

Report of the Pilot Test
for the
National Reporting System
for Adult Education



National Reporting System
for Adult Education

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I. Overview of the NRS and Pilot Test

The National Reporting System project (NRS) is developing an outcome-based accountability system for the state-administered, Federally funded adult education program. The NRS continues a cooperative process, begun more than five years ago, by the Division of Adult Education and Literacy (DAEL) of the U.S. Department of Education, state adult education directors and other adult education stakeholders, to identify, define and measure appropriate learner outcomes for the program.

The NRS is envisioned as including a common set of descriptive, process and outcome measures with a standardized data collection methodology. Local programs will collect and aggregate these data from students at each instructional site, using an individual student record system. These data will be submitted to the state for aggregation and then submission to DAEL in aggregate form. DAEL will combine states' data into a national database describing participants and outcomes of adult education. Both states and DAEL can use NRS data to improve the public accountability of the adult education program, to assess progress in meeting programmatic goals and to relate effective practices and programs with successful outcomes.

The proposed voluntary nature of the NRS changed in August 1998, when the Adult Education and Family Literacy Act within the Workforce Investment Act (P.L. 105-220) became law. This Act established accountability requirements, including that states develop outcome-based performance standards for adult education programs as one means of determining program effectiveness. The NRS mandate was then expanded to establish the measures and methods to conform to the Workforce Investment Act requirements.

NRS Project Activities

The NRS will establish a national accountability system for adult education programs by identifying measures for national reporting and their definitions, establishing methodologies for data collection, developing software standards for reporting to the U.S. Department of Education and developing training materials and activities on NRS requirements and procedures. The project is designed to conduct these activities in three phases.

The first phase, *standardization*, involved the development of standard measure definitions for state and local programs, standard data collection methodologies, and software standards for automated data reporting. This phase was completed in the summer of 1998, when interim software standards were established, methodologies were identified for pilot testing and draft definitions for use in the pilot test were distributed to state directors of adult education.

The *pilot test*, the subject of this report, was the second phase of the project and was designed to have a small number of volunteer states and local programs test the draft measure definitions and proposed methodologies under realistic conditions. The pilots assessed whether the draft measure definitions work or need refinement, as well as the costs, burden, and other difficulties in collecting the data using the proposed methodologies.

Following the pilot tests, Phase 3, *training and technical assistance*, will be provided to state and local programs to support implementation of the NRS. The different types of assistance will include: instructional training packets that will be suitable for states to use in a "train the trainer" environment;

technology-based materials for state and local staff that explain the NRS measures and methods; and individual technical assistance to states to support their implementation efforts.

NRS Measures and Pilot Tests

Three types of measures are proposed for the NRS:

- **Student descriptive measures**, including demographics and goals for attending;
- **Student participation measures**, such as contact hour received.
- **Student outcome measures** in four areas: learning gains within education functioning levels, advancement to further education and training, credentials obtained and employment measures (obtained and retained employment). Optional measures are identified in other areas, such as family literacy (such as reading more to children), and community (such as voting and community involvement).

Table 1 summarizes the NRS measures used in the pilots. A separate document, *Measure Definitions for the National Reporting System for Adult Education* describes the measures used by the pilots in greater detail.

Topic	Measures	Categories or Definitions
Student Demographics	<ul style="list-style-type: none"> • Ethnicity • Gender • Age 	<ul style="list-style-type: none"> • American Indian, Asian, Black, Hispanic, White non-Hispanic • Male, female
Student Status and Goals	<ul style="list-style-type: none"> • Labor force status • Public assistance status • Disability status • Program enrollment type • Learner goals for attending 	<ul style="list-style-type: none"> • Employed, unemployed, not in labor force • Receiving or not receiving assistance • Disabled, not disabled • Family literacy, workplace program, homeless program, correctional facilities, community corrections programs, other institutional program • Obtain a job, retain current job, improve current job, obtain a high school diploma or GED, advance to post-secondary education or job training, improve ability to communicate with others, citizenship, mandatory, other personal goal

TABLE 1 Summary of Pilot Test Measures and Definitions		
Topic	Measures	Categories or Definitions
Student Participation	<ul style="list-style-type: none"> Contact hours Reasons for not completing planned service 	<ul style="list-style-type: none"> Number of hours of instructional activity Illness/incapacity, lack of child care, lack of transportation, family problems, time or location of services not feasible, lack of interest, instruction not helpful, moved, entered employment, entered other education or training program, other known reason, cannot locate or contact
Learning Gains	<ul style="list-style-type: none"> Educational gains Citizenship skills 	<ul style="list-style-type: none"> Six educational functioning levels each for ABE and ESL in reading, writing, speaking, and listening; and functional areas Learners who achieve the skills needed to pass the citizenship exam
Economic Impact	<ul style="list-style-type: none"> Entered employment Improved employment Retained employment Reduction in receipt of public assistance 	<ul style="list-style-type: none"> Learners who obtain a job while receiving instruction or within six months of ending instruction Learners who obtain a new job with increased pay or benefits, more responsibility, or requiring higher skill levels while receiving instruction or within six months of ending instruction Learners who remain in their job at least six months after exit from the program due to upgrading their skills Students whose TANF or equivalent public assistance grant is reduced or eliminated due to employment or increased income
Credentials Attained	<ul style="list-style-type: none"> Obtained a GED or High School Diploma 	<ul style="list-style-type: none"> Number of learners who obtain a GED, high school diploma or recognized equivalent
Further Education and Training	<ul style="list-style-type: none"> Advancement to further education or training 	<ul style="list-style-type: none"> Learners enrolling in an educational or occupational skills program building on prior services or training received

Under the NRS, local programs will be required to collect the descriptive and participation measures, along with measures of learning gains, while students are enrolled in the program. The remaining outcome measures assess the program effects on employment and further education and must be collected at some time after the student leaves the program. Thus, a follow-up methodology is required for states and local programs to collect these measures.

The following three methodologies were under consideration for the NRS.

1. **Local program reporting.** The local program reporting model has local programs collect *all* student information and outcome measures, including the follow-up measures. Local

programs collect these longer-term outcome measures through a phone survey of a sample of learners who left the program six months previously.

2. **State follow-up survey.** In the state follow-up survey, the state collects the longer-term outcome measures through a phone survey of a sample of students statewide. These data are then combined at the state level with the other student data collected by local programs.
3. **Data matching.** Under this methodology, state employment and human service agencies, and often institutions of higher education, combine their data with the state department of education to create a shared, interagency database. Each agency then uses the shared data base to identify outcomes for their participants by matching records with Social Security numbers. For example, unemployment insurance (UI) records can provide data on wages and employment.

The main purpose of the pilot test was to compare the feasibility and costs of these three data collection methods for use in the NRS. The experiences of the pilot states and programs were to inform DAEL on how the NRS should operate on a national level, including the follow-up methodology to employ and to identify measures that should be included or dropped and redefined.

Eight local programs in as many states volunteered to participate in the local program pilot by conducting the follow-up survey on learners who left their programs six months earlier. The local programs also reviewed the other proposed NRS measures to provide feedback on the clarity and usability of measure definitions. In particular, the local programs reviewed the proposed educational functioning level descriptors to assess how well their staff could use them in placing and assessing learners.

Three states volunteered to conduct the state level survey on a statewide sample. Data matching was assessed through case studies of four states that currently are doing data matching. Through these studies the key issues and approaches were identified.

Overview of this Report

This report summarizes the NRS pilot tests and their findings and discusses the implications for the NRS. The next section of this report presents an overview of, and findings from, the local program pilot. Section III describes the state pilot, the procedures employed for conducting a state-level follow-up survey, as well as advantages and disadvantages to employing this specific methodology. Section IV provides an analysis and case studies of four states currently employing or implementing the data matching methodology.

II. Local Program Reporting Pilot

The main goal of the local program reporting was to assess the costs and difficulties in requiring local programs to conduct student follow-up survey methods to collect NRS outcome measures. Another important goal was for local programs to evaluate the usability and accuracy of all proposed measures, especially the educational functioning levels. The local program reporting methodology is likely to be the methodology that will be used to collect the NRS follow-up measures, at least initially, since the state-level survey cannot collect information on individual program performance required by the Workforce Investment Act. It is also not likely that data matching will be not possible in most states for several years. Thus the local reporting pilot was the largest and most important pilot test conducted.

In the spring of 1998, NRS staff asked state directors of adult education to volunteer and to recommend local programs in their states to participate in the pilot. We selected eight local programs from the states that volunteered to represent all regions of the country and to include different size programs, provider types and instructional approaches. The states and local programs that participated in the pilot were:

- **Alabama:** Northeast Alabama Area Adult Education Program, DeKalb County Vocational Technical School, Rainsville
- **Arizona:** Gary Tang Adult Education Center, Glendale
- **California:** Overfelt Adult School, San Jose
- **Iowa:** Eastern Iowa Community College, Career Assistance Center, Davenport
- **New York:** Monroe #1 BOCES, Fairport
- **Ohio:** Queen City Vocational Center, Cincinnati
- **Pennsylvania:** Lackawanna Junior College, Towanda
- **Tennessee:** Knox County Schools, Knoxville

To participate in the pilot, we asked the local programs to collect all of the proposed NRS measures, except the family and community measures, for a three-month period, beginning about mid-September 1998 and continuing through early January 1999. During this period local programs were asked to use the new educational functioning level descriptors. In addition, the local programs conducted a follow-up phone survey of learners who left the program six months prior to the time of the survey. The survey sample was limited to 250 learners and programs were permitted to survey only one of their instructional sites or program components in their program. The survey collected the proposed NRS employment, further education and training and credential measures. Appendix A contains the local follow-up survey.

With the exception of the California and Tennessee sites, all of the programs sampled all of their adult basic education students who had attended at a single site. The California site conducted the survey only on ESL students, and used a simplified version of the survey that was translated into Spanish,

Vietnamese, and Chinese. The Tennessee site conducted the survey of a sample of students who had been mandated to attend due to welfare requirements.

Before the pilot test began, two representatives from each local program, and a state representative were oriented to the NRS and given training on the pilot test methodology. During the two-day training, each program was given a guide which contained the sampling procedure, the survey, and procedures on how to contact learners and conduct the follow-up. In addition, the training covered issues such as data collection, and effective use of data for program improvement purposes.

At the end of the pilot test period, a debriefing meeting was held with at least one representative from each local program. Representatives from the local programs recounted their experiences and provided feedback on the follow-up.

Pilot Test Procedures

Alabama

Alabama attempted 716 phone calls and completed 140 surveys (20% of phone calls resulted in a completed survey) during the months of October, November, and December 1998. The original sample included 188 students sampled randomly using the guidelines supplied in the pilot procedures manual. Most calls were attempted between 9:00 a.m. and 4:00 p.m., though a significant portion were completed as late as 7:00 p.m. Callers generally had good contact information for their students; the vast majority of calls that did not result in completed surveys were attributable to students being unavailable at that particular time.

Arizona

Arizona's surveys and calling logs from October and most of November were lost due to unforeseeable circumstances (a car theft) before they could be returned. During the last two weeks of November and the first week of December, callers attempted 88 phone calls. This figure includes few students who were called more than once. The 88 calls resulted in 13 completed surveys (15% of phone calls resulted in completed surveys). Approximately one-third (31%) of the calls reached phone numbers that were disconnected, not current, or simply wrong for the students in the sample. In another 24% of the calls, the student was not available or a message was left for the student. Most of Arizona's calls were completed between 2:00 p.m. and 4:00 p.m.

California

California's sample contained a large number of ESL students whose native language was Chinese, Vietnamese or Spanish. The program conducted approximately 620 phone calls to complete 136 total surveys in all four languages (22% of the phone calls resulted in completed surveys). Most calls were conducted either in the morning hours or after 6:00 p.m. The program translated the survey instrument into these two languages and administered the translated forms to those students who were not comfortable completing the original English version.

Iowa

In Iowa, one caller attempted to contact the 113 students in the sample. Each student was called only once. These 113 phone calls resulted in 12 completed surveys (11% of the phone calls resulted in completed surveys). Iowa had significant problems with phones that were disconnected, wrong numbers, and not reaching anybody at the contact number. Most phone calls were completed between 4:00 p.m. and 8:00 p.m., though phone calls from early in the pilot test were made between 10:00 a.m. and 3:00 p.m.

New York

New York's data had not been received in time for inclusion in this report.

Ohio

Ohio's sample included 536 students who had withdrawn from the program during March, April, and May 1998, sampled randomly. Two instructional assistants (IAs) called these students during November and December 1998. The IAs conducted an estimated 600 phone calls to complete 150 surveys (25% of the calls made resulted in completed surveys). In over two-thirds of their calls, they reached a wrong number or busy line, received no answer, or left a message. Five percent of the sample refused to participate in the interview. Few members of the sample were called more than once. Most calls occurred from 3:00 p.m. to 7:00 p.m. weekday evenings.

Pennsylvania

Pennsylvania used three staff members to complete 107 phone calls to reach the 68 ABE and ESL students included in its sample. The 107 calls resulted in 37 completed surveys (35% of the calls resulted in completed surveys). Callers tended to have valid contact information, failing to reach students because they were not available or simply leaving messages. Calls were made at various times during business hours.

Tennessee

In Tennessee, seven employees attempted 748 calls during October, November, and December 1998 to reach the 200 students included in their random sample. The 748 calls resulted in a total of 112 completed surveys (15% of the calls resulted in completed surveys). Callers had difficulty completing interviews due to incorrect contact information, unreturned messages, and the inability to reach anybody at the listed phone number. Most calls were made during the middle of the day (from 10:30 a.m. to 3:00 p.m.) and in the early evening (from 5:00 p.m. to 7:30 p.m.).

Pilot Test Findings

Response Rates and Cost

We received data from seven out of the eight local programs involved in the pilot test. The seven programs combined made a total of over 2,000 phone calls, and completed interviews for approximately 400 learners. The overall interview completion rate was 23 percent, while the interview completion rate for the individual programs ranged from 11 to 35 percent. The sample size (where available), response rates, and call completion rates for each local program are shown in Figure 1 below.

Figure 1. Response and Call Completion Rates

State	Number in Sample	Number of Surveys Completed	Response Rate	Number of Calls Made	Call Completion Rate
Alabama	188	140	74%	716	20%
Arizona	n/a ^a	13	n/a	88	15%
California	n/a ^a	136	n/a	620	22%
Iowa	113	12	11%	113	11%
New York*	n/a	n/a	n/a	n/a	n/a
Ohio	536	150	28%	600 ^b	25% ^c
Pennsylvania	68	37	54%	107	35%
Tennessee	200	112	56%	748	15%

^aArizona and California were unable to provide accurate sample sizes.

^bEstimated

^cCalculation based on estimated denominator

*New York did not return valid data regarding their calling program.

Pilot test participants indicated that costs of conducting the follow-up survey over the three-month period ranged from \$500 to over \$1500. The largest categories of expense was staff time. At the debriefing, the largest concern expressed by the program representatives was the cost and availability of staff to conduct the follow-up surveys. Many of the programs are staffed by part-time and volunteer instructors and program had difficulty getting them to volunteer for a task for which they would not be compensated. It was also pointed out that in some locations, instructors are unionized, preventing the programs from even asking them to assist with the surveys. Alabama returned the only itemized expense report, which included time logs for four staff members and a catalog of supplies consumed in the survey process. Figure 2 shows their estimated expense categories.

Figure 2. Alabama's Expense Categories

Expense Category	Quantity
Secretary labor	45.5 hours
Program Coordinator labor	11.5 hours
Teacher labor (2 teachers)	41 hours
Photocopies (surveys and enrollment forms)	600 ^a
Long Distance Phone Calls and Faxes	13 calls ^b

^aEstimated

^bNo time or cost was given for individual calls

Pilot programs suggested that money (either state or Federal) be allocated specifically for WIA compliance, or the local programs may not choose or be able to spend the money for NRS activities.

Improving the Survey and Procedures

Some pilot participants thought the survey procedures could be simplified and offered suggestions for improving its design and administration. First, procedures should include a mail option for learners who do not have a valid telephone number and to otherwise increase response rates. Second, the programs also stated a desire for specific guidance on the number of learners to sample. Third, the NRS should have a mechanism for measuring “outcomes” for students still enrolled in the program. Fourth, it was

suggested that program staff should have input into when and how to conduct the survey and should then develop a survey plan.

There were also a number of concerns regarding who and when to survey. The participants felt uncomfortable with the point in time at which students were surveyed. Among their suggestions were only surveying students who reached a certain threshold for contact hours and changing the cutoff point for including students in the sample (perhaps to the end of the year, rather than surveying students who had been separated for six months).

Assessment of Educational Functioning Level Descriptors

Local programs in the pilot also reviewed and assessed the proposed changes to the educational functioning levels. Several themes emerged from the comments provided by each of the programs. First, there was general agreement that the educational functioning levels worked well for ABE students. Most programs had little or no trouble converting from the current Federal levels to the new NRS levels. There was some sentiment that the levels were not sensitive enough to show progress at the lowest levels, especially for ESL students. It was noted, however, that this is also true of the current system. The participants also pointed out that the intake process was essential to providing accurate functioning level and for conducting the follow-up surveys. Overall, however, the programs reported general satisfaction with the functional level measures, even though they have different requirements for post-testing their students, summarized below.

- Tennessee programs must show 1.5 grade level progression on the TABE after every 60 hours of contact.
- California programs test their students every 100 hours using CASAS.
- Pennsylvania programs test their students every 50 hours using the TABE.
- Arizona program test students every quarter with the TABE.
- New York programs were required to test their students every 50 hours using the TABE.
- Iowa programs test every 60 hours (on average) using either the TABE or ABLE.
- Alabama programs test their students at the teacher's discretion, usually with the TABE.
- Ohio programs have no hourly requirement for testing, though some programs test quarterly or at the end of the semester.

Assessment of the Methodology for the NRS

Advantages

The local program follow up presents several advantages as a model for the NRS. Its primary advantage is that the sampling universe is at the program level, rather than at the state level. The resulting data provides states with accountability data for each individual program within that state. States can use this information to make determinations regarding funding for local programs. Furthermore, local

programs can use these data for program improvement. Another primary advantage is the relatively high response and call completion rates compared to those in the state follow up pilot test (described below). It seems that local programs are better able to collect reach students than are states.

Barriers and Disadvantages

There are, however several disadvantages to this methodology. The costs related to conducting surveys are high, especially for local programs not used to conducting this type of data collection. As indicated by pilot test participants, the method is extremely time-consuming and few programs currently have the resources to conduct telephone surveys. Second, with each program conducting its own survey collection, there is relatively little centralized oversight over the data collection procedures. Combined with the high cost of conducting the survey, local programs may submit poor quality data. Finally, the population surveyed proved to be very difficult to contact, with many students being totally unreachable. In a number of instances students were reluctant to participate in the survey. Alabama, in fact, reported that potential students were dissuaded from even enrolling in their program when they heard that someone from the Adult School would be calling them to collect information on them once they left the program. The California site found that the ESL population is very difficult to contact and that language and cultural issues create further difficulties in contacting these students.

III. State Follow-up Survey

The state follow-up survey pilot was designed to test the feasibility of using a periodic state-level survey of students to collect the longer-term student outcome measures related to employment, further education and training and credentials. Rather than having each local program in a state conduct a survey on a sample of its students, the state survey methodology has state staff conduct a survey on a statewide sample of adult education students. This methodology appears attractive since it alleviates from local programs the burden of collecting follow-up data and also reduces the overall cost of conducting the survey.

The disadvantage of this method is that it does not allow data to be tied back to an individual local program, since the sample for the survey is drawn from the universe of all students in the state. When the pilot was planned, this shortcoming was not considered to be a major problem. However, just before the pilot test was to begin, the Workforce investment Act was passed, which requires states to evaluate the performance of individual programs on the outcome measures. This requirement means that the state level survey cannot be used as a methodology for the NRS. Despite this issue, we decided to continue with plans to conduct the pilot as a means of obtaining further information on the feasibility of conducting follow-up surveys to obtain data.

As with the local program follow-up pilot test, the main goal of this pilot was to assess the costs and barriers to implementing this data collection approach, which could then be compared to the local program methodology. The states of Idaho, Maryland and Rhode Island volunteered to participate in the state follow-up pilot. These states used a telephone-administered interview conducted with a sample of former adult education students sampled throughout the state who had left the program six months earlier. Unlike the local survey, the state survey gathered information on the community and family outcome measures in addition to the employment, further education and credential measures. It was thus considerably longer than the local survey.

The NRS staff supplied sampling guidelines, the survey instrument itself, and necessary technical assistance to the participating states. Appendix A contains a copy of the survey.

Though the NRS provided the general tools and methods for collecting the follow-up data, the states were responsible for developing the specific procedures for conducting the follow-up survey. Each state implemented the methodology in a different way.

- Idaho turned responsibility for the survey over to the University of Idaho.
- Maryland hired a private contractor that had worked for the state on previous data collection efforts.
- The state director of adult education administered Rhode Island's surveys with assistance from a welfare client in a work experience program.

All three of these systems adequately met the requirements of the NRS, and are likely similar to those that would be devised in a full-scale implementation of this methodology.

Pilot Test Procedures

Idaho

The state office of adult education in Idaho relied on the University of Idaho to conduct the surveys. The Center for Educational Research and Public Service in the College of Education had previously coordinated and conducted similar data collection efforts under funding provided by the state for a needs assessment for adult literacy. The office of adult education capitalized on this relationship to have the University conduct the NRS survey using funding provided for the previous needs assessment.

The Office of Adult Education instructed all programs in the state to submit to the University lists of students who had exited the programs during May or June 1998. These lists included approximately 2,000 names. The University then drew a sample of 1,741 students for inclusion in the survey. The state director of adult education reported that one or more programs did not submit all of the information necessary to contact the learners. These programs were instructed to submit all of the necessary information, a process that delayed the surveying of their students by several weeks. The University used four student callers to complete 207 interviews during mid-December 1998 and early- to mid-February 1999.

Maryland

The Maryland State Department of Education (MSDE) contracted with the University of Maryland at College Park to conduct the interviews. MSDE drew a random sample of 580 learners by computer. During the sampling process, MSDE collected Social Security numbers for all students and sorted the sample by the programs they attended. They then sent this list to each of the programs to collect contact information for each learner (this information is not kept in databases at the state level). The individual programs returned contact information to MSDE, which passed social security numbers and contact information (but no names) to the contractor.

The contractor in turn used three callers to complete the interviews over the course of the pilot test. Callers were instructed to make no more than five attempts to complete an interview. A total of 104 interviews were completed. The contractor was paid \$4,198 to conduct the survey.

Rhode Island

The director of adult education for Rhode Island took personal responsibility for administering the survey. He enlisted the help of a “workfare” participant who was in community work experience as a condition of receiving public assistance. Using manual procedures suggested in the NRS manual, they drew a sample of approximately 140 students from throughout the state. These students had been enrolled in every type of program in the state, including volunteer organizations; community based organizations (CBOs); and learning centers. Approximately 40 interviews were completed. The callers had great difficulty reaching learners to complete the survey. The calls themselves were completed during business hours, primarily from 10:00 a.m. to about 3:30 p.m. The director reported that the process was very frustrating since the majority of calls made did not result in completed surveys.

Pilot Test Findings

We evaluated the feasibility of the state survey methodology test for collecting NRS measures by assessing the response rates, costs, and difficulties states encountered in conducting the survey.

Response Rates and Cost

Callers at the University of Idaho made 1,763 individual phone calls and completed 207 interviews. Thus, approximately 12% of phone calls resulted in a completed interview. Out of the 1,741 students deemed eligible for the survey, 207 were reached and completed interviews, for an overall response rate of approximately 12%.

Callers at the University of Maryland reported making nearly 1,700 calls to complete 104 interviews. Thus, approximately 6% of phone calls resulted in a completed interview. The overall response rate in Maryland was approximately 18% (104 of the 580 students in the sample were actually interviewed).

While Rhode Island did not keep a precise log of the number of phone calls made, the state director estimated that about 10-12% of all attempted calls resulted in completed interviews. The overall response rate for this state was approximately 29% (40 of the 140 students in the sample were actually interviewed). These response rates were comparable to those obtained in the local program reporting pilot. Figure 3 summarizes these findings.

Figure 3. Call Completion and Response Rates

State	Number in Sample	Number of Surveys Completed	Response Rate	Number of Calls Made	Call Completion Rate
Idaho	1,741	207	11.9%	1,763	11.7%
Maryland	580	104	17.9%	1,700 ^a	6% ^b
Rhode Island	140	40	28.6%	400-480 ^a	10-12% ^b

^aEstimated.

^bCalculation based on estimated denominator

The cost for obtaining a complete survey varied from \$40.37 in Maryland to \$132.04 in Idaho and is shown in Figure 4. In both of these states, contractors conducted the surveys under very different compensation arrangements. In Idaho, the survey was done as a part of a pre-existing contract between the state office of adult education and the University. There were, therefore no new funds allocated for the pilot test activities. In Maryland, by contrast, the contractor received funds allocated specifically for the pilot test. Rhode Island did not provide an estimate of the cost of conducting the survey. Comparisons of the cost of a contractor cannot, therefore, be compared to the cost of program staff at this time.

Figure 4. Costs per Completed Interview

State	Number of Surveys Completed	Total Cost	Cost per Completed Survey
Idaho	207	\$27,333	\$132.04
Maryland	104	\$4,198	\$40.37
Rhode Island	40	Not Available	Not Available

Idaho provided greater detail on the cost of the survey. The state provided no additional funding specifically for the follow-up survey. The University estimated the cost of administering the survey at just over \$27,000, as shown in Figure 5.

Figure 5. Expense Breakdown for Idaho

Expenditures	Cost
Personnel	
Principal Investigator	11,550
Research Assistant	1,500
Research Assistant	2,500
Fringe @28.5	4,354
Irregular Help	2,850
Fringe @13.1	373
Total Personnel	18,400
Total Fringe	4,727
SUBTOTAL	23,127
Operating Expenses	
Phone	1,638
Copies	497
Postage	327
Misc.	244
SUBTOTAL	2,706
Travel	
Boise (3 trips)	1,500
SUBTOTAL	1,500
TOTAL	27,333

Difficulties in Completing Surveys

As with the local program reporting pilot, the response rates for the survey were very low. States reported reasons for non-response similar to those reported by the local programs. The majority of Rhode Island's phone calls were not completed due to incorrect contact information (disconnected or incorrect phone numbers). When the callers did reach someone other than the learner or an answering machine at the phone number listed, they left a message. In all but a few cases, the messages were not returned.

The director of Rhode Island's program also reported that the completed surveys mostly contained information from ASE students. Collecting information from ABE and ESL students proved to be much

more difficult. The director felt that the survey itself was too long and that the verbiage was difficult for those without strong English skills.

The contractors from both Idaho and Maryland reported having specific difficulties with incorrect contact information. At least one local program in Idaho submitted incomplete information for all of its students. This delayed calls to students from that program for nearly a month. The principal investigator in Idaho reported that a small but significant amount of learners contacted unexpectedly terminated the interview halfway through because of its length. The she, along with the principal investigator from Maryland, reported following the pilot test guidelines and listing large proportions of their samples as non-respondents after failing to reach them after 3 to 4 attempts.

Assessment of the Methodology for the NRS

Advantages

The state follow up presents several advantages over the local program follow up methodology. First, it is significantly less costly than the local survey. By administering the survey to a state sample of students, as opposed to individual student samples for each local program, the overall cost of data collection is reduced. Idaho was, in fact, able to conduct the survey without any new expenditure by taking advantage of a pre-existing arrangement with the University of Idaho. Maryland also contracted with the State University to conduct the survey at relatively low cost. Finally, Rhode Island used only two staff members to conduct its interviews.

A second advantage to the state option is that it alleviates the burden of data collection from each local program and centralizes it at the state level or to a state contractor. By using contractors, as in Maryland and Idaho, the state was relieved of the burden of data collection. There the state Universities actually did the data collection and took on the burdens of providing staff and conducting calls. Local programs would rarely be able to afford to hire a third party contractor.

Barriers and Disadvantages

The state survey option is greatly facilitated by a state-level database with student data, including student contact information. None of the three states in this pilot had an adequate database at the state level. In both Maryland and Idaho, local programs had to be contacted to obtain the contact information and other pertinent information for the survey. In Rhode Island, manual procedures had to be used. This lack of information created substantial delays in the conduct of the survey. The use of this methodology would require states to develop an individual level student record database at the state level, which apparently would be a significant challenge for most states.

The biggest drawback to this methodology, however, is that the state survey does not allow outcomes to be identified at the individual program level. The data can be used to assess the performance of the state program as a whole on the outcome measures, but as currently designed, cannot be used for assessing the performance of individual programs. This drawback is fatal for using methodology in the NRS, given the current requirements of the Workforce Investment Act. Section 231(e)(2) of the Act requires that the states assess local program performance on the core outcome measures, which include the follow-up measures used in the pilot. The lack of information on individual programs would prevent states from complying with the data requirements of the WIA. Thus, this methodology cannot assist in meeting the accountability requirements of the law.

IV. Data Matching

Data matching refers to the procedures where two or more agencies pool and share data on a common group of participants to match students to outcomes. The data consist of individual student records collected by each of the agencies that can be linked through a common identifier, typically a Social Security number. Matching the pooled data using the common identifier produces a new individual student record or an aggregated data report containing data from one or more of the additional agencies. Each agency can use the new, pooled data records or reports to understand the impact of their program on participants and to obtain data to meet their reporting and accountability requirements.

Data matching methods are particularly well suited for studying outcomes that occur some time after program participation. For example, wage record information systems have been used to study the outcomes of vocational education and employment programs. The WIA requires job training programs funded under Title I to use a data matching methodology to obtain the required employment outcomes. For the NRS, this methodology holds considerable promise for studying the follow-up employment measures. Among the reasons making it attractive are its cost relative to surveys, decreased data collection burdens, and increased data validity.

The first major advantage of data matching is that it is significantly less costly than the survey methodologies. The cost of conducting a survey—drawing a sample, training interviewers, making phone calls—are replaced with the cost of combined, cleaning and analyzing the data. Further, this cost can be divided among the participating agencies.

The second major advantage of data matching is reduced data collection burden. At the local program level, staff no longer needs to conduct survey procedures. Local programs would collect only the demographic, participation and educational functioning level information. Finally, matched data are likely to be more valid than those collected through surveys, which are self-reported data. Some former students may not be truthful about whether they obtained a job, for example. The wage or unemployment record data base, however, would reveal whether students are working.

The Data Matching Pilot

The local program and state survey pilots assessed the cost and data quality resulting from using these methodologies by having programs and states conduct the data collection on a limited scale. With data matching, it was not possible to ask a state or program to begin using matching procedures, since such procedures need data systems and interagency collaboration that require considerable time to put in place. To identify the issues in establishing and using data matching as an approach for the NRS, we studied four states that are using this methodology.

The four states investigated in the NRS pilot test have the most advanced systems relevant to adult education programs, although they are in different stages of development. Florida and Illinois have already created their systems and are conducting analyses and using shared data for accountability. California and Oregon have only begun implementation of shared data arrangements within the last two years. In examining these systems we focused on:

- The development of the systems, including why they were developed and the problems encountered in establishing them;

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- The measures included in each system;
 - How each system operates to perform the data matching and reporting;
 - Management of the system and cost, including start-up and maintenance costs; and
 - Training and technical assistance need to implement the systems.

Development of the Systems

The development of collaborative data systems occurred because of mandates from the state legislatures of Florida, California, and Oregon, which differed in their specific reasoning for requiring these systems. Generally, however, the legislatures wanted uniform accountability and planning systems for education and training programs. In Florida the mandate originally covered only the K-12 system but was broadened to include adult education. Illinois's system evolved from a project originally funded by the National Governor's Association to develop integrated state management information systems for workforce development programs. Illinois was one of six states awarded a grant to develop this system and work continued to complete and implement the system after the grant ended.

The states intended their integrated systems to include data from all agencies that deliver employment and training services. Heads of the involved agencies delegated responsibility for developing and implementing the system to mid-level officials, with the power to act on their behalf as they made decisions affecting the project. The involvement of mid-level career officials helped the development and implementation of the system to continue without regard to any individual agency director, who often changed. In the four states, this continuity allowed the staff to become personally involved in the project and remain dedicated to its completion, continuing their work in spite of frequent changes among agency leadership.

In each of the states, the need for employment-related outcomes were a primary force in the systems' development. For this reason, the states' Departments of Labor or their equivalent were major participants in the initial development. Other agencies and departments that deliver training and employment services, or had an interest in the services provided to their clients, were also heavily involved in the development process. Among these are agencies and departments that oversee: state budgets; commerce and economic development; community colleges; corrections; education; employment and unemployment programs; health; other higher education providers (e.g., post secondary commissions, state university systems, and boards of higher education); the Job Partnership Training Act program (now Title 1 under the Workforce Investment Act); labor; vocational rehabilitation; and the welfare agency. Figure 6 presents a summary of the agencies involved in each state.

Figure 6. Agencies Involved in Developing and Implementing Collaborative Data Systems

Agency/Department	California	Florida	Illinois	Oregon
Budget Bureau		✓		
Commerce/Econ Development		✓	✓	
Community Colleges	✓	✓	✓	✓
Corrections	✓	✓	✓	✓
Education	✓	✓	✓	✓
Employment/Unemployment Services	✓	✓	✓	✓
Health	✓			
Other Higher Education	✓	✓	✓ ¹	
JPTA	✓	✓	✓	✓
Labor	✓	✓		✓
Vocational Rehabilitation	✓	✓	✓	
Welfare	✓	✓	✓	✓

¹ Data is only collected on program entry, not completion

Barriers to Development

The most significant barriers to the development of these systems have been confidentiality issues around Social Security numbers, development of measure definitions common across agencies, and clients whose program participation status changes are not reflected as they cross state lines for employment reasons.

Data matching arrangements require participant Social Security numbers as a common identifier. However, there are legal barriers to sharing of Social Security numbers across agencies due to confidentiality issues. Each state has resolved this problem somewhat differently. In Oregon, each agency is permitted only to use the aggregate data within its own agency and cannot identify individual participants. Consequently, reports are only provided in aggregate form. Likewise in Florida, only aggregate reporting is permitted, though data can be aggregated for the entire workforce development system, for the main components or agencies of the system, or for individual state and local workforce development activities. In Illinois, state agencies may share data and with Social Security numbers for research purposes only and the state has ruled that data sharing for accountability is permitted as research, though this is likewise carried out with aggregate data. In California, program participants must sign a release form for their information to be used in the common database. Many participants do not sign the release, creating significant information gaps. For example, about 50 percent of target participants in Los Angeles County do not sign the release.

For matched data to be meaningful, the shared data items should have a common definition or meaning. In Florida, it has been easier for community colleges and local education agencies (LEAs) to work with non-educational agencies than to work with each other due to the lack of common definitions and historically different data collection systems. Even though the legislature has mandated a common system for the education agencies, differences remain, and the state continues to work on them.

Illinois provides a specific example. The shared data base is intended to include only program “completers,” but the term is defined differently for adult education, job training participants, and higher education students. In adult education, a student who advances an educational functioning level is considered a completer. For job training programs, a completer is someone how has been employed for 90

days; for higher education, a completer must have received an associate degree and/or a completion certificate. It was not possible to develop a common definition that all agencies agreed upon. Instead, the agreed upon solution has been the measurement creation of “accountability cohorts” in which each agency uses its mandated or traditional definition of a completer.

Oregon similarly lacked the definitions necessary to describe its workforce development clients. The basic skills curriculum in the state is housed in the state community college system. This system, however, had no way of recording data on its students enrolled in this curriculum. In order to adopt a set of workable definitions for these clients, the state adopted an entirely new data system, TOPS. This system allows the state to track basic skills students in the community colleges and to include that data with other information reported by the college.

A final problem which has not been resolved is that fact that Unemployment Insurance data, which tracks wages and employment, is only valid in the state in which the person first applied. Employment data will not, therefore, be available for clients that take jobs in neighboring states. The extent of this problem is not known, although Illinois estimated that they lose about four percent of participants due to their moving out of the state.

Data Collected and Reported in the Systems

The four states in this pilot test collect two major types of data. The first type, demographic and descriptive information, gives programs the ability to accurately describe their client base to their constituent audiences. Outcome measures and other performance indicators, the second type of data collected, provide the states with mechanisms for program accountability.

Among the demographic and descriptive measures most commonly collected are: years of education, highest level completed, ethnicity, reasons for enrollment, educational functioning level (usually based on standardized test scores), employment status, participation in JTPA or welfare programs, and special needs. These measures can be aggregated to provide a detailed portrayal of program participants, allowing judgements about target population access to various programs.

There is great similarity in terms of the outcome measures and performance indicators that can be reported.

- Illinois can report on 35 different measures collected by participating agencies, including core education, welfare, employment, and income measures. Customer satisfaction measures were defined, but never implemented. An adult education report, for example, might indicate that a client received a GED or high school diploma, got a job, was employed 12 and 24 months later, participated in continuing education, and left welfare. Information for these measures is available through Unemployment Insurance (UI) records, monthly welfare benefits databases, the shared higher education database, and community college enrollment data.
- In California, outcome measures include job placement, wages and earnings, length of employment and employment rates are currently reported. Learning gains, GED attainment and employer satisfaction may be added later.

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- Oregon will report on job placement, job retention, wages and earnings, welfare reduction, welfare recidivism, return on investment, attainment of a GED or credentials, and completion of work/community learning experience. Educational measures will soon be added including completion of educational functional levels, attainment of workforce readiness (through attainment of specific skills), and skill gains in reading, writing, thinking, speaking, and listening; and English language acquisition.
 - In Florida, performance indicators focus specifically on the workforce development system. Data collection focuses on welfare cessation, wages earned, and employment status, continuation and retention in higher education, and customer satisfaction. In education, data are collected by districts and include types of program provided, enrollments, completions, placement as determined by teachers, and other performance indicators.

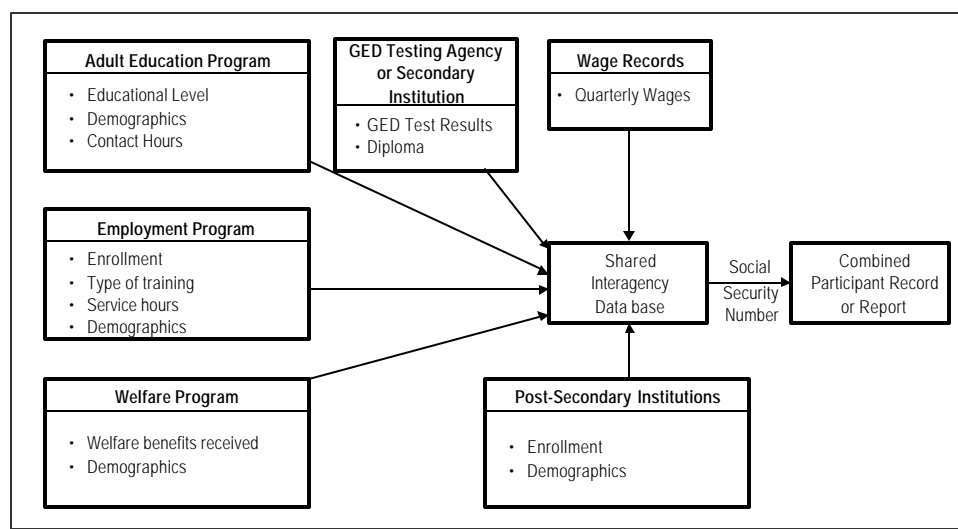
Among the four states, only Oregon included all adult education students in the shared data system. California's system includes only ABE and ESL students who have employment as a primary or secondary goal, and adults enrolled in Regional Occupational Centers (ROC) and in adult vocational education. In Florida, students participating in GED and other adult education programs are included. Illinois's shared data system includes all adult education students.

System Operation

Under a data matching system, each participating agency collects a common core of demographic and descriptive information on their participants, dates of program participation, a common identification number (Social Security number) and the outcome measures specific to its program. All measures that are shared among the agencies need to have common definitions if the resulting analyses and reports are to be meaningful across agencies.

Under the central data processing or *data warehousing* model, each agency submits its individual client records containing the data to be shared to a central source (either a contractor or in-house agency). This central agency combines the information into a single data pool and eliminates record duplication using Social Security numbers. This data pool is then available to the individual agencies, which can request specific tables and reports. The reports are usually in aggregate form at the state, program and site level although individual data reporting can be produced. Local program providers can also request reports through their agencies. Figure 7 shows this model of data matching.

Figure 7



Example of Shared Interagency Data Base—Data Warehouse

Under a second, decentralized or *data harvesting* model of data matching, each agency maintains its own data records and each separate agency requests matches from the agency with the needed data. To match with an outside agency, the requesting agency sends records containing Social Security numbers and other data needed for the analysis to another agency, along with the format of the data tables needed. The other agency makes the matches and reports the data in the requested format. For example, to obtain the GED test results of students, the state could send the Social Security numbers of students who had a goal of passing the GED tests, along with demographic and program information, to the state agency that does GED testing. The testing agency would match the records to produce a report on the number and characteristics of students who passed the GED tests. The state could then use this information in its annual NRS reporting.

For both types of data matching, incorrect or missing Social Security numbers affects the availability of data. This problem can be substantial if students refuse to provide their Social Security number or provide incorrect numbers. Legal barriers to collecting Social Security numbers also pose a significant barrier to this methodology. Another serious problem affecting data analyses with data matching is the time lag from the end of the reporting period until when the data are available. It often takes two or more quarters for all of the data to be available in agencies. Among the four states, the time lag ranges from one quarter to a year. For example, if a student leaves the program in February, entered employment is measured in the next quarter (April–June). However, if the time lag is two quarters, that student’s data could not be matched until the first quarter of the following calendar year.

Management and Cost

The four states have various management mechanisms to organize the data and control access and use of the data. External contractors, committees or agencies provide oversight and management. The four states also report vastly different costs for developing and maintaining the system.

In Illinois, an outside contractor, Northern Illinois University (NIU), receives the data collected by the participating agencies. An interagency committee, composed of representatives from each agency

contributing to the data system, provides oversight NIU. State staff estimated that less than \$100,000 was used to develop the MIS data management process. Costs to develop the data matching process were minimized the state had already automated UI records and software that enabled data matching, providing a blueprint for the new MIS. Maintenance costs are estimated to be approximately \$50,000 per year.

When Oregon's basic skills system began, the Office of Community College Services (OCCS) was responsible for maintaining the database. The development costs for the initial assessment instruments and data collection system were about \$80,000. OCCS is now responsible for maintaining the educational and employment records on clients in its system. A new data system, TOPS, was developed for adult education to participate in the shared information system. Costs for implementing the TOPS system included \$250,000 in local infrastructure improvements and an additional \$85,000 in state technology support expenses. Currently, OCCS provides assessment training to all agencies, while the Employment Department with interagency co-funding funds the maintenance of the MIS itself, which is estimated at \$750,000.

The Florida Education and Training Placement Information Program (FETPIP) was created by an act of the Florida legislature in 1988. FETPIP serves as the central data warehouse for information from workforce development agencies, compiling individual student or participant files submitted electronically by participating organizations. The current FETPIP annual budget is approximately \$600,000, of which \$400,000 comes from general state funding, \$140,000 comes from the Department of Labor and Economic Security, and \$60,000 comes from federal Perkins Act resources. These funds pay for nine professional and one support- staff members.

In California, the data report will be provided to the Special Committee on Performance Based Accountability (PBA), which is under the SJTCC. From its inception, the data management system was funded by a small grant from JTPA. Currently, the state is considering a proposal to tax the agencies submitting data at the rate of \$6 per client. There is concern that this high cost will be prohibitive to small providers, who will then be unable to meet reporting requirements and lose funding.

Training and Technical Assistance for System Implementation

The development and implementation of a shared data system requires a considerable investment in training and technical assistance at the local level to ensure that the data provided are valid and reliable. Teachers, for example, typically feel overburdened by data collection requirements and all four states reported resistant to and lack of understanding of the reasons for data collecting and reporting. For these reasons, three of the states have substantially invested in training.

- In Illinois, three full-time staff members provide technical assistance on the state adult education data system to local adult education programs. There have been over 100 training sessions, and more than \$1 million of Section 353 funds have been spent to implement the system.
- In Oregon, more than six years have elapsed since the decision to move from a system describing only student needs and demographics to one that focuses on outcomes. Training teachers has also proved costly; 50% of professional development time is devoted to this issue, coordinated by a half-time technical assistance person.

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- Although in California, the shared system is not fully yet implemented in adult education, training on using data systems is a high priority. CASAS and the California Staff Development Institute have been providing this training on an ongoing basis.

There has been little training of adult education providers in Florida, as adult education has only a recent and limited involvement in the integrated system.

Implications for the NRS

The use of data matching arrangements is an attractive approach toward collecting the follow-up measures in the NRS. However, the experiences of California, Florida, Illinois, and Oregon in implementing this approach have shown that it takes time to develop and operate the system. While Illinois was able to get its system going within two years, Oregon required about five years and California and Florida's systems do not fully involve adult education after several years. Also crucial to implementation is an interagency planning process with individuals committed to seeing the system development. This process is successful when political concerns are kept out of the planning and development.

Another essential ingredient is for each agency to have an automated, individual participant record system. The lack of such a system for adult education in Oregon delayed development and this problem remains a barrier to adult education's involvement in Florida. It is not necessary, however, that each agency use the same record system or software, only that the software used by each agency can produce information in a common format to allow data matching.

Beyond these basic planning and infrastructure needs, the experience of the four states has identified three conceptual problems that need to be surmounted for to develop shared data arrangements: the need for common outcome and measure definitions, the need to address concerns about data confidentiality and the need for high quality training and technical assistance.

The MIS must have common definitions for outcome measures for measures that will be shared. Agencies with jurisdiction over different types of programs (for example, Departments of Labor and Education) must provide data that are based on common understandings of the measures. Furthermore, agencies within a single department (for example, community colleges and LEAs) must also use common definitions. Care must be taken, however, to ensure that the definitions agreed upon maintain their fidelity with the mission of the program. If common agreement on common definitions cannot be reached, each agency must understand what the other definitions are and must be able to accommodate these differences in interpreting the data. For example, if "program completion" is a common data element, each agency must use the same definition or must have an understanding of what the other definitions are and interpret the data accordingly.

The issue of confidentiality looms large over data matching procedures. Each of the four states had to resolve the prohibition about sharing Social Security numbers across agencies. In California, the state superintendent initially refused to allow the education department to participate because of this problem. The state now requires permission from students to share their records, and since many students refuse, there are significant gaps in the data. The other three states resolved this problem by defining the data matching as research and/or by allowing only aggregated reporting, so that individual students cannot be identified.

Many states have laws against not only sharing Social Security numbers, but against sharing any sharing educational records. These barriers must be resolved legally before data matching can become a widely used methodology for the NRS.

Finally, a great deal of training and technical assistance at the local level is needed to develop a system that produces valid and reliable data. Training should be provided on measure definitions, data collection and reporting, and data use. Such training also produces buy-in to the whole data collection and analysis process and can help “convert” teachers, local staff, other stakeholders who might be skeptical about the usefulness of the system. The training can also provide local providers with an idea of how the data is used at the state level, as well as how they can use it to improve their program.

California's Shared Data System

History and Development

A 1996 state law requires the State Job Training Coordinating Council to develop and implement an outcome-based system to measure the performance of state- and federally-funded education and training programs that comprise the state workforce preparation system. The SJTCC is to report on individual programs and the system as a whole through a series of "report cards" that include these outcomes. Implementation began in program year 1997, but education did not become involved until 1998-1999 when issues about using Social Security numbers were resolved.

Agencies Involved

Adult Education	Community Colleges	Job Service
Vocational Rehabilitation	Vocational Education	Unemployment Insurance
Job Training Programs	Department of Corrections	Department of Social Services
	Employment and Training Panel	

Adult Education Population Included

Only adult education students are specifically pursuing career enhancement or job training, which are adults enrolled in Regional Occupational Centers (ROC), adult vocational education and adults in ABE and ESL programs who have employment as a primary or secondary goal.

Outcome Measures

Job placement, wages and earnings, length of employment and employment rates are currently reported. Learning gains, GED attainment and employer satisfaction may be added later.

Operation

Each agency collects demographic information on clients, participation dates, Social Security Numbers and its own outcome measures. These data are sent to a third party contractor, who make the data matches and then sends aggregated reports back to each agency in the format it requests. There is about a one-year time lag from submission until data are available.

Barriers to Development and Implementation

The most significant barrier to implementation has been concern about whether agencies could require students to provide Social Security numbers, which prevented involvement of Department of Education programs. This issue was resolved by making the reporting of Social Security numbers voluntary. The cost of operating the system has also slowed implementation.

Management and Cost

The SJTCC established the interagency Performance-Based Accountability (PBA) Committee to develop and oversee this system. The cost for the data matching is estimated at about \$6 per client matched.

Florida's Shared Data System

History and Development

The Florida Education and Training Program (FETPIP), an interagency data collection system, was established in 1984, but remains in development for educational programming. Since 1993, participating agencies have been working to clarify definitions and data elements. FETPIP exists to obtain follow-up data on former workforce development program participants and provide this data to programs and organizations in which the participant received services.

Agencies Involved

Adult Education	Public Schools
Community Colleges	State Universities
Selected Private Vocational Education Programs	Department of Corrections
Department of Labor and Employment Security	Job Training Programs
Department of Health and Rehabilitative Services	

Adult Education Population Included

All students who enroll in adult education are included in the system.

Outcome Measures

Government job status (including job classification and pay grade), wages, length of employment of clients, welfare participation or reduction, enrollment in other education programs, enlistment in the military, employer satisfaction with training of program participants.

Operation

Each agency collects its own outcome measures. Once a year, FETPIP uses Social Security numbers to match participant files electronically to administrative records or other state and Federal agencies. Employment records are updated quarterly. Customer satisfaction measures are collected through annual surveys of a sample of employers hiring program participants.

Barriers to Development and Implementation

The major remaining obstacle has been the development of a single data collection system for community colleges and LEAs. The lack of common definitions also remains problematic. Education programs have accepted the system, however, because of its link to annual funding.

Management and Cost

FETPIP receives and compiles all student and participant data submitted from participating workforce development agencies' MISs. In 1984, the state allocated \$60,000 for initial study and design plans, though the current annual budget is approximately \$600,000. Of this, \$400,000 comes from general state funding, \$140,000 comes from the Department of Labor and Economic Security, and \$60,000 comes from federal Perkins Act resources. These funds pay for nine professional- and one support- staff members.

Illinois' Shared Data System

History and Development

Beginning in the summer of 1994, Illinois was one of six states working with the National Governors' Association (NGA) to develop a framework for managing and measuring performance across workforce development programs. The state Adult Education program worked in conjunction with representatives from employment, training, and welfare agencies to develop workforce performance measures. Most of the work in the NGA project involved identifying the common measures and developing appropriate measurement strategies.

Agencies Involved

Adult Education	Vocational Education
Job Training Programs	Employment and Training Panel
Unemployment Insurance	Veterans Affairs
Community Colleges	Department of Social Services

Adult Education Population Included

All students who enroll in adult education are included in the system.

Outcome Measures

Educational measures include attainment of credentials (including certificates of mastery, high school diploma, high school equivalency certificate, postsecondary degree or certificate, skills credential and competency credential), learning gains, and matriculation to further education and training. Economic measures include entering employment (including subsidized and unsubsidized employment, employment with earnings constraints, and employment related to training), retaining current employment, wage at placement, earnings gains, average earnings over time, welfare reduction, and unemployment insurance savings.

Operation

Each agency collects demographic information on clients, participation dates, Social Security Numbers and its own outcome measures. These data are sent to a third party contractor, who makes the data matches and sends aggregated reports to each agency in a requested format. Individual level data are not available. Economic measures are extracted from the Unemployment Insurance database.

Barriers to Development and Implementation

There has been some difficulty in aligning some of the outcome measures and definitions. The term “completer,” for example, is defined differently for education, JTPA clients, and higher education clients. In addition, Unemployment Insurance data is not available for clients that take jobs in neighboring states. Finally, the quarterly reporting of Unemployment Insurance data creates a lag for the economic measures that does not exist for education measures.

Management and Cost

It is estimated that less than \$100,000 was used to develop the MIS data management process. Costs to develop the data matching process were minimized the state had already automated University of Illinois records, providing a blueprint for the new MIS. Maintenance costs are estimated to be \$50,000 per year.

Oregon’s Shared Data System

History and Development

Oregon’s education, job training and social service agencies began working together in 1987 to determine the characteristics of Oregon’s welfare population in the wake of welfare reform. The state legislature wanted to be able to describe Oregon’s long range goals and to develop a systems approach to measuring and meeting those needs. In 1992, the legislature required agencies to work together to develop a coordinated state plan and two years later asked for core measures for the workforce development system. Prior to 1994, the system provided for client assessment only at intake. The mandates under which Oregon operated forced the development and implementation of the MIS to continue without regard to changing agency directors.

Agencies Involved

Office of Community College Services	Office of Professional and Technical Education
Employment Department	Department of Corrections
Adult and Family Services	Oregon Workforce Advisory Committee
Economic Development Agency	Job Training Partnership Act Administration
Governor’s Office of Workforce & Educational Policy	

Adult Education Population Included

All students who enroll in adult education are included in the system.

Outcome Measures

Job placement, job retention, wages and earnings, welfare reduction, welfare recidivism, return on investment and attainment of a GED or credentials are reported. Educational measures will soon be added including completion of educational functional levels, workforce readiness (through attainment of specific skills), and completion of work/community learning experience.

Operation

Each agency collects demographic information on clients, participation dates, Social Security Numbers and its own outcome measures. When other agencies want information, they provide to the relevant agency the format of the report desired, student Social Security numbers and demographic or other data as appropriate for the report requested. The individual agency returns the report or tables in aggregate form. Tables can be by program or site, but not by individual students, due to confidentiality rules. There is about a nine-month time lag from data submission by the individual agencies until data are available for reports.

Barriers to Development and Implementation

The entire process has taken considerable time as data systems needed to be developed and the development of the system required continual reaffirmation and support. The process has been facilitated by the fact that adult education and employment training programs are both under the same agency—the Office of Community College Services.

Management and Cost

Each agency maintains its own data records and pays for its own reports. The Office of Community College Services oversees the education records and the Oregon Workforce Cabinet and Workforce Advisory Committee oversee the Shared Information System housed at the Oregon Employment Department. The development costs for the system for adult education were approximately \$400,000. Including local program infrastructure and annual maintenance and reporting, the cost of the system is approximately \$750,000.