# K-12 Data Feasibility Study Report

## Report to the Legislature

***Dr. Terry Bergeson***
State Superintendent of
Public Instruction

January 2009

Office of Superintendent of Public Instruction
Old Capitol Building
P.O. Box 47200
Olympia, WA 98504-7200

For more information about the contents
of this document, please contact:
Robin Munson, OSPI
E-mail: Robin.Munson@k12.wa.us
Phone: (360) 725.6346

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# K-12 Data Feasibility Study Report

Prepared by:
Dr. Joe Willhoft, Assistant Superintendent, Assessment and Student Information
Dr. Robin Munson, Director of Student Information
Peter Tamayo, Chief Information Officer

**Assessment and Student Information**
**Office of Superintendent of Public Instruction**
**Dr. Joe Willhoft, Assistant Superintendent Assessment and Student Information**

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**Dr. Terry Bergeson**
Superintendent of Public Instruction

**Catherine Davidson, Ed.D.**
Chief of Staff

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**December 2008**

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# K-12 Data Feasibility Study Report

## Executive Summary

The Office of Superintendent of Public Instruction (OSPI) recently completed the legislatively mandated Feasibility Study as required in SB 5843 (2007). OSPI has fulfilled the required deliverables as outlined in RCW 28A.320:

1. Collect teacher to course data (i.e., who is teaching what) using the teacher certification numbers and student course enrollments using the state student identification numbers.

   Districts have submitted first semester teacher to course data. The data collection requirement is to provide a point in time snapshot of all students' course schedules, and for each course provide the teacher's certification number. OSPI has developed an initial Teacher Information Summary report that merges certification information with current teaching responsibilities for individual teachers (sample reports can be found on pages 39-42.)

2. Coordinate a diverse workgroup to consider additional data elements to collect from all districts.

   A workgroup with the required representation was convened and had five three-hour meetings. There are 33 members of the workgroup, and an additional ten OSPI staff members supporting the workgroup. Data elements beyond those currently collected and those planned for the new Comprehensive Education Data and Research System (CEDARS) were identified by the Feasibility Study workgroup. The additional elements included:

   - Standardized state course codes
   - Expanded racial sub-groups
   - Teacher grade and content assignments
   - Teacher program and activity codes
   - Educator credits, schools, degrees, major, and routes to certification

3. Pilot the collection of additional elements in at least two school districts, one with more than 20,000 students and one with less than 2,000.

   Two districts piloted the additional data elements required for CEDARS and incorporated standardized state course codes for their mathematics courses into their processes and systems. The CEDARS submission includes teacher grade level and content assignments and teacher certification numbers, which allows OSPI to link to the newly integrated teacher certification data systems to document teacher program and activity codes and educator credits, schools, degrees, major, and routes to certification.

Everett School District is the pilot district representing the large districts, with 18,935 students, and Raymond School District representing the small districts, with 536 students. While Everett does not quite meet the 20,000 student threshold, they were already participating in CEDARS and we felt they are representative of large districts.

4. Submit a report on the feasibility of the expanded data collection.

   The Feasibility Study has confirmed that additional teacher, course and student data can be collected, integrated, and reported by OSPI through CEDARS. Without much more required of districts than already mandated by the implementation of CEDARS in 2009-10 and by leveraging the data that OSPI is already collecting, OSPI will have access to student and teacher demographics, course schedules, grade history, and certification information. This will allow OSPI to:

   a. answer policy and evaluation questions heretofore not able to be answered;
   b. consolidate redundant reporting requirements, thus reducing the data burden on school districts;
   c. provide comparative data back to school districts; and
   d. provide districts faster access to data assets primarily controlled, maintained and made accessible by the state (such as WASL scores and state course codes for students transferring to a school district).

As part of the Feasibility Study, OSPI has also developed a plan for implementing state course codes by the end of 2009-10 school year, and for expanding ethnicity-race codes to include racial subgroups by the beginning of the 2010-11 school year.

**Recommendations**

1. Collect racial subgroup data using the established University of Washington (UW) subgroup categories for Hispanic/Latino, Asian American and Native Hawaiian/Pacific Islander students, and to use 31 subgroups for American Indian/Native Alaskan students (28 federally-recognized Washington tribes, "Other Washington tribe", "Native Alaskan tribe", and "Other American Indian tribe"). We recommend that there be no subgroup categories for African American/Black or White students.
2. To accommodate students who identify with more than one subgroup within a single federal category, we recommend adding a data value within the subgroups such as: "Two or more groups of Asian Americans."
3. Require districts to report expanded subgroups to the state, beginning in the 2010-11 school year.
4. Implement state standardized course code reporting using the National Center on Education Statistics (NCES) coding scheme by the following dates:

| | |
|---|---|
| Math | November 2009 |
| Science | November 2009 |
| English/Language Arts | March 2010 |
| Foreign Language | March 2010 |
| Social Studies | March 2010 |
| Occupational Ed /CTE | May 2010 |
| Health & Physical Ed | May 2010 |
| All High School courses | May 2010 |

5. Continue the e-Certification project.
6. Incorporate all teacher databases into the CEDARS warehouse.
7. Build new reports and queries based on stakeholder needs.

# K-12 Data Feasibility Study Report

## Legislative Creation of Feasibility Study

SB 5843 was signed into law July 22, 2007. RCW 28A.320 called on OSPI to accomplish four tasks:

1. Collect teacher to course data (i.e., who is teaching what) using the teacher certification numbers and student course enrollments using the state student identification numbers;
2. Coordinate a diverse workgroup to consider additional data elements to collect from all districts;
3. Pilot the collection of additional elements in at least two school districts; and
4. Submit a report in November 2008 on the feasibility of the expanded data collection.

Legislative findings in the bill included:

- A need for reliable data on student progress, characteristics of students and schools, teacher qualifications and mobility for accountability purposes.
- A commitment that educational data should be widely available while protecting the privacy of individuals, as provided by Family Educational Rights and Privacy Act (FERPA) and state law.
- An understanding that districts and OSPI need robust and compatible data systems and programs, and to reduce the reporting burden on districts, OSPI should reduce the inefficiencies caused by the lack of connectivity and redundant data entry and reporting requirements.
- A belief that schools and districts should be supported in the management of their educational data and have user friendly programs and reports that can be used by teachers and administrators to improve instruction.

Two sections of SB 5843 specifically relate to the feasibility study:

> NEW SECTION. **Sec. 4.** A new section is added to chapter 28A.320 RCW to read as follows:
> No later than the beginning of the 2008-09 school year and thereafter, each school district shall collect and electronically submit to the office of the superintendent of public instruction, in a format and according to a schedule prescribed by the office, the following data for each class or course offered in each school:
> 1) The certification number or other unique identifier associated with the teacher's certificate for each teacher assigned to teach the class or course, including reassignments that may occur during the school year; and
> 2) The statewide student identifier for each student enrolled in or being provided services through the class or course.

NEW SECTION. **Sec. 6.**

1) To the extent funds are appropriated for this purpose, the office of the superintendent of public instruction shall conduct a feasibility study on expanding the longitudinal student data system beyond the elements currently collected and those required under section 4 of this act.
2) The office of the superintendent of public instruction, in consultation with the work group established under subsection (5) of this section, shall identify a preliminary set of additional data elements whose collection shall be field tested on a pilot basis in at least two school districts, with at least one with over twenty thousand in full-time equivalent enrollment and at least one with less than two thousand in full-time equivalent enrollment. Among the data elements to be field tested shall be course codes for a limited set of core high school mathematics courses, based on the classification of secondary school courses by the national center for education statistics.
3) Additional topics addressed by the feasibility study shall include, but are not limited to:
    a. Detailed estimates on the cost of the development and implementation of the expanded data system;
    b. A final list of specific data elements that are necessary to allow effective and efficient research on an individual school, district, and statewide basis, and of those data elements, identification of what data is currently reported by schools and school districts and what is not reported;
    c. An implementation plan for consistent coding of secondary courses in subjects other than mathematics that is based on a national classification system;
    d. A phased-in implementation of a comprehensive data system with school-level financial, student, teacher, and community variables consistent with recommendations of the joint legislative audit and review committee; and
    e. The staffing and related impacts on schools and school districts from the collection of the recommended data elements and consideration of ways to reduce duplicate reporting of data.
4) By November 1, 2008, the office of the superintendent of public instruction shall provide a final report on the results of the feasibility study, including the results from the field tests, to the appropriate policy and fiscal committees of the legislature.
5) To assist in conducting the feasibility study and field tests and in carrying out the responsibilities assigned under section 5 of this act, the office of the superintendent of public instruction shall convene a work group comprised of representatives of the following agencies and organizations:
    - The education data center established under section 3 of this act,
    - the Washington State Institute for Public Policy,
    - the Professional Educator Standards Board,
    - the State Board of Education,
    - the Joint Legislative Audit and Review Committee,

- the Center for Analysis of Longitudinal Data in Education Research,
- other research organizations as appropriate,
- school districts of varying sizes and
- geographic locations,
- educational service districts,
- the Washington School Information Processing Cooperative,
- at least one additional school information system vendor,
- the Association of Washington school principals,
- the Washington Association of School Administrators,
- the Washington Education Association,
- the Washington Association of School Business Officials,
- the Washington Association of Colleges for Teacher Education,
- and the Washington State School Directors' Association.

Given this legislation, the Feasibility Study deliverables can be summarized as:

1. Collect teacher to course data (i.e., who is teaching what) using the teacher certification numbers and student course enrollments using the state student identification numbers.
2. Coordinate a diverse workgroup to consider additional data elements to collect from all districts.
3. Pilot the collection of additional elements in at least two school districts, one with more than 20,000 students and one with less than 2,000.
4. Submit a report in November 2008 on the feasibility of the expanded data collection.
    a. Include standard course codes for high school mathematics courses using NCES classification of secondary school courses in the list of additional data elements; and develop an implementation plan for expanding standard course codes for other subjects using NCES coding.
    b. Develop a final list of specific data elements that are necessary to allow effective and efficient research on an individual school, district, and statewide basis, and of those data elements, identification of what data is currently reported by schools and school districts and what is not reported.
    c. Develop a phased-in implementation plan for a comprehensive data system with school level financial, student, teacher, and community variables consistent with Joint Legislative Audit and Review Committee (JLARC) recommendations.
    e. Describe staffing, cost and related impact of the development and implementation of the expanded data system.
    f. Consider ways to reduce duplicate reporting.

In addition to establishing the Feasibility Study, SB 5843 also:

- Authorized OSPI to establish a longitudinal data system (CEDARS) to better aid research.

- Established OFM's Education Research and Data Center (ERDC) to conduct collaborative analyses on P-20 education.
- Requested school data system standards – RCW 28A.300 calls for standards on date validation; code validation; decimal and integer validation; required field validation as defined by State and federal requirements; and ethnic categories within racial subgroups.
- Directed OSPI to establish data collection guidelines for racial sub-groups within ethnic categories.
- Emphasized FERPA and relevant State laws to safeguard personally identifiable student data.

## OSPI's Implementation of Feasibility Study

OSPI's implementation of the Feasibility Study began with establishment of the Feasibility Workgroup. Committee members were identified from a broad array of organizations and perspectives. During the first couple of the workgroup's meetings, one representative of each entity was designated by that entity as the voting member in case consensus could not be reached by the entire workgroup. The membership list below denotes the designated voting member with an *, as well as the other workgroup participants.

| Feasibility Workgroup | |
|---|---|
| **MEMBERS** | **ORGANIZATION** |
| Cathy Davidson* | OSPI |
| Irv Lefberg* | Education Research and Data Center (OFM) |
| Carol Jenner | Education Research and Data Center (OFM) |
| Deb Came | Education Research and Data Center (OFM) |
| Annie Pennucci* | Washington State Institute of Public Policy |
| Wade Cole | Washington State Institute of Public Policy |
| Nasue Nishida* | PSESB |
| Edie Harding* | State Board of Education |
| Evelyn Hawkins | State Board of Education |
| Nina Oman | Joint legislative Audit and Review Committee |
| Michael Mann | LEAP |
| Tom Jensen | LEAP |
| Joe Egan* (replaced by Kate Verville) | Dept of Early Learning |
| Mike Ricchio, Sr* | Dept of Information Services |
| Newel Rice* | Everett School District (large district) |
| Linda Holtorf | Everett School District |
| Allen Miedema* | Northshore School District (medium district) |
| Althea Clark* | Tukwila School District & WASBO (small district) |
| Todd E. Johnson* | ESD 113 |
| Marty Daybell* | Washington School Information Processing Cooperative |
| Kathy Stuehrenberg | Washington School Information Processing Cooperative |
| Val Nelson* | Val Nelson Associates, SIS Vendor |
| Paul Rosier* | Washington Association School Administrators |
| Mitch Denning | Washington Association School Administrators |
| Charlene Milota* | Washington Association School Principals |

| Feasibility Workgroup | |
|---|---|
| **MEMBERS** | **ORGANIZATION** |
| Martharose Laffey* | Washington State School Directors Association |
| Marlyn Keating* | Washington Association of School Business Officials |
| Kris Van Gorkam | Washington Association of School Business Officials |
| Frank Kline* | Washington Association of Colleges for Teacher Education |
| Marge Plecki | Washington Association of Colleges for Teacher Education |
| Dan Goldhaber* | Center for Analysis of Longitudinal Data (UW) |
| Jeannie Harmon* | Center for Strengthening the Teaching Profession |
| Armand Tiberio* | Washington Education Association |
| Joe Willhoft | OSPI |
| Peter Tamayo | OSPI |
| Corrine McGuigan | OSPI |
| Janell Newman | OSPI |
| Robin Munson | OSPI |
| Corina McCleary (replaced by Tim Anderson) | OSPI |
| Calvin Brodie | OSPI |
| Mary Jo Johnson | OSPI |
| Brian Jeffries | OSPI |
| Sheri Dunster | OSPI |

## Workgroup Activities

### Meetings

The workgroup met five times: September 27 and November 6, 2007; and January 8, March 18 and October 2, 2008. The meetings were facilitated by the workgroup co-chairs, Joe Willhoft, Assistant Superintendent for Assessment and Student Information, Corrine McGuigan, Assistant Superintendent for Research and Educator Development, and Peter Tamayo, Chief Information Officer.

The main topics for each meeting were:

**Sept 27, 2007:** Review legislation and workgroup scope; context of OSPI data collection; initial brainstorm of additional data elements (see Appendix A).

**Nov 6, 2007:** Review of project deliverables; JLARC report overview; revisit additional data elements.

**Jan 8, 2008:** Prioritize additional data elements (see Appendix B).

**March 18, 2008:** Finalize additional data elements; status of teacher data collection; discussion of racial sub-groups; Education Research and Data Center update.

**Oct 2, 2008:** Review draft report; update on status of ".175" data submissions (i.e., teacher and student schedule data required in RCW 28A.320.175); discussion of reports desired from newly integrated teacher, course, and student data.

### Background readings

The following documents were provided to the workgroup as background reading for the committees work:

- K-12 Data Study Report; Joint Legislative Audit and Review Committee (February 2007)
- Data Dilemma in Washington: No Way to Know; Center for Strengthening the Teaching Profession and Professional education Standards Board
- Making Connections for Youth in Washington State, Dan Goldhaber (February 2008)

### Context of OSPI's Current and Planned Data Collection

To be able to identify the legislatively requested "additional data elements," it was important for the workgroup (and will be important for readers of this report) to have an understanding of the context of OSPI's current and planned data collection systems. The evolution from individual program reports of summary information submitted prior to the current CSRS to CEDARS that will be operational in 2009-10 shows slow but steady

progress toward meeting the legislative and stakeholder needs of longitudinal and interconnected data about Washington's students, teachers, and schools.

The e-Certification system, ".175" data collection, and the Education Research and Data Center at OFM are part of this evolution, which is summarized below. Figure 1 depicts the major milestones of the various data collections, culminating in CEDARS.

**History of Data Collection (Prior to 2002)**:

- Student data collected through P223 aggregate enrollment information and S275 individual staffing information provide basis for funding model.
- P210 and P105 submissions collected enrollment status data for state & federal enrollment reporting requirements.
- Special Education Data: (December 1 Count) aggregate student level data & broken out by subgroups. Not individualized and could not answer questions such as demographic, special education and bilingual education.

**No Child Left Behind (2002):** Prompted change by requiring state to monitor and report student outcomes on state assessment and related measures (unexcused absence and graduation rates):

- Required states to collect detailed data to track students over time and to obtain detailed demographic information for sub-group monitoring.
- Required states to determine teacher qualifications and denote highly qualified teachers. (Beginning with the 2002-03 school year)
- Required states to analyze teacher qualification data in each school to identify equitable distribution of teachers with comparable qualifications between high-poverty/high-minority and low-poverty/low-minority schools – at the district level and also for the state. (Beginning with the 2002-03 school year)

**Core Student Records System (2002-2009):**

- CSRS V1 2001-2002 - developed State Student ID (SSID) to track students across State and collect basic demographic data.
- May 2003 - all districts submitting SSIDs through monthly CSRS reporting.
- CSRS V2 2004: monthly collection of data with detailed, student information.

**Comprehensive Education Data and Research System (2006-2009 development and 2009-10 statewide implementation)**:

- 2006-07 and 2007-08
  - Designed a comprehensive data warehouse for student, course, teacher, and outcome data.
  - Established district stakeholder group to pilot data collection and advise on district interfaces, user reports, etc.
- 2008-09
  - Interim implementation of one portion of CEDARS (student and teacher schedule information, with teacher certification numbers and

student identification numbers). RCW 28A.320.175 (nicknamed ".175") required that all districts report minimal student, teacher and course information by fall 2008.

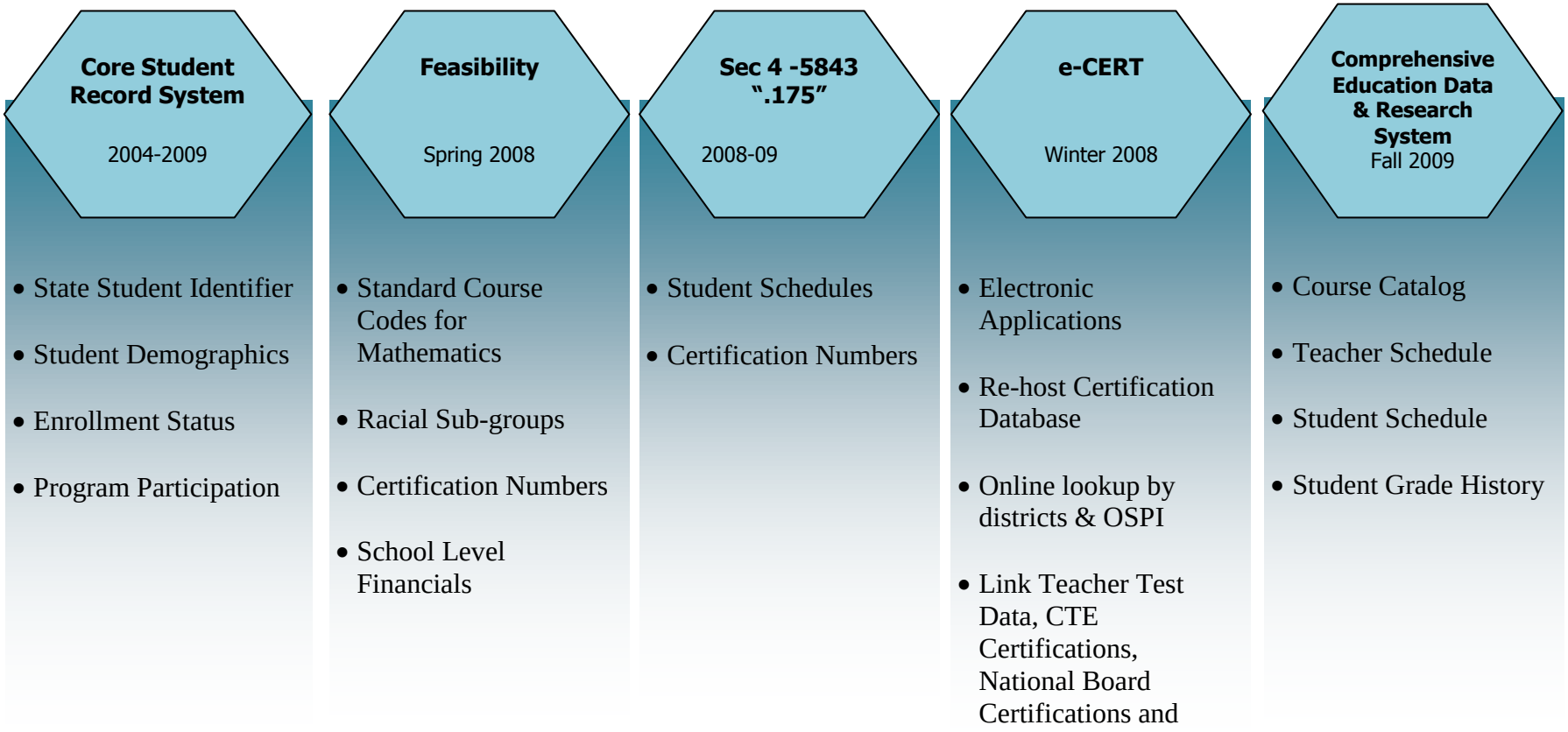
- 2009-10
  - State-wide implementation of CEDARS data collection to replace CSRS and .175 data submissions.

**Certification Data (December 2008)**:

- OSPI will introduce a re-hosted Certification system. That system has been on a legacy mainframe system and is being moved to a more modern SQL database data architecture.
- Other databases with teacher information such as National Board Certification, Career and Technical Education certification and teacher test data will also be linked and universally searchable by districts. The database architecture is the same as CSRS. ".175" data collection introduces the requirement that districts report teacher certification numbers which allows CSRS to "join" with the certification database. Having common data fields in a common database language allows OSPI to analyze and summarize student, teacher and course data in ways never before possible.
- Additional upgrades to the certification system are planned but dependent on legislative budget approval. These are described later in this report.

Figure 1.

# Student, Teacher and Course Data Collections History



**Discussion and Identification of Additional Elements:**

Identification of data elements OSPI should collect, on top of what is already being collected and is planned to be collected, was at the heart of the Feasibility workgroup's assignment from the legislature. The workgroup approached this in four steps: 1. Brainstorming; 2. Separating already collected, planned, and new; 3. Prioritizing; and, 4. Final selections. From the brainstorming discussion at the first meeting in September 2007, the group categorized the data elements into four categories (Student data, Educator data, Course Data, and Financial data). For each of these categories of data the workgroup identified the data elements that were important to be considered for future incorporation into the CEDARS or other data collection processes. Where appropriate, two pilot districts were then identified to provide insight into the feasibility of collecting those elements.

See Appendix B for a table showing the prioritization of the additional data elements.

## Pilot Sites

The legislation creating the feasibility workgroup requested that the collection of additional data elements be piloted in two school districts, one with more than 20,000 students, and one with fewer than 2,000 students. Initially Everett School District was targeted as the district with more than 20,000 students and Nine Mile Falls School District was selected as the district with fewer than 2,000 students. Unfortunately, Nine Mile Falls was unable to meet our need for K-12 data. Therefore, Raymond School District was asked to be a pilot district.

**Raymond**

October 2007 Enrollment = 536

Classroom Teachers = 43

Student Information System = Washington School Information Processing Cooperative (WSIPC-Skyward)

**Everett**

October 2007 Enrollment = 18,935

Classroom Teachers = 972

Student Information System = Pentamation

Other CEDARS pilots: Several additional school districts serve as pilot districts for the CEDARS project. Their experience in capturing teacher certification numbers, student and teacher course information has also been considered in this endeavor. The additional CEDARS pilot districts already submitting data are Aberdeen, Auburn, Lake Washington, Mukilteo, and Northshore.

Because so many of the new data elements were already included in the CEDARS data collection, and because both pilots were already preparing to submit CEDARS data in 2008-09, the pilot districts were told that participating in the feasibility study would necessitate only a couple of additional tasks. Our requests of the pilot districts were to:

1. Provide a crosswalk document between the district course codes for high school math courses and the new state course codes, which are based on the National Center for Educational Statistics (NCES) coding scheme. We will provide your math curriculum staff the list of state course codes and their descriptions; someone in your district will need to assign a state course code to each course (you will of course continue to use your own course codes, but a state course code will also be reported).

2. Submit teacher certification numbers for all teachers (K-12), and work with OSPI staff in the Certification and Highly Qualified Teacher areas to link your teacher data to various teacher data systems at OSPI (National Board Certification, e-Certification, teacher testing, etc.).

3. Help us think about the implications of collecting race/ethnicity data at a racial subgroup level. Some legislators want OSPI to be able to disaggregate data by racial subgroups (e.g., Guamanian and Samoan and Hawaiian, etc., rather than the current category of Native Hawaiian/Pacific Islander; or Puyallup and Nisqually and Tulalip, etc., rather than the current category of Native American). We need a district's perspective on what it would cost and entail to implement the finer grained categories into your data collection and storage and reporting, but do not need you to try to collect anything different for the purpose of this study.

## STUDENT DATA

**Student data elements currently collected through CSRS**:

- State student identifier
- District identifier
- Name
- Ethnicity
- Gender
- Birthdate
- Social Security number (optional)
- Grade level
- School and district of enrollment
- Enrollment and withdrawal dates for district and school
- Primary language
- Language spoken at home
- Expected graduation year
- Cumulative grade point average (GPA)
- Homeless status
- Free/reduced meal eligibility
- ELL program participation
- Migrant program participation
- Special education program participation
- Disability category
- Least restricted environment
- Highly capable program participation
- Title I and LAP program participation
- Career and Technical Education flags (Tech Prep completer, Vocational Education completer, Industry certification status)

**New data elements already planned to be collected through CEDARS**:

- Federal race and ethnicity codes (i.e., Hispanic/Non-Hispanic, then racial groups of Asian, Native Hawaiian/Pacific Islander, Caucasian, Alaskan Native/Native American, Black/African American, or Multi-racial)
- Birth country
- Graduation requirements year (i.e., which set of requirements are needed)
- Grade history information (i.e., data you'd see on HS transcript)
- Special education program details
- Bilingual program details

**New data elements (beyond CEDARS and CSRS) identified by workgroup:**

**Initial brainstorming:**

- Expand race and ethnicity codes for students
- Supplemental education programs, such as summer education
- Academic outcomes for students beyond WASL
- Family demographics

**Narrowing after discussion – no change for this category of data:**

- Expand race and ethnicity codes for students
- Supplemental education programs, such as summer education
- Academic outcomes for students beyond WASL (eliminated in prioritization because it is planned as part of CEDARS warehouse)
- Family demographics (eliminated in prioritization phase because free/reduced meals eligibility already collected; other data difficult to define)

**Prioritization:**

- Expand race and ethnicity codes for students

## Expanded Race and Ethnicity Codes for Students

There are two new issues related to expanding race and ethnicity codes. First, there is the soon to be required (by 2010) federal mandate that students' ethnicity be reported as Hispanic or Non-Hispanic, and their race be reported as Asian, Native Hawaiian/Pacific Islander, Caucasian, Alaskan Native/Native American, Black/African American, or Multi-racial. Second, there is the request of the legislature in SB 5843 to disaggregate data by "distinct racial subgroups within racial categories." A thorough discussion of these two issues is presented in Appendix C. The issues identified by our pilot district and OSPI's recommendation are described below.

### Pilot site implementation

We asked the pilot districts (Everett and Raymond), and the other CEDARS pilot districts, to assist us with this analysis. To have piloted the changes to race and ethnicity categories, districts would have had to change their enrollment forms, and ask parents of all students to re-identify themselves. This was not feasible for a pilot, but we did ask the districts for their perspective on changing not only to the new federal codes (which is mandated by 2010) but also to further sub-groups within races.

Everett's analysis of implementing new ethnic/race codes is included as Appendix D. Their student information system, Pentamation, has the capability to store multiple ethnicities for a student, but Everett does not use the feature in the production area because current CSRS requirements do not call for it. Everett staff searched the internet for other districts' enrollment forms for ideas of what is currently being requested in other districts. Sample findings are included in Appendix D.

Using examples from other districts around the nation and their current enrollment form, Everett staff mocked up a revised enrollment form to accommodate both modifications to ethnicity data (Hispanic/Non-Hispanic and racial subgroups for Asian and Native Hawaiian/Pacific Islander). Everett's mockup is below:

## Figure 2. Everett Enrollment form mock-up

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| * Student Legal First Name | | | | | * Legal Middle Name | | | | | * Legal Last Name | | | |
| *Gender | ☐ Male | ☐ Female | * Grade | | * Birthdate | | Student's Primary Language | | | | | | |
| **Ethnic Origins and Race are required by the federal and state agencies. If no data is provided observer identification is required.** | | | | | | | | | | | | | |
| * Ethnic Origin (Check ONE) | ☐Hipanic/Latino | | ☐ Non Hipanic/Latino | | | | | | | | | | |
| * Race (Check all that apply)) | ☐ **B**lack | | | | ☐ **I**ndian, American India/Alaska Native | | | | | ☐ **W**hite | | | |
| | ☐ Asian India | ☐ Chinese | | ☐ Filipino | | ☐ Japanese | | ☐ Korean | | ☐ Vietnamese | ☐ Other Asian | | |
| | ☐ Native Hawaiian | | | ☐Guamanian or Chamorro | | | | ☐Samoan | | ☐Other Pacific Island | | | |
| Does this child currently receive any of the following services? | | | | ☐ Special Education Classes | | ☐ Speech | | ☐ Occupational or Physical Therapy | | ☐ ELL | ☐ 504 Plan | | |
| Born in USA | ☐ Yes | ☐ No | City of Birth | | | State of Birth | | | | Country of Birth. | | | |
| USA Entry Date | | USA School Entry Date | | | | WA School Entry Date | | | | | | | |

Given the numerous subgroups that would be possible to delineate for each racial category, our challenge was to determine the level of specificity for the sub-groupings. The table below shows some of the possibilities. The left-hand side of the table is what is required by federal mandate in 2010-11. The remaining question is what makes sense, in Washington, for the right-hand side?

## Figure 3. Possible Ethnicity and Race and Racial Sub-group Codes

| **Required by Federal DOE by 2010-2011** | | **Should Washington add this level of detail?** | | |
|---|---|---|---|---|
| **Ethnicity** | | | | |
| **H** | **Hispanic/Latino** | | | |
| **N** | **Non-Hispanic** | | | |
| **Race** | | **Possible racial subgroups** | | |
| 1 | Asian | Asian Indian | Cambodian | Chinese |
| | | Filipino | Japanese | Korean |
| | | Pakistani | Vietnamese | Other Asian |
| 2 | Native Hawaiian or Other Pacific Islander | Fijian | Guamanian or Chamorro | Native Hawaiian |
| | | Samoan | Other Pacific Islander | |
| 3 | African American or Black | Afro-American | Ethiopian | Nigerian |
| 4 | American Indian or Alaskan Native | Aleut | Chinook | Chehalis |
| | | Nisqually | Puyallup | Quileute |
| | | Tulalip | Etc…… | |
| 5 | White or Caucasian | African | Iraqi | Russian |
| | | Ukrainian | Other White | |
| 6 | Two or more races | | | |

A feasible approach to identify which sub-groups to use for K-12 student data systems may be to incorporate the data collection categories already being used by the University of Washington on its freshman application form. The UW form is promising for K-12 adoption; using its categories would ensure continuity of data elements across K-12 and post-secondary. A cautionary observation, however, is that some of the options on the UW form are allowed for postsecondary but not for K-12. Specifically, the new federal guidelines do not allow K-12 to provide a major race category of "Other," nor to provide an "I choose not to respond" option. Additionally, the UW form asks for verification of tribal membership from students self reporting as American Indian, which would be overly restrictive for the K-12 data needs. If the UW form were to be used as a basis for a K-12 information form, some additional guidance for racial subgroups would be called for. For example, the recent influx of immigration from Eastern European countries should probably be reflected in clarifying notes for the "Caucasian or White" group. The ethnic/race statistical information collected by the UW is shown below.

## Figure 4. Statistical information collected on UW freshman application form

Are you of Hispanic or Latino origin? (Check all that apply)

☐ No
☐ Yes, Columbian
☐ Yes, Spanish/Spaniard
☐ Yes, Mexican or Mexican American or Chicano
☐ Yes, Salvadoran
☐ Yes, Other Hispanic or Latino
☐ Yes, Chilean
☐ Yes, Argentinian
☐ Yes, Peruvian
☐ I choose not to respond

What race(s) do you consider yourself? (Check all that apply)

☐ African American or Black

☐ Alaska Native or American Indian

ASIAN AMERICAN
☐ Asian Indian
☐ Chinese
☐ Filipino
☐ Hmong
☐ Indonesian
☐ Japanese
☐ Korean
☐ Laotian
☐ Malaysian
☐ Pakistani
☐ Singaporean
☐ Taiwanese
☐ Thai
☐ Vietnamese
☐ Other Asian American: Specify _____

PACIFIC ISLANDER
☐ Fijian
☐ Guamanian or Chamorro
☐ Mariana Islander
☐ Melanesian
☐ Micronesian
☐ Native Hawaiian
☐ Samoan
☐ Tongan
☐ Other Pacific Islander: Specify _____

☐ Caucasian or White: Includes persons of European (e.g., French, Italian), Middle Eastern (e.g., Iranian, Saudi Arabian), or North African (e.g., Egyptian, Libyan) heritage

☐ Other: Specify here ONLY if none of the groups listed above applies; do not duplicate responses listed above. _____

☐ I choose not to respond

A K-12 ethnic/race data collection table could feasibly be designed as shown below.

| Part 1 Response | Number of Values | Value labels |
|---|---|---|
| Hispanic/Latino | 9 | 8 UW Hispanic/Latino categories + "No" |

| Part 2 Response | Number of Values | Value labels |
|---|---|---|
| African American/Black | 2 | "Yes" + blank |
| American Indian/Alaska Native | 32 | 28 WA tribes + Other WA + Alaska Native + Other American Indian + blank |
| Asian American | 16 | 15 UW Asian American categories + blank |
| Native Hawaiian or Other Pacific Islander | 10 | 9 UW Pacific Islander categories + blank |
| White/Caucasian | 2 | "Yes" + blank |

## Feasibility Findings Related to Student Data

### Local Data Collection Feasibility Issues

The need to re-inventory students' ethnic/race information will be an added requirement for districts. Implementing the federal requirements by 2010 raises significant challenges for school districts. Coordination of the expanded Washington subcategories with the new federal requirements will mean that the re-identification will only need to be done once, making the one effort less burdensome than two revisions. Nevertheless, some implementation challenges will remain.

Obtaining the new information from parents will have cost implications. The most cost-effective method would be for parents to complete surveys which are then returned to the school. Follow-up would be necessary for those who do not respond, and central office staffing resources will need to be devoted to tracking which parents have and have not responded and to enter data from the surveys into the student information system. Additionally, the survey(s) parents are to use for this information will need to clearly describe why these questions are being asked and must be designed to be easy to understand. There will be issues providing translations so non-English speaking parents know what they are selecting. OSPI can provide sample communications for the surveys, letter of introduction, and translations.

Timing of the conversion to new codes needs to be carefully considered. Districts will need to report current codes until June of the school year, then update their records over

the summer and report the new codes in September/October of the year the new codes are implemented. Larger districts will have more student updates to complete, so they will require more staff resources.

Local data collection will need to continue once re-inventory is complete for all newly-enrolled students. Enrollment forms will need to be re-designed, re-printed and distributed to schools. The new data categories will place an added burden on school registrars both for time and training. The new federal requirements do not allow K-12 reporting to include an "Unknown" category, and require that "Observer Identification" be used if the parent/guardian or student do not self-identify. For many students and parents the issue of ethnic/race identification is emotionally loaded. At the same time, fostering positive parent/school relationships is extremely important for our elementary and secondary schools. Thoughtful and careful attention needs to be paid to how school-level personnel collect ethnic/race information. Resources should be provided to support these efforts to ensure that all districts are able to support their re-inventory and data collection efforts.

The majority of data systems being used by districts are currently not designed to accommodate either the new federal or the proposed state ethnic/race data requirements. In some cases districts will incur some of the costs associated with their vendor re-tooling their system for these new requirements. These costs can show up as either direct charges for this specific work or might show up as an increase to on-going maintenance fees. Additionally, the state will need to provide clear and timely information to districts and software vendors as to how these new data requirements are being implemented in Washington so that systems and processes can be updated in plenty of time to meet the new reporting requirements.

Although not required under the new federal requirements, states are "strongly encouraged to re-inventory their racial and ethnic data" (Managing an Identity Crisis: Forum Guide to Implementing New Federal Race and Ethnicity Categories, USDOE; NFES 2008-802.) This recommendation turns out to be well-timed for Washington's efforts to expand its collection of racial sub-groups. The feasibility of collecting data on additional sub-groups will be facilitated by the timing of the new federal requirements. However, using state codes for racial subgroups, beyond the required federal codes, raises additional challenges:

a. Communicating the educational benefits to students of using racial sub-groups. One of the pilot districts stated they focus on "each" student without consideration of ethnicity and questioned if this information will truly make a difference in how students learn.

b. Collecting the data at a very detailed level may seem invasive and frightening to some families, depending upon their immigration status or past experiences. There is a cost of a parent's trust regarding the personal data schools collect.

c. How do we determine which racial subgroups to collect? What about within White? Do we need Russian, Ukrainian, Iraqi, North African, etc.?

d. Determining the procedure to add new racial sub-groups codes. Once the state has established one or more sub-groups, what if someone wants to track another?

e. Articulating the constraints on reporting when the population size is too small for confidentiality. Disaggregating data to a point that we cannot report the data for public information because the percentage is so low it may look like information is being hidden.

### Feasibility of Data Storage and Analysis/Reporting

The previous section considered the feasibility of data collection methods, which appear to be feasible. This section takes a look at the feasibility of data storage, and analysis and reporting.

The storage of expanded racial subgroup data is feasible if student information systems can accommodate multiple races for students who are of more than one race. This will not be a trivial matter for most student information systems, nor for CEDARS at the state level, but it is a requirement that is inherent in the new federal ethnic-race guidelines, required by 2010-2011. Adding racial subgroups to the list of values for each federal race will not be difficult once multiple races can be handled, i.e., once a data system can store that a student is both African American and Pacific Islander, it is not more of a data storage issue to know that the student is African American and Guamanian. If the list of racial subgroups grows very large, the more practical challenge here for districts could be the expanded size of the enrollment form necessary to list all the options and the time associated with having families go through a list of dozens of race/ethnic options where there were previously fewer than ten.

The feasibility of analyzing and reporting expanded subgroups rests on the scope and timing of the data collection. As mentioned above, if the number of subgroups expands to an unreasonable size, the number of students in some of the subgroups would be fewer than can be reported or analyzed. As an illustrative example, there are 172 language groups served by the state's Bilingual program. However, only 17 of those language groups have at least ten students per grade level statewide. The district numbers are clearly smaller than that. The distribution of ethnic/race subgroups within the state likely follows a similar pattern. So, although K-12 students in Washington exhibit broad diversity, the usefulness of analysis and reporting is questionable if the number of categories is so large that many of them are populated with very few students.

## Recommendations Related to Student Data

OSPI feels it is reasonable to use the established UW subgroup categories for Hispanic/Latino, Asian American and Native Hawaiian/Pacific Islander students, and to use the 31 subgroups for American Indian/Native Alaskan students (28 federally-recognized Washington tribes, "Other Washington tribe,", "Native Alaskan tribe," and "Other American Indian tribe"). Finally, we recommend that there be no subgroup categories for African American/Black or White students.

To accommodate students who identify with more than one subgroup within a single federal category, we recommend adding a data value within the subgroups such as: "Two or more groups of Asian Americans."

We also recommend that districts be required to report expanded subgroups to the state. The utility of data reports from expanded subgroups will be significantly compromised if the subgroup data collection is voluntary for districts. If subgroup data collection is not a state requirement, one would never be confident in the validity of any subgroup reports. Presumably part of the rationale for subgroup reporting is to provide information to state and community policy makers to assist them in drawing conclusions about the characteristics and performance of schools and students. Incomplete or out-of-date data collection would substantially reduce the quality of the information provided to our stakeholders.

# COURSE DATA

### Course data elements currently collected through CSRS

- Flag if student is taking an AP/IB course
- CTE course CIP codes
- CTE Direct Transcription flag

### New data elements already planned to be collected through CEDARS

- Student schedule table
  - District Course Title
  - District Course ID
  - Term
  - Section ID
  - Teacher

- Course catalog
  - District Course Title
  - District Course ID
  - State Course Code
  - Content Area Code
  - Course Designation Code (required on HS transcript)

- Grade history file
  - District Course Title
  - District Course ID
  - Credits attempted
  - Credits earned
  - Grade level in course
  - Letter grade earned
  - Cumulative GPA
  - Term (grading period)
  - CTE Completer flag
  - CTE Received National Certification
  - CTE Tech Prep Completer flag

### New data elements (beyond CEDARS and CSRS) identified by workgroup

#### Initial brainstorming

- Common course codes (NCES- SCED)
- Course rigor
- Course minutes

**Narrowing after discussion**

- Common course codes (NCES- SCED)
- Course rigor (eliminated in prioritization because the course designation on transcript provides an indicator of rigor as will standardized state course codes)
- Course minutes (eliminated in prioritization because WACs specify course minutes required for credit, so one can deduce course minutes from credit attempted information)

**Prioritization**

- Common course codes (NCES- SCED) – see Appendix C for a sample NCES course code description

**Pilot site implementation – Everett School District**

Everett School District agreed to enter the Math State Course Codes for current codes as part of the CEDARS project and to assist the Data Feasibility Study late last year. Historical records were not updated via this project. Everett's SIS is Pentamation, which does not have a standard designated state course code field but the software allows for customizing the course catalog and master schedule to include up to ten additional user-defined fields.

Everett maintains a District Course Catalog that is then copied to each school. The District Course Catalog consisted of 57 high school math courses and 39 middle school math courses. This helped Everett by having consistent standards among our schools in what is being taught and in reporting out information about students. Everett staff indicated that for this project this configuration made it much easier than if they had different course catalogs at each school. Only one or two central office people were needed to do the translation instead of a person at each school, as would have been the case if they lacked a District Course Catalog.

Table 1. Everett's Coding of State Course Codes

Sample of Excel that went to district personnel:

| Our HS Code | Our MS Code | State Code | Title | Description |
|---|---|---|---|---|
| | | 02001 | Informal Math 02001 | Informal Math courses emphasize the teaching of math as problem solving, communication, and reasoning, and highlight the connections among math topics and between math and other disciplines. These courses approach the teaching of general math, pre-algebra and pre-geometry topics by applying numbers, and algebraic and geometric concepts and relationships to real-world problems. |
| | | 02002 | General Math 02002 | General Math courses reinforce and expand students' foundational math skills, such as arithmetic operations using rational numbers; area, perimeter and volume of geometric figures, congruence and similarity, angle relationships, the Pythagorean theorem, the rectangular coordinate system, sets and logic, estimation, formulas, solving and graphing simple equations and inequalities. |

Sample of what came back:

| HS Our Code | MS Our Code | Code | Title | Description |
|---|---|---|---|---|
| MTH201/MTH202 MTH211/MTH212 MTH251/MTH252 MTH983/MTH984 | MTH201/ MTH202 | 02072 | Geometry 02072 | Geometry courses, emphasizing an abstract, formal approach to the study of geometry, typically include topics such as properties of plane and solid figures; deductive methods of reasoning and use of logic; geometry as an axiomatic system including the study of postulates, theorems, and formal proofs; concepts of congruence, similarity, parallelism, perpendicularity, and proportion; and rules of angle measurement in triangles. |
| MTH301/MTH302 MTH311/MTH312 MTH351/MTH352 | | 02103 | Trigonometry 02103 | Trigonometry courses prepare students for eventual work in calculus and typically include the following topics: trigonometric and circular functions; their inverses and graphs; relations among the parts of a triangle; trigonometric identities and equations; solutions of right and oblique triangles; and complex numbers. |

Sample of what was created for SQL statement:

update schd_course_setup set fld08 = '02001' where course = 'MTH035';

update schd_course_setup set fld08 = '02001' where course = 'MTH036';

Approximate time for Everett to include state math codes only in middle and high schools:

| Task | Hours |
|---|---|
| Create User Defined Field for Data | 0.25 |
| Create Excel File of State Course Codes | 0.5 |
| Central office District Course Cat mapped | 3 |
| Central office Curriculum Person Review | 1 |
| Created SQL statement & test/run from file | 3 |
| **Total** | **7.75** |

**Pilot site implementation – Everett School District**

Similarly, in Raymond School District, staff mapped their math course offerings to the NCES codes, reporting that "this task gave us an opportunity to clean up our course offerings." Raymond staff indicated the project took them only a couple of hours. As with Everett, the work at Raymond was made much simpler by the fact that there was a single District Course Catalog. Raymond's student information system (WSIPC-Skyward) cannot currently accommodate state course codes and district course codes, so rather than use internal codes and "state" course codes, Raymond simply adopted the NCES codes for internal use too. WSIPC reports that it is modifying the Skyward software to be able to accommodate state course codes by fall of 2009.

**Feasibility Findings Related to Course Data**

Coding current math courses with the NCES common course codes was not a difficult task for either of the two pilot districts. After mapping their math course offerings to the descriptions OSPI provided from the NCES coding, Everett developed a SQL statement to enter the "state" course codes into a user defined field in their student information system. Their submission of CEDARS data now routinely submits both the Everett course codes (for all content areas) and the "state" course code for all math courses.

The following tables show a sample report that can be drawn from the course and teacher information. First, Raymond's data is presented and then Everett's:

## Table 2. Sample State and District Course Code Summary Report

## Raymond School District:

| State Course Code | State Subject | State Course Title | District Course ID | District Course Title | Section Count | Student Count | Teacher Count |
|---|---|---|---|---|---|---|---|
| 02002 | Mathematics | General Math | 02002 | GENERAL MATH | 2 | 36 | 1 |
| 02051 | Mathematics | Pre-Algebra | 02051 | PRE-ALGEBRA | 1 | 12 | 1 |
| 02052 | Mathematics | Algebra I | 02052 | ALGEBRA 1 | 3 | 37 | 2 |
| 02056 | Mathematics | Algebra II | 02056 | ALGEBRA II | 2 | 12 | 1 |
| 02072 | Mathematics | Geometry | 02072 | GEOMETRY | 1 | 19 | 1 |
| 02074 | Mathematics | Principles of Algebra and Geometry | 02074 | PRINCIPLES OF ALGEBRA/GEOMETRY | 2 | 12 | 1 |
| 02110 | Mathematics | Pre-Calculus | 02110 | PRE-CALCULUS | 1 | 3 | 1 |
| 02124 | Mathematics | AP Calculus AB | 02124 | AP CALCULUS AB | 1 | 3 | 1 |
| 02157 | Mathematics | Consumer Math | 02157 | CONSUMER MATH | 1 | 15 | 1 |
| 02994 | Mathematics | Mathematics Proficiency Development | 02994 | MATH PROFICIENCY DEVELOPMENT | 1 | 19 | 1 |
| Total codes | | 10 | | 10 | | | |

## Everett School District:

| State Course Code | State Subject | State Course Title | District Course ID | District Course Title | Section Count | Student Count | Teacher Count |
|---|---|---|---|---|---|---|---|
| 02001 | Mathematics | Informal Mathematics | MTH035 | MOD ALG CONCEPT | 70 | 105 | 28 |
| 02001 | Mathematics | Informal Mathematics | MTH036 | MOD ALG CONCEPT | 70 | 91 | 28 |
| 02001 | Mathematics | Informal Mathematics | MTH600 | MATH 6 | 252 | 354 | 60 |
| 02001 | Mathematics | Informal Mathematics | MTH620 | MATH 6 | 174 | 156 | 54 |
| 02001 | Mathematics | Informal Mathematics | MTH630 | MATH 6 | 66 | 108 | 30 |
| 02001 | Mathematics | Informal Mathematics | MTH640 | MATH 6 | 36 | 54 | 30 |
| 02001 | Mathematics | Informal Mathematics | MTH700 | MATH 7 | 282 | 480 | 72 |
| 02001 | Mathematics | Informal Mathematics | MTH720 | MATH 7 | 126 | 42 | 42 |
| 02001 | Mathematics | Informal Mathematics | MTH730 | MATH 7 | 60 | 90 | 30 |
| 02001 | Mathematics | Informal Mathematics | MTH740 | MATH 7 | 42 | 12 | 18 |
| 02001 | Mathematics | Informal Mathematics | MTH800 | MATH 8 | 168 | 270 | 48 |
| 02001 | Mathematics | Informal Mathematics | MTH830 | MATH 8 | 66 | 90 | 36 |
| 02001 | Mathematics | Informal Mathematics | MTH840 | MATH 8 | 24 | 12 | 18 |
| 02001 | Mathematics | Informal Mathematics | MTH910 | MATH | 6 | 12 | 6 |
| 02001 | Mathematics | Informal Mathematics | MTH911 | MATH | 6 | 0 | 6 |
| 02001 | Mathematics | Informal Mathematics | MTH940 | MATH | 42 | 24 | 24 |
| 02002 | Mathematics | General Math | MTH031 | MOD BASIC MATH | 14 | 35 | 14 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 02002 | Mathematics | General Math | MTH032 | MOD BASIC MATH | 14 | 21 | 14 |
| 02002 | Mathematics | General Math | MTH033 | MOD GENERAL MTH | 49 | 28 | 28 |
| 02002 | Mathematics | General Math | MTH034 | MOD GENERAL MTH | 49 | 21 | 28 |
| 02002 | Mathematics | General Math | MTH941 | MATH | 30 | 6 | 18 |
| 02002 | Mathematics | General Math | MTH942 | MATH | 18 | 18 | 12 |
| 02002 | Mathematics | General Math | MTH943 | MATH | 30 | 18 | 24 |
| 02003 | Mathematics | Particular Topics in Foundation Math | MTH023 | FUNCTIONAL MATH | 21 | 14 | 21 |
| 02003 | Mathematics | Particular Topics in Foundation Math | MTH024 | FUNCTIONAL MATH | 21 | 14 | 21 |
| 02052 | Mathematics | Algebra I | MTH101 | ALGEBRA 1 | 644 | 980 | 252 |
| 02052 | Mathematics | Algebra I | MTH102 | ALGEBRA 1 | 208 | 408 | 104 |
| 02052 | Mathematics | Algebra I | MTH111 | ALGEBRA 1 CL | 455 | 1560 | 169 |
| 02052 | Mathematics | Algebra I | MTH112 | ALGEBRA 1 CL | 144 | 648 | 64 |
| 02072 | Mathematics | Geometry | MTH201 | GEOMETRY | 616 | 1176 | 294 |
| 02072 | Mathematics | Geometry | MTH202 | GEOMETRY | 296 | 608 | 136 |
| 02072 | Mathematics | Geometry | MTH211 | GEOMETRY CL | 119 | 371 | 42 |
| 02072 | Mathematics | Geometry | MTH212 | GEOMETRY CL | 119 | 315 | 42 |
| 02072 | Mathematics | Geometry | MTH251 | GEOMETRY HONORS | 35 | 28 | 21 |
| 02072 | Mathematics | Geometry | MTH252 | GEOMETRY HONORS | 35 | 21 | 21 |
| 02103 | Mathematics | Trigonometry | MTH301 | ALG 2 TRIG | 200 | 456 | 88 |
| 02103 | Mathematics | Trigonometry | MTH302 | ALG 2 TRIG | 192 | 384 | 88 |
| 02103 | Mathematics | Trigonometry | MTH311 | ALG 2 TRIG CL | 84 | 238 | 28 |
| 02103 | Mathematics | Trigonometry | MTH312 | ALG 2 TRIG CL | 84 | 217 | 28 |
| 02103 | Mathematics | Trigonometry | MTH351 | ALG2 TRIG HONOR | 28 | 49 | 14 |
| 02103 | Mathematics | Trigonometry | MTH352 | ALG2 TRIG HONOR | 28 | 35 | 14 |
| 02110 | Mathematics | Pre-Calculus | MTH401 | PRE-CALCULUS | 140 | 266 | 63 |
| 02110 | Mathematics | Pre-Calculus | MTH402 | PRE-CALCULUS | 152 | 288 | 64 |
| 02121 | Mathematics | Calculus | MTH501 | CALCULUS | 28 | 42 | 14 |
| 02121 | Mathematics | Calculus | MTH502 | CALCULUS | 28 | 35 | 14 |
| 02124 | Mathematics | AP Calculus AB | MTH591 | AP CALCULUS AB | 28 | 21 | 14 |
| 02124 | Mathematics | AP Calculus AB | MTH592 | AP CALCULUS AB | 28 | 28 | 14 |
| 02201 | Mathematics | Probability and Statistics | MTH601 | STATISTICS | 14 | 35 | 7 |
| 02201 | Mathematics | Probability and Statistics | MTH602 | STATISTICS | 14 | 35 | 7 |
| 02203 | Mathematics | AP Statistics | MTH691 | AP STATISTICS | 21 | 21 | 21 |
| 02203 | Mathematics | AP Statistics | MTH692 | AP STATISTICS | 21 | 21 | 21 |
| 02994 | Mathematics | Mathematics Proficiency Development | MTH341 | WASL MATH EQU | 42 | 56 | 28 |
| 02994 | Mathematics | Mathematics Proficiency Development | MTH342 | WASL MATH EQU | 28 | 56 | 14 |
| 02994 | Mathematics | Mathematics Proficiency Development | MTH441 | WASL MTH EQU EX | 49 | 98 | 28 |
| 02994 | Mathematics | Mathematics Proficiency Development | MTH442 | WASL MTH EQU EX | 7 | 7 | 7 |
| 02999 | Mathematics | Mathematics—Other | MTH452 | COL REVIEW MATH | 56 | 98 | 28 |
| TOTAL | Codes | 13 | 56 | | | | |

Although Raymond staff indicated coding their math courses to the NCES codes took them only a couple of hours, they felt the other content areas might be a bit more difficult but would be very similar in demands.

The pilots provided insight into the task of coding a content area's courses into a well-crafted state coding scheme. It seems that this particular content area may be quite doable in a day or two if the district maintains a standard course code across all high schools. The task will be significantly compounded, but not insurmountable, if separate independent course catalogs exist.

**Recommendations Related to Course Data**

To provide districts ample time to code their courses into the NCES coding scheme, OSPI recommends that the following dates be the "no later than" requirement for the implementation of state standardized course code reporting.

| | |
|---|---|
| Mathematics | November 2009 |
| Science | November 2009 |
| English/Language Arts | March 2010 |
| Foreign Language | March 2010 |
| Social Studies | March 2010 |
| Occupational Ed /CTE | May 2010 |
| Health & Physical Ed | May 2010 |
| All High School courses | May 2010 |

OSPI will publish the standardized state course codes (based on NCES-SCED codes) by January 15, 2009 and offer technical assistance to districts as they map their current course codes to the state codes.

# EDUCATOR DATA

### Educator data elements currently collected through CSRS

- None

### New data elements already planned to be collected through CEDARS

- Certification number
- Name
- Gender
- Birthdate
- Highly Qualified Teacher Status Code
- Staff type (teacher, principal, para-professional, counselor, librarian, etc.)
- Race and Ethnicity code

### New data elements (beyond CEDARS and CSRS) identified by workgroup

**Initial brainstorming**:

- Expand race and ethnicity codes for staff
- Teacher exit codes (retirements, transfer, and leave of absence)
- Teacher assignment. Need to redefine teacher duty codes with possible outcome of real class size
- Individual teacher program codes (e.g., Title I, Special Ed) and activity codes (e.g., teaching, counseling, coaching)
- Years of teaching to identify in and out of state experience
- Educator credits, schools, degrees, major, level of degree, and route to certification
- Reasons for additional pay
- Professional growth plans
- Professional development participation
- Elements that are collected at the state level, but can't be linked or connected (Example: teacher retirement, retention/mobility of teachers.)
- National Board Certification (Apportionment, S275 but not linked)
- Individual teacher program code and activities codes
- Teachers on leave

**Narrowing after discussion**:

- Expand race and ethnicity codes for staff
- Teacher exit codes (retirements, transfer, and leave of absence)
- Teacher assignment. Need to redefine teacher duty codes with possible outcome of real class size

- Individual teacher program codes (e.g., Title I, Special Ed) and activity codes (e.g., teaching, counseling, coaching)
- Years of teaching to identify in and out of state experience
- Educator credits, schools, degrees, major, level of degree, and route to certification
- Reasons for additional pay
- Professional growth plans
- Professional development participation

**Prioritization**:

- Grade and content assignment
- Program and activity codes
- Educator credits, schools, degrees, major, route to certification

### Pilot Site Implementation

The two pilot sites were asked to provide teacher certification numbers for their K-12 staff. Raymond accomplished this through their pilot CEDARS submissions for which WSIPC submits their CEDARS data once a week. Everett utilizes a unique method of CEDARS submission, in which OSPI "reaches into" the Everett student information system once a week and creates the various tables that comprise the CEDARS data collection. Both districts were just recently successful in submitting data on teachers and courses (August 2008). OSPI staff then linked those certification numbers to the various databases OSPI maintains. To date this has just been completed for the high school math courses.

### Feasibility Findings Related to Educator Data

The submission of teacher schedules and certification numbers, in addition to the re-hosting of the teacher certification database, will allow OSPI to develop reports that integrate extant teacher information with student and course information. This is very exciting and will go a long way to address the questions about teacher deployment, course taking patterns and student outcomes that heretofore have not been able to be answered by OSPI.

Four sample teacher profiles, integrating course and certification information, follows with fictitious teacher names.

# Teacher Information Summary

Serving District: 31002 Everett

School: 4334 HEATHERWOOD MIDDLE

Certificate Number: 387470H Staff Id: 2916 Name: E White Birth Date: 1955-08-11 Gender:

Teacher Courses:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Content Area Code: | | Course Designation Code: | | Course ID: | MTH101 | District Course Title: | ALGEBRA |
| State Subject: | Mathematics | | | State Course Code: | 02052 | State Course Title: | Algebra I |
| Content Area Code: | | Course Designation Code: | B | Course ID: | MTH101 | District Course Title: | ALGEBRA 1 |
| State Subject: | Mathematics | | | State Course Code: | 02052 | State Course Title: | Algebra I |
| Content Area Code: | | Course Designation Code: | | Course ID: | MTH201 | District Course Title: | GEOMETRY |
| State Subject: | Mathematics | | | State Course Code: | 02072 | State Course Title: | Geometry |
| Content Area Code: | | Course Designation Code: | B | Course ID: | MTH201 | District Course Title: | GEOMETRY |
| State Subject: | Mathematics | | | State Course Code: | 02072 | State Course Title: | Geometry |
| Content Area Code: | | Course Designation Code: | | Course ID: | MTH830 | District Course Title: | MATH 8 |
| State Subject: | Mathematics | | | State Course Code: | 02001 | State Course Title: | Informal Mathematics |

Education Degree Code: M Education Degree Year Date: 2001 Education Experience Number: 6 National Board Certified:

Credit Grandfather Number: 23 Credit Vocational Number: 0 Credit Academic Number: 14 Credit In-Service Number: 58.5

Test Results:

Cert. Descriptive Type ID Code: C270700 Cert. Descriptive Title: EMERGENCY SUBSTITUTE TEACHER

Cert. Issue Date: 20010606 Cert. Exp Date: 20030630 Agency Recommend Cert.: 00001 SPI. OFFICE OF PROFESSIONAL CERTIFICATION

Recommended Area:

Cert. Descriptive Type ID Code: T320500 Cert. Descriptive Title: RESIDENCY TEACHER

Cert. Issue Date: 20010718 Cert. Exp Date: 20070630 Agency Recommend Cert.: 50025 CITY UNIVERSITY

Recommended Area:

| | | | | |
|---|---|---|---|---|
| Endorsement ID #: | 0400 | Endorsement Descriptive Name: | ELEMENTARY EDUCATION | Cert. Issue Date: 20010718 |
| Endorsement ID #: | 0837 | Endorsement Descriptive Name: | MATHEMATICS | Cert. Issue Date: 20010718 |

Cert. Descriptive Type ID Code: T330500 Cert. Descriptive Title: PROFESSIONAL TEACHER

Cert. Issue Date: 20070727 Cert. Exp Date: 19160630 Agency Recommend Cert.: 00001 SPI. OFFICE OF PROFESSIONAL CERTIFICATION

Recommended Area:

| | | | | |
|---|---|---|---|---|
| Endorsement ID #: | 0400 | Endorsement Descriptive Name: | ELEMENTARY EDUCATION | Cert. Issue Date: 20070727 |
| Endorsement ID #: | 0837 | Endorsement Descriptive Name: | MATHEMATICS | Cert. Issue Date: 20070727 |

# Teacher Information Summary

Serving District: 31002 Everett

School: 2126 EVERETT HIGH

Certificate Number: 220233A Staff Id: 5014 Name: D Smith Birth Date: 1962-05-14 Gender:

Teacher Courses:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Content Area Code: | | Course Designation Code: | | Course ID: | MTH201 | District Course Title: | GEOMETRY |
| State Subject: | Mathematics | | | State Course Code: | 02072 | State Course Title: | Geometry |
| Content Area Code: | | Course Designation Code: | B | Course ID: | MTH201 | District Course Title: | GEOMETRY |
| State Subject: | Mathematics | | | State Course Code: | 02072 | State Course Title: | Geometry |
| Content Area Code: | | Course Designation Code: | B | Course ID: | MTH202 | District Course Title: | GEOMETRY |
| State Subject: | Mathematics | | | State Course Code: | 02072 | State Course Title: | Geometry |
| Content Area Code: | | Course Designation Code: | C | Course ID: | MTH341 | District Course Title: | WASL MATH EQU |
| State Subject: | Mathematics | | | State Course Code: | 02994 | State Course Title: | Mathematics Proficiency Development |
| Content Area Code: | | Course Designation Code: | C | Course ID: | MTH342 | District Course Title: | WASL MATH EQU |
| State Subject: | Mathematics | | | State Course Code: | 02994 | State Course Title: | Mathematics Proficiency Development |

Education Degree Code: M Education Degree Year Date: 1983 Education Experience Number: 27.1 National Board Certified:

Credit Grandfather Number: 74 Credit Vocational Number: 0 Credit Academic Number: 26 Credit In-Service Number: 1.8

Test Results:

Cert. Descriptive Type ID Code: 1013000 Cert. Descriptive Title: PROVISIONAL ELEMENTARY AND SECONDARY TEACHER

Cert. Issue Date: 19770203 Cert. Exp Date: 19800203 Agency Recommend Cert.: 50018 WASHINGTON STATE UNIVERSITY

Recommended Area:

Endorsement ID #: 0006 Endorsement Descriptive Name: SOCIAL SCIENCES Cert. Issue Date: 19770203

Endorsement ID #: 0017 Endorsement Descriptive Name: PHYSICAL EDUCATION/RECREATION Cert. Issue Date: 19770203

Cert. Descriptive Type ID Code: 1043700 Cert. Descriptive Title: CONTINUING ELEMENTARY AND SECONDARY TEACHER

Cert. Issue Date: 19791214 Cert. Exp Date: 00000000 Agency Recommend Cert.: 50001 CENTRAL WASHINGTON UNIVERSITY

Recommended Area:

Cert. Descriptive Type ID Code: 3032701 Cert. Descriptive Title: INITIAL SECONDARY PRINCIPAL

Cert. Issue Date: 19830729 Cert. Exp Date: 19870729 Agency Recommend Cert.: 43004 SPU ADMINISTRATOR TASK FORCE

Recommended Area:

Cert. Descriptive Type ID Code: A220815 Cert. Descriptive Title: INITIAL ADMINISTRATOR (RENEWAL)

Cert. Issue Date: 19870831 Cert. Exp Date: 19900831 Agency Recommend Cert.: 50015 SEATTLE PACIFIC UNIVERSITY

Recommended Area:

Endorsement ID #: 0701 Endorsement Descriptive Name: PRINCIPAL Cert. Issue Date: 19870831

# Teacher Information Summary

Serving District: 25116 Raymond

School: 2357 RAYMOND JR SR HIGH SCHOOL

Certificate Number: 401075G Staff Id: 6156 Name: Elise Anne Morris Birth Date: 11/20/1973 Gender: F

Teacher Courses:

| | | | | | |
|---|---|---|---|---|---|
| Content Area Code: | | Course Designation Code: | Course ID: 02052 | District Course Title: | ALGEBRA 1 |
| State Subject: | Mathematics | | State Course Code: 02052 | State Course Title: | Algebra I |
| Content Area Code: | | Course Designation Code: | Course ID: 02056 | District Course Title: | ALGEBRA II |
| State Subject: | Mathematics | | State Course Code: 02056 | State Course Title: | Algebra II |
| Content Area Code: | | Course Designation Code: | Course ID: 02072 | District Course Title: | GEOMETRY |
| State Subject: | Mathematics | | State Course Code: 02072 | State Course Title: | Geometry |
| Content Area Code: | | Course Designation Code: | Course ID: 02074 | District Course Title: | PRINCIPLES OF ALGEBRA/GEOMETRY |
| State Subject: | Mathematics | | State Course Code: 02074 | State Course Title: | Principles of Algebra and Geometry |
| Content Area Code: | | Course Designation Code: | Course ID: 02110 | District Course Title: | PRE-CALCULUS |
| State Subject: | Mathematics | | State Course Code: 02110 | State Course Title: | Pre-Calculus |
| Content Area Code: | | Course Designation Code: | Course ID: 02121 | District Course Title: | CALCULUS |
| State Subject: | Mathematics | | State Course Code: 02121 | State Course Title: | Calculus |
| Content Area Code: | | Course Designation Code: A | Course ID: 02124 | District Course Title: | AP CALCULUS AB |
| State Subject: | Mathematics | | State Course Code: 02124 | State Course Title: | AP Calculus AB |

Education Degree Code: M Education Degree Year Date: 2006 Education Experience Number: 5.1 National Board Certified:

Credit Grandfather Number: 106.5 Credit Vocational Number: 0 Credit Academic Number: 0 Credit In-Service Number: 0

Test Results:

Cert. Descriptive Type ID Code: T320500 Cert. Descriptive Title: RESIDENCY TEACHER

Cert. Issue Date: 20020812 Cert. Exp Date: 20080630 Agency Recommend Cert.: 00001 SPI. OFFICE OF PROFESSIONAL CERTIFICATION

Recommended Area:

Endorsement ID #: 1837 Endorsement Descriptive Name: MATHEMATICS-PRIMARY Cert. Issue Date: 20020812

Cert. Descriptive Type ID Code: T330500 Cert. Descriptive Title: PROFESSIONAL TEACHER

Cert. Issue Date: 20080425 Cert. Exp Date: 20130630 Agency Recommend Cert.: 50015 SEATTLE PACIFIC UNIVERSITY

Recommended Area:

Endorsement ID #: 1837 Endorsement Descriptive Name: MATHEMATICS-PRIMARY Cert. Issue Date: 20080425

Cert. Descriptive Type ID Code: V520300 Cert. Descriptive Title: ACCOUNTING AND RELATED PROGRAMS

Cert. Issue Date: 20060701 Cert. Exp Date: 20070630 Agency Recommend Cert.: 00000

Recommended Area:

# Teacher Information Summary

Serving District: 31002 Everett

School: 3752 EISENHOWER MIDDLE

Certificate Number: 453288C Staff Id: 8665 Name: R Yule Birth Date: 1979-09-28 Gender:

Teacher Courses:

Content Area Code: Course Designation Code: Course ID: MTH700 District Course Title: MATH 7

State Subject: Mathematics State Course Code: 02001 State Course Title: Informal Mathematics

Content Area Code: Course Designation Code: Course ID: MTH720 District Course Title: MATH 7

State Subject: Mathematics State Course Code: 02001 State Course Title: Informal Mathematics

Education Degree Code: B Education Degree Year Date: 2002 Education Experience Number: 5 National Board Certified:

Credit Grandfather Number: 0 Credit Vocational Number: 0 Credit Academic Number: 9 Credit In-Service Number: 6.4

Test Results:

| | | | | | |
|---|---|---|---|---|---|
| Test Type Name: | Praxis I - CPPST - Math | Test Score: | 190 | Test Date: | 2007-08-03 |
| Test Type Name: | Praxis I - CPPST - Reading | Test Score: | 184 | Test Date: | 2007-08-03 |
| Test Type Name: | Praxis I - CPPST - Writing | Test Score: | 182 | Test Date: | 2007-08-03 |

Cert. Descriptive Type ID Code: T310600 Cert. Descriptive Title: RESIDENCY TEACHER (FIRST ISSUE)

Cert. Issue Date: 20080314 Cert. Exp Date: 00000000 Agency Recommend Cert.: 00001 SPI. OFFICE OF PROFESSIONAL CERTIFICATION

Recommended Area:

Endorsement ID #: 3400 Endorsement Descriptive Name: ELEMENTARY EDUCATION Cert. Issue Date: 20080314

Some of the data elements currently scheduled for collection via CEDARS require that data be extracted not just from a district's student information system, but also pulled from their human resource and possibly fiscal data systems. In the past, there has been very little need to design processes that can connect or collect the data from the separate systems within a single data submission. Expanding the data collection to areas outside what is traditionally managed within a district's SIS will require an additional level of coordination. In some cases it will involve district software vendors, in most cases it will require districts changing some of their business processes, and in some cases it will be both.

Additionally, several of the educator data elements could reasonably be collected at the state level without involving districts (e.g., educator credits, schools, degrees, major, level of degree, route to certification). Some of these data may have been provided by the educator to the state in paper format, which will require that OSPI scan and transfer into an electronic system. Data elements OSPI does not already collect should be worked into the certification (e-Cert) system's teacher interface.

Some of the linking to extant state level databases that will be possible with the CEDARS (and .175) submission of teacher and course information is demonstrated in the reports provided on the preceding pages. Further development of the e-Cert system and full incorporation of educator data into the CEDARS warehouse will enable the multiple data systems to be relational, to improve data quality, and promote efficient reporting that provides meaningful and relevant data.

## Recommendations Related to Educator Data

### Continue e-Certification Project

Continuation of the e-Cert project is crucial to the overall success of a comprehensive state data system which has the ability to connect teacher data with other types of data – such as student, course, and fiscal data. The e-Cert project is helpful as it currently is, but it will not solve the current challenges that exist with teacher accessibility to their own records, and therefore data consistency and quality. Full completion and implementation of the project will benefit teachers, school districts, and other educational entities that require reliable educator data in their current and future work by:

a. Eliminating school district inefficiencies and decrease their costs associated with documenting teacher experience and education (see JLARC Report).
b. Enhancing school district hiring practices to ensure appropriate alignment of teacher credentials with teaching assignment placements to better meet instructional needs of students.
c. Empowering educators to be more accountable for their professional growth plans as educators will have readily access to information about their certification and fulfillment of ongoing certification requirements.

### Incorporate All Teacher Databases Into CEDARS Warehouse

The incorporation of multiple educator databases into one data warehouse enables a thorough assessment of teacher qualifications and access to educator data. Inclusion of all

teacher data in one warehouse encourages the ability to make informed decisions about policies, practices and initiatives that could affect teacher shortages and placement of teachers with Washington's most struggling students. Incorporation of multiple data could create a robust assessment of the effectiveness of state and district fiscal investments and policy measures related to financial resources and student learning outcomes by:

a. Reducing inefficiencies and costs that districts incur.
b. Creating a viable infrastructure that integrates information typically maintained in isolated systems, thus promoting better access to educator data.
c. Creating a systematic maintenance of data which can improve the quality of educator data.
d. Reducing redundant data reporting by school districts and other educational entities.

**Build New Reports and Queries Based on Stakeholder Needs**

The ability to create reports and respond to queries related to students, teachers and courses is a powerful way to assess the operational and outcome success of an educational system. It is exciting that OSPI can extend the enhancements in student outcome reporting brought about four years ago by the state student identifier, to now design reports and queries integrating teacher and course information. Building new reports and queries based on our stakeholder needs will:

a. Provide a powerful method to assess current and future educational needs of teachers and students.
b. Align educator preparation and deployment information with teaching and learning outcomes – something that has never before been accomplished in Washington State.
c. Promote data reporting which will meet federal requirements, such as No Child Left Behind's (NCLB) Highly Qualified Teacher (HQT) requirements. Currently school district human resource staff invest vast amounts of their time manually calculating and reporting annual data to OSPI. Although NCLB funding is supplemental and small in comparison to state Basic Education funding, school districts rely on the millions of federal dollars to enhance instructional programs and services for students and professional development for teachers. The ability for OSPI to create the HQT reports for school districts would allow district staff to invest their time in more meaningful work activities to support the district.

## SCHOOL LEVEL FINANCIAL DATA

**Note: The analysis of school level financial data is not included with this report. Resources necessary to complete that section were obligated to the work of the Basic Education Funding Task Force. This section of the report will be forwarded as an addendum as soon as it is available.**

# Related Accomplishments

## Research ID

SB 5843, and subsequently RCW 28A.320, also called on OSPI to safeguard the confidentiality of student information. Specifically, the bill language stated:

> "(2) The confidentiality of personally identifiable student data shall be safeguarded consistent with the requirements of the federal family educational rights privacy act and applicable state laws. Consistent with the provisions of these federal and state laws, data may be disclosed for educational purposes and studies, including but not limited to:
>
> (a) Educational studies authorized or mandated by the state legislature;
>
> (b) Studies initiated by other state educational authorities and authorized by the office of the superintendent of public instruction, including analysis conducted by the education data center established under section 3 of this act; and
>
> (c) Studies initiated by other public or private agencies and organizations and authorized by the office of the superintendent of public instruction.
>
> (3) Any agency or organization that is authorized by the office of the superintendent of public instruction to access student-level data shall adhere to all federal and state laws protecting student data and safeguarding the confidentiality and privacy of student records.
>
> (4) Nothing in this section precludes the office of the superintendent of public instruction from collecting and distributing aggregate data about students or student-level data without personally identifiable information."

Significant progress has been made on being able to share data at the individual record level, without violating confidentiality. OSPI is now able to share unidentifiable individual records for enrollment, demographic, program participation and assessment data with researchers and other agencies. To meet this need we established a Research ID number for every State Student Identification (SSID) number ever issued. We can substitute the Research ID for the SSID in every data file that has SSID (nearly everything does now), and then remove the identifiable information included in the file. We remove name, day of birth (leaving month and year), Social Security number and district ID. The Research ID then allows the recipient to link files of various types (enrollment and assessment) or across years. The Research ID-SSID lookup table is maintained in the strictest confidence, with only a handful of OSPI staff having access to it.

The Office of Financial Management's (OFM) Educational Research and Data Center is using a similar method of linking and preparing data files to share.

## Education Research and Data Center

In addition to establishing the Feasibility Study, SB 5843 also established OFM's Education Research and Data Center (ERDC) to conduct collaborative analyses on P-20 education. OSPI has been collaborating with OFM to facilitate the development of the ERDC and we are very pleased with partnership formed with OFM on this endeavor. OSPI and OFM have

established a data sharing agreement, and OSPI has provided ERDC extensive data from CSRS, graduation/dropout files and assessment results. OFM has subsequently been able to use the K-12 data provided by OSPI to match with data provided from higher education to look at K-20 patterns and outcomes.

**Teacher Certification Databases**

By December 2008, OSPI will introduce a re-hosted Certification system. That system has been on a legacy mainframe system and is being moved to a more modern SQL database data architecture. Other databases with teacher information such as National Board Certification, Career and Technical Education certification, and teacher test data will also be linked and universally searchable by districts. The database architecture is the same as CSRS. ".175" data collection introduces the requirement that districts report teacher certification numbers which allow CSRS to "join" with the certification database. Having common data fields in a common database language allows OSPI to analyze and summarize student, teacher and course data in ways never before possible.

Further development for teacher certification data, dependent on funding, will create a self-serve teacher portal for online view of an educator profile and submission of certification. This phase will include:

- Online Certification application status reporting
- Accept credit cards online for payment
- Email reminders of upcoming renewals
- Electronic transcript retrieval

Future plans will also include:

- Linking certification and teacher information to the state longitudinal student data system (CEDARS)
- Linking to the state's higher education data system for centralized transcript information

**Common School Codes Across Databases**

OSPI has undertaken the task of comparing the list of school codes used in all data bases in the agency and will consolidate those codes to better be able to link information collected and reported for schools and districts throughout the state.

During the first of several exploratory meetings, OSPI has identified several databases that track building codes. OSPI staff also identified several OSPI program areas that use building codes for internal and external reporting.

An information technology (IT) analyst has been assigned to document each database structure including the field names, field types and field lengths. The analyst is also documenting how each program area (e.g., Transportation, Grants, Facilities, Assessment, Student Information, Support Services, and Information Technology) is using building codes for reporting. Upon completion of the analysis, OSPI will determine the optimum use of

building codes and design a common school code system around requirements that meet the needs of all OSPI program areas for the internal and external reporting of building codes.

The common school code database will be able to link to other student, educator and financial data, which will further assist in the research and analysis of student achievement, teacher effectiveness and school/district improvement.

## Staffing, Costs and Related Impact of the Expanded Data System

Estimating the staffing, costs and related impacts explicit to the 'expanded data system' is challenging in that much of the impact for the development and implementation of submitting student, teacher and course data is attributable to the CEDARS data collection effort, not the expanded elements associated with the Feasibility Study. Districts likely have already absorbed most of these costs since they are already submitting student schedules with teacher certification numbers and are gearing up for full CEDARS implementation by fall of 2009.

The additional costs of the elements discussed in the Feasibility Study will be limited to mapping district course offerings to state course codes and to collecting racial sub-groups. Based on the pilot district's experience coding their math courses to the state math codes, a day or two of staff time was all that was needed, at least for districts with a district-wide course catalog. Coding for all content areas might require two-three weeks of staff time. This could be estimated to be:

Average Salary = $4,166/mo ($50,000)
2-3 weeks = ~$2,600 ($2,000 – $3,200)
250 HS Districts = $650,000

The cost for changing to the proposed racial subgroups involves redesigning and reprinting enrollment forms, sending letters to families asking for new ethnicity/race information, following up with families that did not respond to the initial mailing, data-entry of updated information, and modifications to student information software to accommodate the sub-racial groups. The costs associated with an expanded list of racial sub-groups is tempered by the fact that the federal requirement is to at least be able to report if students are Hispanic or not, and then one or more races. As indicated earlier, if districts combine the racial sub-groups with the federal requirement, the additional cost of collecting sub-group data is probably limited to redesigning and reprinting enrollment forms and extra data entry. This could be estimated to be:

Enrollment Forms (1,500,000 @ $.10) = $150,000
Data entry:
Average Salary = $2,917/mo ($35,000)
2 weeks = ~$1,500
295 Districts = $442,500

There are additional costs for both school districts and OSPI related to reporting of these additional elements. When racial sub-group data is collected, audiences will expect that data are disaggregated for racial subgroups. In addition to the typical expenses of revising district and state reports and queries, this particular data element carries the added complication of needing to be mindful of the confidentiality issues related to small cell size. Therefore, an added layer of analysis and quality assurance will be needed at each district and at OSPI. This could be estimated at:

.5 FTE data manager:

Average Salary = $75,000
.5 per district = $37,500
295 Districts = $11,062

While there may be significant expenses for each district to add state course codes and racial subgroups, they likely pale with the already absorbed impact of current data collections (i.e., CSRS, Highly Qualified Teachers, Staffing (S275), Apportionment, etc.). CSRS, introduced in 2003, began the giant leap in the amount of data and the time required to meet state requirements. With CSRS's state student identification numbers, OSPI has transitioned from aggregate yearly reporting to summary reporting of individual records. This shift has necessitated more precise reporting of student records from districts. The need for accuracy at the data entry level (i.e., typically at each school) has in turn meant that districts have had to provide training and in many cases shift other responsibilities to data management.

Staffing, costs and related impacts on schools and school districts for the collection of all data elements needed to produce state and federal reports, not just those of the 'expanded data system,' include the following specific issues and considerations for state support.

**Information Systems**

- OSPI does not provide student information, human resource or financial systems to the school districts, so automation of information management varies considerably across the state. This allows school districts to select or develop their own system depending on the business needs of their district. For instance, there are about 40 districts that do not have an automated student information system. Other school districts participate in cooperative systems and are comfortable with the one-size-fits-all option. The remaining districts have selected or built student information systems that fit their particular needs and they are generally able to customize their information systems in short order to meet their internal business needs and respond to state mandates.
- It is critical to remember that regardless of how much data is collected by the state, it is just the tip of the iceberg for the data maintained by each district in order to run their day-to-day operations. District information systems also need to maintain health records, transportation information, detailed discipline records, school calendars, lunch and recess information, locker combinations, parking lot assignments, etc. Depending on the size and local requirements of the district these components, and many others, may be integrated into the student information system or not.
- Startup costs and flat overhead costs vary significantly for districts of different sizes, and with different vendors; OSPI should provide assistance to districts by identifying minimum requirements of information systems, including the initial collection and the subsequent error processing, reporting, etc.
- The state should consider providing overhead costs for day-to-day maintenance of the information systems, which are currently absorbed as NERC (non-employee related costs).

- Most requests for additional data elements can be accommodated by software vendors with sufficient lead time (12-18 months) and a well-defined set of specifications.

**School District Business Practices**

- Most requests for additional data elements also require a change to district business practices. These too can generally be accommodated by districts with sufficient lead time (12-18 months) and a complete set of applicable business rules.
- Data collections that require parental participation may take longer. For example, the school registration process and forms will need to be modified to accommodate racial sub-group information to be collected. Also, district policies may need to be revised so school personnel know how to handle parents that do not want to provide this information, and then building level staff will need to be trained so the information collected is of high quality.

**Benefit to Districts**

- It is important that the data collection burden to districts is off-set with some value to the districts, either directly or indirectly.

**Staffing**

- Current data collection efforts require more qualified data and computer literate personnel, including backups to cover for absences and departures.
- Data management responsibilities may require year-round funding for personnel.
- There should be a professional development plan created to train existing personnel, and their backups, in data collection, management and analysis.

**Data Quality**

- More data elements, at a more granular level, are collected including student, teacher and course data.
- Data reporting frequency is moving toward real-time submission when the prior submissions were a retrospective with adequate time for appropriate edits.
- Data quality could be improved by increased training, increased data audits at the school, district and state level, and increased focus on data management skills in hiring and training school level clerical personnel.

**Data Governance**

- The appetite for school district data at the state level has grown in the past five to seven years, but it is disorganized. The state needs a data governance structure to dictate all data changes. This should include a matrix of reviewers, final approval authority, the change management rules, and process for funding for the change. By addressing data ownership, accountability, quality, access and security across institutional program "silos," data governance can lead to improved data quality.
- A change management process is also needed to introduce a predictable release schedule where a cut-off date for changes is determined and releases of data manuals and collection requirements are scheduled. This process provides time for all parties to adjust and make changes to their systems. For such a change management process to be successful, it would need to be agreed to and adhered to by all parties involved

(i.e., Legislature, OSPI and school districts.) The Federal model is three years to implement changes.
- OSPI would like to continue to collaborate with the Feasibility Study workgroup as an advisory group to the OSPI data governance team because we found this group to be extremely helpful in discussing data needs and debating issues.

**Funding**
- A formula for funding data collection systems should include a variable that captures the impact to business processes as well as the software and reporting cost.
- When efforts are funded, OSPI needs to determine and document how the funds are allocated and distributed to the Educational Service Districts, school districts and schools.
- Depending on the requirements being considered there may be both per student costs and per element costs.
- An updated Fiscal Note process is needed to ensure the costs to change business processes and systems are reflected in a response to the legislature on the costs of new legislation.
- OSPI should investigate the costs to school districts to change business processes, systems and data collections recognizing that there are modifications mandated by groups other than the legislature.

## Consideration of Ways to Reduce Duplicate Reporting

Isolated data systems within OSPI and a lack of a data governance structure have led to redundant reporting requirements for school districts. With the integrated CEDARS data warehouse, OSPI believes it can reduce several redundant reporting requirements within the next two years. These include but are not limited to:

1. Transitional Bilingual Apportionment report
2. Highly Qualified Teacher Status report
3. Career and Technical Education Vocational Completers

In addition, OSPI believes it can offer new services to school districts that will reduce their workload. These include, but are not limited to:

1. More immediate access to WASL and enrollment data for students transferring into districts from elsewhere in the state.
2. Grade history information for students transferring into districts from elsewhere in the state, minimizing the time needed for transcript analysis.
3. Teacher qualifications and endorsements to facilitate teacher/student scheduling.
4. Comparative information from the target district to the state and/or to peer districts to assist with data-driven policy development.

## Summary of Feasibility Study

OSPI has completed each of the four tasks required in RCW 28A.320:

1. collect teacher to course data (i.e., who is teaching what) using the teacher certification numbers and student course enrollments using the state student identification numbers;
2. coordinate a diverse workgroup to consider additional data elements to collect from all districts;
3. pilot the collection of additional elements in at least two school districts; and
4. submit a report by November 2008 on the feasibility of the expanded data collection.

The Feasibility Study has confirmed that additional teacher, course and student data can be collected, integrated, and reported by OSPI through CEDARS. Without much more required of districts than already mandated by the implementation of CEDARS in 2009-10, OSPI will have access to student and teacher demographics, course schedules, grade history, and certification information. This will allow OSPI to:

a. answer policy and evaluation questions that have not been able to be answered;
b. consolidate redundant reporting requirements, thus reducing the data burden on school districts;
c. provide comparative data back to school districts;
d. provide districts faster access to data primarily accessible by the state (such as WASL scores and state course codes for students transferring to a school district).

As part of the Feasibility Study, OSPI has also developed a plan for implementing state course codes by the end of the 2009-10 school year, and for expanding ethnicity-race codes to include racial subgroups by the beginning of the 2010-11 school year.

The diverse feasibility workgroup has provided insightful assistance in thinking through data that OSPI should require from districts, and two pilot districts have helped us review the impact of those additional requirements. In addition, OSPI is poised to receive teacher to course data from all districts by the end of October 2008 and again in the spring of 2009. The feasibility study pilot districts have already submitted these data with the additional feature of having used the new state course codes. These data submissions have allowed OSPI to begin designing reports to link student, teacher and course data together.

OSPI continued to convene the Feasibility Workgroup beyond their assigned task of identifying additional data elements. The OSPI staff has found this group to be extremely helpful in discussing data needs and debating issues. We would like to continue to collaborate with the workgroup as an advisory group to the OSPI data governance team that is being established to reduce redundant data collection and improve data quality.

## Contacts

Questions about the Feasibility Workgroup, or this report, should be directed to Dr. Robin Munson, Director of Student Information at Robin.Munson@k12.wa.us or 360-725-6356. Additional contacts are Dr. Joe Willhoft, Assistant Superintendent of Assessment and Student Information at Joe.Willhoft@k12.wa.us or 360-725-6334; and Mr. Peter Tamayo, Chief information Officer at Peter.Tamayo@k12.wa.us or 360-725-6134.

## Appendices

**Appendix A**: Worksheet for Definitions and Priorities of Additional Data Elements
**Appendix B**: Ethnic-Race Designation Analysis
**Appendix C**: NCES Course Code sample

Appendix A

# Worksheet for Definitions and Priorities of

# Additional Data Elements

| EDUCATOR DATA | PRIORITY<br>1= Critical to pilot<br>2= Desirable<br>3= Consider for future | SPECIFIC DEFINITIONS | COMMENTS on Utility, Reliability, and Feasibility |
|---|---|---|---|
| Race and ethnicity | **3 3 1** | Use same categories as students | Already part of CEDARS; Collect from S275; not always collected by districts; low utility (LEAP knows of no requests) |
| Teacher exit codes | **2 3 1 3** | E.g., retirement, medical, transfer | Not always collected by districts; concern about reliability of self-reporting; very low feasibility to capture exits; S275 only captures current staff |
| Teacher assignment (duty codes) | **1 1 1 1** | Grade and content assignment | Expand duty codes on S275 |
| Program codes and activity codes | **1 2 1 1** | Continue current definitions | Most can come from S275, but need multiple snapshots during year |

| | | | |
|---|---|---|---|
| Years of teaching | **2 1 3** | | Reference DRS for in-state public; use S275 |
| Educator credits, schools, degrees, major, level of degree, and route to certification | **1 1 1 1** | Credits not critical, just schools attended, major, degree; use NCES Schools and Staffing Survey | Collect from universities or extant OSPI data sources, not from districts; cost is a concern; need for HQT reporting |
| Reasons for additional pay | **1 3 2 5** | TRI, NBCT, High-Need | Concern over amount of work needed to collect; difficult to standardize |
| Professional growth plans | **3 3 3 2** | | Concern over amount of work needed to collect; difficult to standardize; need to explore aggregation; free-text needed; Pro-CERT; part of E-Cert future |
| Professional development participation | **2 3 3 2** | | Concern over amount of work needed to collect; difficult to standardize; part of E-Cert future |
| *Grade Levels/Courses taught* | **1** | | Already part of CEDARS collection |
| *Bldg Assignment* | **1** | | Already part of CEDARS collection |
| *National Board Certification* | **1** | | Already part of CEDARS warehouse |

## Worksheet for Definitions and Priorities of

## Additional Data Elements (cont')

| STUDENT DATA | PRIORITY<br>1= Critical to pilot<br>2= Desirable<br>3= Consider for future | SPECIFIC DEFINITIONS | COMMENTS on Utility, Reliability, and Feasibility |
|---|---|---|---|
| Race and ethnicity codes | 1= Critical to pilot | USDOE categories already planned for CEDARS - -<br>**Ethnicity** (Hispanic, Non-Hispanic);<br>**Race** (Am Indian, Alaskan Native, Asian, Black/Afr Amer, Nat Hawaiian/ Other Pac Islander, White);<br>**Racial subgroups**: | Offer an option for selecting multiple codes |
| Supplemental education programs | **2 2** | Collect as part of financial data | |
| Academic outcomes | **3 3 1** | College Readiness Test when implemented | Planned for CEDARS warehouse |
| Family demographics | **4 2 3** | Use NCES survey | Free/Reduced meals already collected |

| COURSE DATA | PRIORITY<br>1= Critical to pilot<br>2= Desirable<br>3= Consider for future | SPECIFIC DEFINITIONS | COMMENTS on Utility, Reliability, and Feasibility |
|---|---|---|---|
| Common course codes (NCES- SCED) | 1= Critical to pilot | See NCES- SCED course codes for math courses | |
| Course rigor | **3 3** | Use transcript course descriptors already in use | Already part of CEDARS collection |
| Course minutes | **3 3 3** | Use credits for secondary level and minutes/week in grades k-8 | Credits already part of CEDARS collection |
| **SCHOOL LEVEL FINANCIAL DATA** | **PRIORITY**<br>**1= Critical to pilot**<br>**2= Desirable**<br>**3= Consider for future** | **SPECIFIC DEFINITIONS** | **COMMENTS on Utility, Reliability, and Feasibility** |
| Teacher/staff salaries and benefits | **1 3 3 5** | | Concern over amount of time, resources needed to gather info |
| Non-salary expenditures | **1 3 3 5** | School level expenditure as enhancements to S275 and F196 | Concern over amount of time, resources needed to gather info |

Appendix B

# Ethnic-Race Designation Analysis

Joe Willhoft, Ph.D.

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**Background**

Starting in the fall of the 2010-11 new federal rules take effect requiring school districts to collect student ethnicity and race information at a more detailed level than previously required. States may begin to collect this information in the newly defined categories before 2010, but reports from states to the federal government covering the 2010-11 school year must use the new ethnic/race categories. Although state and local education agencies may collect and report race data at a more detailed level, state reports to the Department of Education that include ethnic and race data must use the seven federal categories shown below (Federal Register, vol. 72, no. 202, p. 59274):

> "Educational institutions and other recipients will be required to report aggregated racial and ethnic data in seven categories:
>
> (1) Hispanic/Latino of any race; and, for individuals who are non-Hispanic/Latino only,
> (2) American Indian or Alaska Native,
> (3) Asian,
> (4) Black or African American,
> (5) Native Hawaiian or Other Pacific Islander,
> (6) White, and
> (7) Two or more races."

These categories were generally defined in 1997 (Federal Register, vol. 62, no. 210, p. 58789) as:

> *"American Indian or Alaska Native.* A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment;
>
> *"Asian.* A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam;
>
> *"Black or African American.* A person having origins in any of the black racial groups of Africa. Terms such as ''Haitian'' or ''Negro'' can be used in addition to ''Black or African American;''
>
> *"Hispanic or Latino.* A person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, ''Spanish origin,'' can be used in addition to ''Hispanic or Latino;''
>
> *"Native Hawaiian or Other Pacific Islander.* A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands;
>
> *"White.* A person having origins in any of the original peoples of Europe, the Middle East, or North Africa."

Collecting the new federal requirements, often characterized as a "two-part question", is described in the Department of Education's "Final Guidance At-A-Glance":

> **"A two-part question must be used to collect data about students' race and ethnicity:**

**The first part should consist of a question about the respondent's ethnicity:**

Hispanic/Latino or not – the term "Spanish origin" can be used in addition to "Hispanic/Latino".

The order of the questions is important. The question about ethnicity must be asked first.

**The second part should ask the respondent to select one or more races from five racial groups:**

American Indian or Alaska Native
Asian
Black or African American
Native Hawaiian or Other Pacific Islander
White

Additional categories may be used, but they must be subcategories of these groups."

**Data Collection Feasibility**

The new federal requirements have several implications for Washington. First, the state's data system may collect racial sub-groups at a more detailed level than listed above as long as there is a defined protocol for aggregating sub-groups into one of the seven federally-required categories. This is certainly feasible and can be incorporated into the state's collection of ethnic/race data.

Second, although not required under the new federal requirements, states are "strongly encouraged to re-inventory their racial and ethnic data" (Managing an Identity Crisis: Forum Guide to Implementing New Federal Race and Ethnicity Categories, USDOE; NFES 2008-802.) This recommendation turns out to be well-timed for Washington's efforts to expand its collection of racial sub-groups. The feasibility of collecting data on additional sub-groups will be facilitated by the timing of the new federal requirements.

Third, the new requirements establish some broad parameters within which Washington's efforts to collect more detailed sub-groups will need to be defined. As such, what is most feasible for Washington would be to have sub-groups defined within the major ethnic/race categories required by federal reporting.

Finally, most states are only now beginning to implement the new federal requirements. This multi-state effort has already resulted in the generation of a host of support materials for states to use. Materials such as data collection forms, sample letters to principals and parents, and implementation plans will enhance the feasibility of Washington's efforts.

A data collection feasibility challenge is determining the number of race subcategories that should be used in Washington. Given the complexity and costs for school districts to re-inventory racial and ethnic data, every effort should be made to have Washington's subcategories be a stable list. It would be very disruptive to schools and districts to have additional subgroups added after re-inventory have been completed. It also is not reasonably feasible to use the broad array of racial subgroups listed in federal guidance materials for Washington's data collection. The following (non-exhaustive) list of possible ethnic and national origins for identification of the "Hispanic or Latino" ethnic group is provided by the Department of Education.

| Hispanic Ethnicity | | | | |
|---|---|---|---|---|
| Spaniard | Andalusian | Asturian | Casttillian | Catalonian |
| Balearic Islands | Gailego | Valencian | Canary Islands | Mexican |
| Mexican American | Mexicano | Chicano | La Raza | Mexican American Indian |
| Mexican State | Costa Rican | Guatemalan | Honduran | Nicaraguan |
| Panamanian | Salvadoran | Central American | Canal Zone | Argentinian |
| Bolivian | Chilean | Columbian | Ecuadorian | Paraguayan |
| Peruvian | Uruguayan | Venezuelan | Criollo | South Amer. |
| Latin American | Latino | Puerto Rican | Dominican | Hispanic |
| Spanish | Californio | Tehano | Nuevo Mexicano | Spanish American |

Federal guidance also provides a similar (non-exhaustive) list of national origins for the race categories of Asian, Black or African American, Native Hawaiian or Pacific Islander, and White, shown below.

| A person self identifying as Asian American or coming from the following countries/regions may be identified as Asian | | | | |
|---|---|---|---|---|
| Asian Indian | Bangladesh | Bhutan | Burma | Cambodia |
| China | Taiwan | Phillipines | Indonesia | Japan |
| Korea | Laos | Malaysia | Mongolia | Nepal |
| Okinawa | Pakistan | Singapore | Sri Lanka | Thailand |
| Vietnam | Hmong | Iwo Jiman | Maldivian | |

| A person self identifying as Black, African American, Afro-American or coming from the following countries/regions may be identified as Black/African American | | | | |
|---|---|---|---|---|
| Bahamas | Barbados | Batswana | Ethiopia | Haiti |
| Jamaica | Liberia | Madagascar | Mozambique | Namibia |
| Nigeria | Nigriti | South Africa | Sudan | Tobago |
| Trinidad | West Indies | Zaire | | |

| A person self identifying as Pacific Islander or coming from the following countries/regions may be identified as Native Hawaiian or Other Pacific Islander | | | | |
|---|---|---|---|---|
| Caroline Islands | Fiji | Guam | Hawaiian Islands | Marshall Islands |
| Papua New Guinea | Polynesia | Samoa | Solomon Islands | Tahiti |
| Tarawa islands | Tonga | | | |

| A person self identifying as Aborigine, Indigenous Australian, Torres Straits Islander, Melanesian or coming from the following countries/regions may be identified as Native Hawaiian or Other Pacific Islander | | |
|---|---|---|
| Australia | New Zealand | Torres Straits Islands |

| A person self identifying as Australian or New Zealander – not an indigenous person or coming from the following countries/regions may be identified as White | |
|---|---|
| Australia | New Zealand |

| A person self identifying as European American or coming from the following countries/regions may be identified as White | | | | |
|---|---|---|---|---|
| Britain | Denmark | Estonia | Finland | Latvia |
| Iceland | Latvia | Lithuania | Norway | Sweden |
| Belgium | France | Holland | Luxembourg | Austria |
| Czech Republic | Germany | Hungary | Poland | Slovakia |
| Switzerland | Belarus | Bulgaria | Romania | Russia |
| Ukraine | Bosnia | Catalonia | Croatia | Cyprus |
| Greece | Italy | Macedonia | Malta | Montenegro |
| Portugal | Serbia | Slovenia | Spain | Caucasus |
| Amenia | Georgia | Azerbaijan | | |

| A person self identifying as Middle Eastern American or coming from the following countries/regions may be identified as White | | | | |
|---|---|---|---|---|
| Afghanistan | Egypt | Israel | Iran | Iraq |
| Jordan | Lebanon | Palestine | Saudi Arabia | Syria |
| Turkey | Yemen | | | |

| A person self identifying as North African American or coming from the following countries/regions may be identified as White | | | |
|---|---|---|---|
| Algeria | Egypt | Morocco | Tunisia |

A separate table for American Indian/Alaska Native lists 211 tribes and tribal groups. Most of the tribes and tribal groups for Washington are not listed individually, and are collectively included as "Northwest Tribes" in the table. There are 613 Federally-recognized American Indian tribes, as of December 31, 1998, 28 of which are in Washington. Those 28 tribes, as shown in documents provided by the Department of Social and Health Services (DSHS) are:.

| Federally-recognized American Indian tribes in Washington | | | | |
|---|---|---|---|---|
| Chehalis | Colville | Cowlitz | Hoh | Jamestown |
| Kalispel | Lower Elwha | Lummi | Makah | Muckleshoot |
| Nisqually | Nooksack | Port Gamble | Puyallup | Quileute |
| Quinault | Samish | Sauk-Suiattle | Shoalwater | Skokomish |
| Snoqualmie | Spokane | Squaxin | Stillaguamish | Suquamish |
| Swinomish | Tulalip | Yakama | | |

As already stated above, the subgroups shown in these tables are not exhaustive lists. An effort to collect all possible ethnic/racial subgroups would surely be futile, and of little value from an information perspective. If an exhaustive, or even partially exhaustive list of subgroups were used, the number of students in many of the categories would be too small to allow for meaningful analysis of trends and patterns of academic progress.

A feasible approach to identify which sub-groups to use for K-12 student data systems may be to incorporate the data collection categories already being used by the University of Washington on its freshman application form. The UW form is promising for K-12 adoption; using its categories would ensure continuity of data elements across K-12 and post-secondary. A cautionary observation, however, is that some of the options on the UW form are allowed for postsecondary but not for K-12. Specifically, the new federal guidelines do not allow K-12 to provide a major race category of "Other", nor to provide an "I choose not to respond" option. Additionally, the UW form asks for verification of tribal membership from students self reporting as American Indian, which may be overly restrictive for the K-12 data needs. If the UW form were to be used as a basis for a K-12 information form, some additional guidance for racial subgroups would probably be called for. For example, the recent influx of immigration from Eastern European countries should probably be reflected in clarifying notes for the "Caucasian or White" group. The ethnic/race statistical information collected by the UW is shown below.

Statistical information collected on UW freshman application form

Are you of Hispanic or Latino origin? (Check all that apply)

☐ No ☐ Yes, Mexican or Mexican American or Chicano ☐ Yes, Argentinian
☐ Yes, Columbian ☐ Yes, Salvadoran ☐ Yes, Chilean ☐ Yes, Peruvian
☐ Yes, Spanish/Spaniard ☐ Yes, Other Hispanic or Latino ☐ I choose not to respond

What race(s) do you consider yourself? (Check all that apply)

☐ African American or Black

☐ Alaska Native or American Indian

ASIAN AMERICAN
☐ Asian Indian
☐ Chinese
☐ Filipino
☐ Hmong
☐ Indonesian
☐ Japanese
☐ Korean
☐ Laotian
☐ Malaysian
☐ Pakistani
☐ Singaporean
☐ Taiwanese
☐ Thai
☐ Vietnamese
☐ Other Asian American: Specify _____

PACIFIC ISLANDER
☐ Fijian
☐ Guamanian or Chamorro
☐ Mariana Islander
☐ Melanesian
☐ Micronesian
☐ Native Hawaiian
☐ Samoan
☐ Tongan
☐ Other Pacific Islander: Specify _____

☐ Caucasian or White: Includes persons of European (e.g., French, Italian), Middle Eastern (e.g., Iranian, Saudi Arabian),

or North African (e.g., Egyptian, Libyan) heritage

☐ Other: Specify here ONLY if none of the groups listed above applies; do not duplicate responses listed above. _____

☐ I choose not to respond

A K-12 ethnic/race data collection table could feasibly be designed as shown below.

| Part 1 Response | Number of Values | Value labels |
|---|---|---|
| Hispanic/Latino | 9 | 8 UW Hispanic/Latino categories + "No" |

| Part 2 Response | Number of Values | Value labels |
|---|---|---|
| African American/Black | 2 | "Yes" + blank |
| American Indian/Alaska Native | 32 | 28 WA tribes + Other WA + Alaska Native + Other American Indian + blank |
| Asian American | 16 | 15 UW Asian American categories + blank |
| Native Hawaiian or Other Pacific Islander | 10 | 9 UW Pacific Islander categories + blank |
| White/Caucasian | 2 | "Yes" + blank |

**Local Data Collection Feasibility Issues**

The need to re-inventory students' ethnic/race information will be an added requirement for districts. Coordination of the expanded Washington subcategories with the new federal requirements will mean that the re-identification will only need to be done once, making the effort much more feasible. Nevertheless, some implementation challenges will remain. Obtaining the new information from parents will have cost implications. The most cost-effective method would be for parents to complete surveys which are then returned to the school. Follow-up would be necessary for those who do not respond, and central office staffing resources will need to be devoted to tracking which parents have and have not responded. Additionally, the survey(s) parents are to use for this information will need to clearly describe why these questions are being asked and must be designed to be easy to understand.

Local data collection will need to continue once re-inventory is complete for all newly-enrolled students. This will place an added burden on school registrars both for time and training. The new federal requirements do not allow K-12 reporting to include an "Unknown" category, and require that "Observer Identification" be used if the parent/guardian or student do not self-identify. For many students and parents the issue of ethnic/race identification is emotionally loaded. At the same time, fostering positive parent/school relationships is extremely important for our elementary and secondary schools. Thoughtful and careful attention needs to be paid to how school-level personnel collect ethnic/race information. Resources should be provided to support these efforts to ensure that all districts are able to support their re-inventory and data collection efforts.

**Feasibility of Data Storage and Analysis/Reporting**

The previous section considered the feasibility of data collection methods, which appear to be feasible. This section takes a look at the feasibility of data storage, and analysis and reporting.

The storage of student data with expanded subgroups is feasible if consideration is given to some reasonable constraints. The addition of subgroups within the one ethnic and five racial groups defined by the federal regulations (Hispanic ethnic; American Indian/Native Alaskan, African American/Black, Asian American, Native Hawaiian or Other Pacific Islander, and White) can be feasibly stored using a separate data field for each of the federal ethnic/race categories. This assures students can self identify as belonging to more than one category (e.g., "African American/Black" and "Asian American"), but requires students to select a single subgroup within a category (e.g., "African American/Black" and "Filipino". The reporting for the example used here, would have the student aggregated into the "Two or more races" category for all federal reports, but could have the student reported for state-level reports as simultaneously belonging to three groups: "African American/Black" and "Asian American", and "Filipino." There are two consequences of allowing students to

self identify more than one subgroup within a federally defined category. One, the number of data fields needed to store these data within district and state data systems expands exponentially, and becomes unreasonably burdensome. Two, the reporting "grain size" becomes so discrete that the complexity of reports is likely to overwhelm users and end up being of limited value. To accommodate students who identify with more than one subgroup within a single federal category, we recommend adding a data value within the subgroups such as: "Two or more groups of Asian Americans."

The feasibility of analyzing and reporting expanded subgroups rests on the scope and timing of the data collection. As mentioned above, if the number of subgroups expands to an unreasonable size, the number of students in some of the subgroups would be fewer than can be reported or analyzed. As an illustrative example, there are 172 language groups served by the state's Bilingual program. However, only 17 of those language groups have at least ten students per grade level statewide. The district numbers are clearly smaller than that. The distribution of ethnic/race subgroups within the state likely follows a similar pattern. So, although K-12 students in Washington exhibit broad diversity, the usefulness of analysis and reporting is questionable if the number of categories is so large that many of them are populated with very few students. We feel it is reasonable to use the established UW subgroup categories for Hispanic/Latino, Asian American and Native Hawaiian/Pacific Islander students, and to use the 31 subgroups for American Indian/Native Alaskan students (28 federally-recognized Washington tribes, "Other Washington tribe", "Native Alaskan tribe", and "Other American Indian tribe"). Finally, we recommend that there be no subgroup categories for African American/Black or White students.

We also recommend that districts be required to report expanded subgroups to the state. The utility of data reports from expanded subgroups will be significantly compromised if the subgroup data collection is voluntary for districts. If subgroup data collection is not a state requirement, one would never be confident in the validity of any subgroup reports. Presumably part of the rationale for subgroup reporting is to provide information to state and community policy makers to assist them in drawing conclusions about the characteristics and performance of schools and students. Incomplete or out-of-date data collection would substantially reduce the quality of the information provided to our stakeholders.

Appendix C

# NCES Course Code sample


## Subject Area 2: Mathematics (secondary)

### Foundation Mathematics

**02001 Informal Mathematics**
Informal Mathematics courses emphasize the teaching of mathematics as problem solving, communication, and reasoning, and highlight the connections among mathematical topics and between mathematics and other disciplines. These courses approach the teaching of general math, pre-algebra, and pre-geometry topics by applying numbers, and algebraic and geometric concepts and relationships to real world problems.

**02002 General Math**
General Math courses reinforce and expand students' foundational math skills, such as arithmetic operations using rational numbers; area, perimeter, and volume of geometric figures, congruence and similarity, angle relationships, the Pythagorean theorem, the rectangular coordinate system, sets and logic, ratio and proportion, estimation, formulas, solving and graphing simple equations and inequalities.

**02003 Particular Topics in Foundation Math**
These courses examine particular topics in Foundation math, such as arithmetic or basic conceptual skills, rather than provide a general overview.

**02047 Foundation Math—Independent Study**
Foundation Math—Independent Study courses, often conducted with instructors as mentors, enable students to explore topics of interest related to foundation mathematics. Independent Study courses may serve as an opportunity for students to expand their expertise in a particular application, to explore a topic in greater detail, or to develop more advanced skills.

**02049 Foundation Math—Other**

### Pure Mathematics

**02051 Pre-Algebra**
Pre-Algebra courses increase students' foundational math skills and prepare them for Algebra I by covering a variety of topics, such as properties of rational numbers (i.e., number theory), ratio, proportion, estimation, exponents and radicals, the rectangular coordinate system, sets and logic, formulas, and solving first-degree equations and inequalities.

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