by the Florida Department of Education can be downloaded at: http://www.edcountability.net/downloads/AWI_Agreement.pdf.

and federal data. The system is intended to assist states in identifying individuals employed by federal agencies so that they can respond to performance-reporting requirements contained in federal programs. Since FEDES is funded using federal resources, there is no cost to states seeking to participate in the system.

The system functions as a secure information pass-through that allows states to access federal, civilian, and military employment records maintained by the Office of Personnel Management, the United States Postal Service, and the Department of Defense. Since records in these databases are not included in the nation's UI wage record system, states must either use FEDES or establish relationships with each federal agency to identify individuals in federal employment.

To access FEDES, CCCS will need to establish a signed data sharing agreement with the Maryland Department of Labor Licensing and Regulation, which would conduct administrative matching on its behalf.⁵ Once an agreement has been executed, the state representative would be placed on the FEDES mailing list, so that he or she would receive information and notices relating to FEDES participation.

To conduct matches, data analysts would submit student records for administrative matching once per quarter following the FEDES data-exchange cycle. Data transmission would occur using secure file transfer protocol (SFTP), with data sent to a secure, password protected web portal so that no other state would have access to state files.⁶ Records are matched using individuals' SSNs as the unique identifier. Each record also must include a state identifier and, if applicable, a discretionary program identifier, since a SSN may be identified within multiple states during a defined time period.

About a week following the file submission deadline, the Institute creates a combined state file for delivery to the federal Office of Personnel Management, the United States Postal Service, and the Department of Defense. Approximately two weeks later, these agencies return files containing matched records to the Institute. Institute staff creates a sub-file with each state's matched records, and announces a window of opportunity for states to perform a secure download.

This data transmission window opens one to two weeks after federal agencies provide matched records. Since the Institute is not a data warehouse, files are stored on the secure server only during the data-transfer window, after which they are destroyed. The total turnaround time from state submission of records to the return of matched records to each state is about one month. Matched data returned by federal agencies cover the eight most recent quarters, lagged three months.

Although states may submit a large number of CTE concentrator identifiers to the Institute, only data on matched records are returned. A great deal of detailed information is contained within matched records, with data elements varying among federal agencies. Appendix C lists the types of information provided for each record for which a match is generated.

⁵ To obtain a copy of the data sharing agreement or to inquire further about FEDES, state administrators should contact Janet Staveley at (410) 837-6552 (jstaveley@ubalt.edu).

⁶ SFTP is similar to FTP, but it encrypts both commands and data, preventing passwords and sensitive information from being transmitted in the clear over the Internet. Colorado would be provided a copy of the SFTP software by the Institute, along with instructions and technical assistance in its use. Alternatively the state could save data onto a password-protected CD, which could be sent via FedEx to the Institute.

6S1/6S2/5P1/5P2—Secondary and Postsecondary Nontraditional Participation and Completion

To assist states in identifying nontraditional occupations, the National Alliance for Partnerships in Equity has identified a list of occupations that were out of gender balance nationwide, based on 2006 Current Population Survey data. This list, which has been crosswalked to the 2000 Classification of Instructional Programs (CIP) codes at the 6-digit level, can be downloaded from OVAE’s Peer Collaborative Resource Network website (<http://www.edcountability.net/>).⁷

In keeping with prior guidance, OVAE has recommended that states identify secondary and postsecondary CTE programs and/or courses associated with nontraditional occupations once, at the outset of the new legislation. Once identified, states are to report on selected programs and/or coursework over the lifetime of the Act, irrespective of whether gender balances equalize over time. Holding the base of programs constant over time is intended to ensure that states can monitor trends to assess state progress in closing enrollment gaps.

Colorado has indicated that it will follow OVAE guidance on measure construction. That is, the numerator of each measure will encompass underrepresented students of either gender who participated in or completed a CTE program that prepares students for employment in a nontraditional occupation (i.e., females in male-dominated plus males in female-dominated occupations). The denominator will include all concentrators who participated in or completed a CTE program that prepares students for employment in a nontraditional occupation, irrespective of their gender (i.e., males and females within the subset of CTE programs). Data for the reporting year would be reported in the CAR report submitted in December of the same reporting year.

⁷ The CIP was developed by the U.S. Department of Education, National Center for Education Statistics to catalog educational program descriptions and titles at the secondary, postsecondary, and adult education levels. A CIP entry may include a 2-digit series that incorporates a summary of groups of instructional programs (e.g., #48 *Precision Production Trades*); a 4-digit series that includes an intermediate aggregation of instructional programs (e.g., #48.07 *Woodworkers*); and a 6-digit code corresponding to a single instructional program (e.g., #48.0702 *Furniture Designer and Maker*).

APPENDIX A:

TECHNICAL SKILL ASSESSMENT

NONREGULATORY GUIDANCE

*Proposed DRAFT Guidelines for GOLD, SILVER, and
BRONZE Designations for State Phase-in of Perkins IV
Core Indicators 1S2 and 1P1
Technical Skills Assessments*

**Version for Review by Technical Skills Study Group
August 31, 2007**

Background

Secondary and postsecondary student attainment of career and technical skill proficiencies, *including student achievement on technical assessments* that are aligned with industry-recognized standards, if available and appropriate, are the focus of core indicators 2S1 (Technical Skill Attainment) and 1P1 (Technical Skill Attainment). The OVAE March 13, 2007 Program Memorandum indicated that though a state may not have technical skill assessments aligned with industry standards in every CTE program area, states are still expected to identify in their Perkins State Plan

- those program areas for which a state has technical skill assessments;
- the estimated percentage of students who will be reported in the state's calculation of CTE concentrators who took assessments; and
- the state's timeframe for increasing the coverage of programs and students reported in these indicators to cover all CTE concentrators and all program areas in the future.

At the OVAE-sponsored Data Quality Initiative Institute (DQI), held May 18–19, 2007 in Savannah, Georgia, federal staff described three categories of assessments that will govern how states establish measurement approaches for these indicators—the Gold, Silver, and Bronze Standards.

The *Gold Standard* encompasses (1) *technical* skill assessments, developed by external, third-party agencies to assess national or state-identified standards (**e.g., nationally validated employer/industry and postsecondary cluster standards**); (2) national, state, or industry-developed credentialing or licensing exams, typically used to control entry into a profession; or (3) standardized statewide assessments of *technical* skills, created by state administrators for local agency use.

The *Silver Standard* applies to state-approved, locally developed assessments, in which the state develops formal procedures for reviewing tests developed by secondary teachers or postsecondary faculty.

The *Bronze Standard* applies to grade point average, program completion, and other non-assessment related indicators of student achievement.

Note, however, that OVAE will only permit states to use proxies of skill assessment for an interim period, after which states will be required to institute some form of technical skill assessment.

Gold, Silver, Bronze (GSB) Standards

The GSB classification system was presented at the DQI as a means of categorizing the range of different assessments that states are presently proposing to assess student technical skill attainment. A further elaboration of the GSB standards is needed, and this memo builds upon discussions at the DQI to review the different approaches states may propose in their five-year Perkins Plan and provides a timeline that states may follow in structuring their plan submission.

There are two related issues within the GSB system—industry-validated standards and valid and reliable assessments. Some states could have industry-validated standards in place without assessments. This would be progress toward the goal because one is a prerequisite for the other.

Technical Skill Attainment Approaches

Final Desired Approach—by the final year of a state’s five-year plan (2012–13).

Gold: Any external, third-party assessment that objectively measures student attainment of industry-recognized skills, appropriate to the educational level of CTE concentrators. Acceptable assessments may include:

- National/international credentialing or certification exams (e.g., ASE certification)
- State credentialing or licensing exam (e.g., cosmetology)
- Industry-developed exam for occupations/specialties (e.g., Certified Executive Chef)
- Third-party exam measuring technical skills (e.g., NOCTI)
- State-developed exam, tied to industry standards—either a series of end-of-course exams or a single end-of-program exam (e.g., including homegrown or VTECS model)
- Foundation-level exam developed by national industry groups (e.g., Health Care)
- State secondary exam, matched to postsecondary entry—but only if technical skills are measured

Interim Approaches—states may employ these approaches on an increasingly limited basis over the course of the five-year plan.

Silver: A state-approved, teacher/instructor-developed assessment that aligns with either state-established or industry-recognized standards (at the career cluster or pathway level) and that meets minimum state validity and reliability guidelines. Options may include:

- State-developed exam(s), not tied to industry standards
- Locally-developed, state-approved exams
- Teacher-administered, LEA-approved exams

Bronze: Any non-approved or non-assessment related indicator of technical skill attainment. Options may include:

- GPA
- Course completion
- Program completion
- Teacher-developed exams, not approved externally

OVAE will no longer accept Bronze level assessments following the phase-in period.

To assist states in developing their five-year state plan for Perkins, OVAE has provided the following framework to illustrate how a state may model an improvement plan to achieve the desired Gold Standard assessment over the lifetime of Perkins IV.

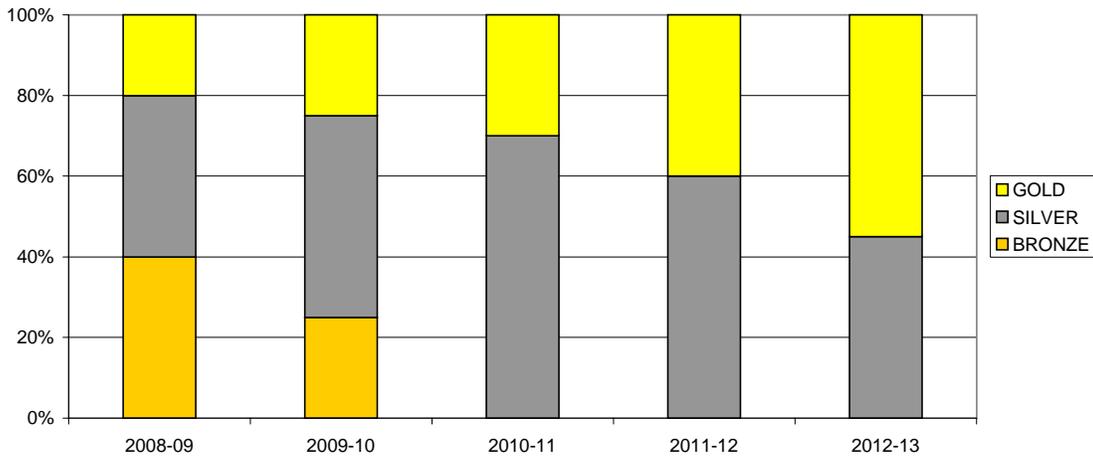
Technical Skill Assessment Phase-In

The March 13, 2007 Non-Regulatory Guidance to states on technical skill assessment contained the following note:

Note for Indicator 2S1/IP1: The Department recognizes that a state may not have technical skill assessments that are aligned with industry-recognized standards in every CTE program area and for every CTE concentrator. OVAE expects that each state will identify, in Part A, Section VI (Accountability and Evaluation) of its new Perkins IV State plan, the program areas for which the state has technical skill assessments, the estimated percentage of students who will be reported in the state's calculation of CTE concentrators who took assessments, and the state's plan and timeframe for increasing the coverage of programs and students reported in this indicator to cover all CTE concentrators and all program areas in the future.

In getting valid and reliable assessments aligned with industry-recognized standards, OVAE realizes that states will need to phase-in assessment adoption. OVAE also recognizes that not all states will be able to progress at the same rate, and that some will seek to progress within a single category (e.g., Silver vs. Gold), and that phase-in might differ for secondary and postsecondary programs, depending on the existing status of each within a state. One means of expressing state progress would be to provide an anticipated timeline for assessment phase-in, as illustrated in the following chart:

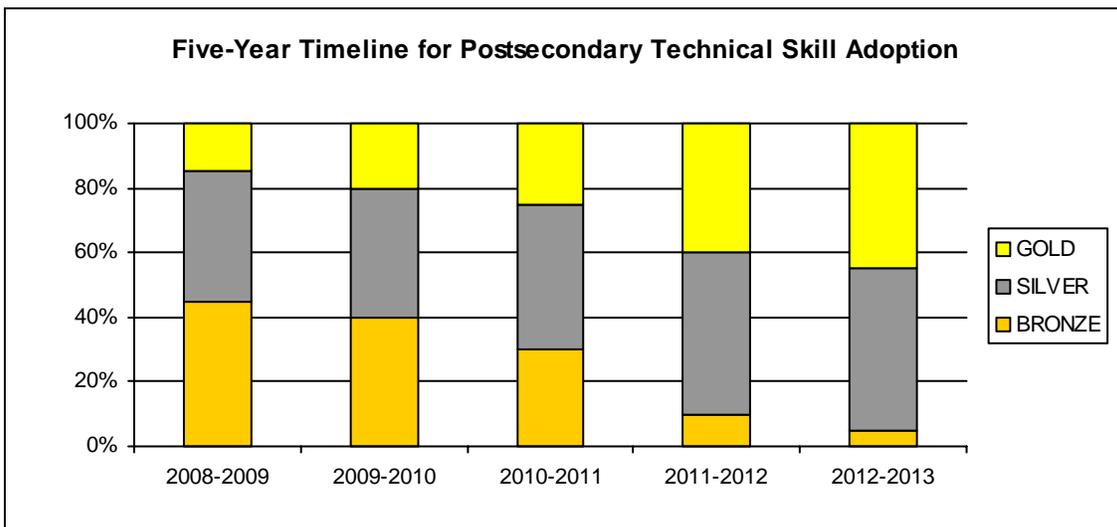
Five-Year Timeline for Secondary Technical Skill Assessments



This hypothetical example presents an improvement plan for a state that would embrace a combination of Gold, Silver, and Bronze approaches in 2008–09. Initially, 20 percent of CTE concentrators in the state would be tested using a Gold Standard approach, with the percentage of students increasing to 25 percent in the 2009–10 assessment year.

In the example, Bronze is no longer utilized starting with 2010–11 (the December 31, 2011 CAR submission). However, it may not be possible for states to totally eliminate the Bronze approach for all clusters and pathways, and at both the secondary and postsecondary levels.

A way of expressing state progress in these instances would be to provide an anticipated timeline for postsecondary assessment phase-in separately, as illustrated in the following chart:



As illustrated in the postsecondary example, a state would begin to transition away from using the Bronze Standard assessments by 2009–10, and continue to need to utilize progressively smaller percentages of Bronze Standard assessments until 2012–13, when 95% of the assessments will either be Gold or Silver, the final year of the Act.

Over time, as more assessments become available or as states continue to hold programs accountable for meeting state approval processes for locally developed programs, the state would begin to transition to the Gold and Silver Standards.

Ideally, as illustrated in the first example, a state would transition completely away from using Bronze Standard assessments by 2010–11, and toward adoption of the Gold Standard for a majority of assessments by 2012–13, the final year of the Act.

OVAE would expect Bronze to remain below 30% statewide (secondary and postsecondary considered together) in any single year starting with 2010–11 and less than 30% in any specific cluster/pathway. By 2012–13 it is expected that at least 55% of each of the State’s cluster/pathway programs (secondary and postsecondary considered together) will have met the Gold Standard.

Valid and Reliable

Valid and reliable assessments will remain a state assurance requirement as stated in the Act. (Section 113(b)(2)(A). Valid and reliable in this case means a state-approved assessment meeting APA guidelines for validity and reliability. The state or a state-recognized third party (e.g., state agency, school district, college, contractor) must review and approve student assessments of technical skill attainment developed by instructors as indicators of competency.

Similarities and Differences between 2S1/1P1 and 3S1/2P1

There is a distinct similarity between 2S1/1P1, which is 2S1 “Student attainment of career and technical skill proficiencies, **including student achievement on technical assessments**, that are aligned with industry-recognized standards, if available and appropriate.” (Section 113(b)(2)(A)(ii)) and 1P1 “Student attainment of challenging career and technical skill proficiencies, **including student achievement on technical assessments**, that are aligned with industry-recognized standards, if available and appropriate.” (Section 113(b)(2)(B)(i)) The key is that both 2S1 and 1P1 imply that the student attain the necessary technical skill proficiencies by or through the means of an assessment. That assessment may be part of a larger activity such as graduating or obtaining a diploma or an industry certification, but it is important to recognize the component both of these indicators are identifying is the assessment.

There is a similarity between 3S1/2P1, which is 3S1 is attainment of a diploma, GED, or a proficiency **credential, certificate, or degree** and 2P1 is attainment of an industry

recognized *credential, certificate, or degree*. These are both concerned with obtaining an outcome in the form of an award such as a credential, certificate, or degree.

The difference between 2S1/1P1 and 3S1/2P1 is that the assessment may be a prerequisite for a credential, certificate, or degree, they are not interchangeable. Therefore we cannot use 3S1/2P1 as a proxy for 2S1/1P1.

Industry Recognized Credential

An industry recognized credential is generally based upon two criteria: (1) a set of standards, knowledge, and skills that are necessary for one to know and be able to do in order to adequately function in that industry, and (2) an evaluation, usually administered by an educational facility, that certifies or bestows a credential on an individual as a result of demonstrating that knowledge and skill. The industry in cooperation with education identifies the set of skills, and upgrade of knowledge and skills that are necessary on an ongoing basis. The industry may administer and train the individual on its own without the assistance of an educational institution; however, it is rare that an educational institution will bestow a credential without industry input or current required knowledge and skills.

A Technical Skill

A technical skill includes the knowledge of coherent and rigorous career content aligned with challenging academic standards and relevant knowledge needed to prepare for further education and careers in current and emerging professions. These technical skills provide the student requisite proficiencies for industry-recognized credentials, certificates, or degrees.

Reporting

GSB will be reported in each states' CAR submission as an appendix to the narrative section. A matrix will be developed that states may want to use in reporting their GSB data. This will also assist other states with similar program efforts.

Suggested Annual Reporting Tables

To supplement and clarify narrative reporting in the CAR appendix, states may complete each of the following tables for their secondary and postsecondary CTE programs, a total of four tables from each state. States may additionally want to list programs by name and CIP code in the narrative.

Assessment Category	Designated Level of Assessment			Number of Programs with Assessment at this Level			Percent of Programs with Assessment at this Level		
	Gold	Silver	Bronze	Gold	Silver	Bronze	Gold	Silver	Bronze
National/International Credentialing or Certification Exam	X								
State Credentialing or Licensing Exam	X								
Industry-Developed Exam for Occupational Specialty	X								
Third-Party Exam Measuring Technical Skills	X								
State-Developed Exam(s), Tied to Industry Standards	X								
Foundation-level Exam, Developed by National Industry Group	X								
State Secondary Technical Exam, Matched to Postsecondary Entry	X								
TOTAL: GOLD STANDARD									
State-developed Exam(s), not Tied to Industry Standards		X							
Locally-developed, State-approved Exams		X							
Teacher-administered, LEA-approved Exams		X							
TOTAL: SILVER STANDARD									
Grade-Point-Average (GPA)			X						
Course Completion			X						
Program Completion			X						
Teacher-Developed Exam(s), not approved Externally			X						
TOTAL: BRONZE STANDARD									
TOTAL: ALL PROGRAMS									

Career Cluster	Number of Programs with Assessment at this Level			Number of Students Assessed at this Level		
	Gold	Silver	Bronze	Gold	Silver	Bronze
Agriculture, Food and Natural Resources						
Architecture and Construction						
Arts, Audio-Visual Technology and Communications						
Business, Management and Administration						
Education and Training						
Finance						
Government and Public Administration						
Health Science						
Hospitality and Tourism						
Human Services						
Information Technology						
Law, Public Safety, Corrections and Security						
Manufacturing						
Marketing, Sales and Service						
Science, Technology, Engineering and Mathematics						
Transportation, Distribution and Logistics						
TOTAL: ALL CAREER CLUSTERS						

APPENDIX B:
VIRGINIA GUIDANCE MEMOS

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF EDUCATION
P.O. BOX 2120
RICHMOND, VIRGINIA 23218-2120

SUPTS. MEMO NO. 92
May 30, 2003

INFORMATIONAL

TO: Division Superintendents

FROM: Jo Lynne DeMary
Superintendent of Public Instruction

SUBJECT: Use of Social Security Numbers for School
Enrollment

The purpose of this memorandum is to notify school divisions of a change in the requirement that parents provide school divisions with a social security number for each student at the time of enrollment in school. During the 2003 General Assembly, House Bill 1716 was passed amending § 22.1-260 of the Code of Virginia. This section of the Code, as amended, continues to require each student to present a federal social security number within 90 days of his or her enrollment and to require the Board of Education to promulgate guidelines for determining which students are eligible to obtain social security numbers. The following change was made, however, regarding students whose parents are unable or unwilling to provide a social security number for them:

In any case in which a student is ineligible, pursuant to these guidelines, to obtain a social security number or the parent is unwilling to present such number, the superintendent or his designee may assign another identifying number to the student or waive this requirement.

The Board of Education provided school divisions with the *Guidelines for Administering the Requirement for Public School Students to Obtain a Social Security Number* on June 15, 1988, via Supts. Memo No. 125 INFORMATIONAL (attached). These guidelines permit a division superintendent to waive the social security number requirement and assign a student an alternative number for identification under certain circumstances including the following:

- a student, along with his parents, by reason of bona fide religious training or belief, is conscientiously opposed to having a federal social security number;

- the student's application for a social security number would require disclosure of his illegal immigration status to a federal agency; and
- the student is a member of a non-immigrant family that is legally temporarily living in the United States, such as families whose members are employed in embassies or in other international organizations.

The 2003 amendment to § 22.1-260 of the Code now provides that the requirement may be waived or another identifying number be assigned in instances where the student is ineligible to receive a social security number or the parent is unwilling to present a social security number for the student.

There are additional requirements that govern the requests for social security numbers for students from parents. No child may be excluded from school for failure to provide a social security number. Section 7 of the Privacy Act (found at 5 U.S.C. § 522a note) requires that no person be denied a right, benefit or privilege provided by law because of his refusal to disclose his social security number. This law also requires agencies that request social security numbers to inform the individual whether disclosure is mandatory or voluntary, by what statutory authority the number is requested, and what uses will be made of the number. Finally, section 2.2-3808 of the Code of Virginia makes it unlawful for any agency to require an individual to disclose or furnish his or her social security number "not previously disclosed or furnished, for any purpose in connection with any activity, or to refuse any service privilege or right to an individual wholly or partly because the individual does not disclose or furnish such number, unless the disclosure or furnishing of such number is specifically required by state or federal law."

If you have questions, please contact Cynthia A. Cave, director of policy, at (804) 371-0558 or at ccave@pen.k12.va.us.

JLD/MJP/cb

Attachment

<http://www.pen.k12.va.us/VDOE/suptsmemos/2003/inf092a.pdf>

APPENDIX C:

**FEDERAL EMPLOYMENT DATA EXCHANGE
SYSTEM DATA ELEMENTS**

Data Elements included in the FEDES Record Match

I. Office of Personnel Management

- Social Security Number
- Agency of employment
- Occupation code/name
- Pay plan
- Grade
- Adjusted basic pay
- Basic pay
- Total pay
- State of employment
- Work schedule code
- Begin date
- End date

II. United States Postal Service

- Social Security Number
- Location of postal employment (city, state, zip code, zip-4)
- Occupation title
- Pay grade
- Base rate of pay (annual salary, salary rate code)
- Date entered on duty

III. United States Department of Defense

- Social Security Number
- Flag identifying whether record is Active Duty, Civilian file, or no match found

Active Duty:

- Last Name
- First Name
- Middle Name
- Suffix or Cadence
- Date of Birth
- Uniformed Service Pay Grade Code
- Taxable Wages
- Primary DOD Occupation Code
- Primary Service Occupation Code
- Duty DOD Occupation Code
- Duty Service Occupation Code
- Secondary DOD Occupation Code
- Secondary Service Occupation Code
- Accession Training Service Code
- Service Branch Classification Code
- Duty Unit Location Country Code
- Duty Unit Location (State Code)
- Duty Unit Location (US ZIP Code)
- Active Federal Military Service Years
- Uniformed Service Initial Entry Date
- Enlisted Active Service Agreement
Begin Calendar Date
- Active Military Service Base Calendar Date
- Transaction Effective Calendar Date
- Enlisted Active Service Projected End
Calendar Date (ETS of Minimum Service)

Civilian:

- Service (Agency)
- Bureau
- Pay Plan
- Rank or GS rating
- Occupational Series
- Duty Location – Country
- Duty Location – State
- Separation Date

