

Appendix C

Louisiana State Education Data

The Louisiana Department of Education (LDE) is the main source of education data for the state of Louisiana. The state has 64 parish school districts and four city school districts, employs 60,045 certified staff, including 50,082 classroom teachers, and serves a total of 734,706 children in the public school system (as of October 1, 2003).

Overview of Existing State Data

Researchers examined six education databases housed by the Louisiana Department of Education. Four are maintained by the Division of Planning, Analysis, and Information Resources (PAIR), one is maintained by the Division of Student Standards and Assessment, and the last is maintained by the Division of Teacher Certification and Higher Education. These six databases provide information regarding instructional spending, staff characteristics, teacher certification, student performance, and student characteristics (see Table LA1).

The Division of Planning, Analysis, and Information Resources collects and maintains data for four databases relevant to this study. This division maintains a central Web site where data and reports are available to the public (<http://www.doe.state.la.us/lde/pair/1419.html>). The Web site for Data Collection Systems (<http://www.doe.state.la.us/lde/pair/638.html>) includes user's manuals that define all data elements and posts timelines of data submissions. The four Planning, Analysis, and Information Resources databases are described below.

1. School districts in Louisiana report district-level financial data to the state via the Annual Financial Report (AFR). Data are submitted every fall for the previous school year. Similar to Arkansas financial data, fiscal categories match those collected by the U.S. Census Bureau on the F-33 form (including revenues by source and expenditures by object, function, and

program). The *Louisiana Accounting and Uniform Governmental Handbook*, available on the Planning, Analysis, and Information Resources Web site, describes each category. The Annual Financial and Statistical Report summarizes the financial data. This report is published annually and posted to the Web site in portable document format (.pdf). Raw data can be downloaded from the Web site in Microsoft Access and Excel formats.

2. The Profile of Educational Personnel (PEP) database houses information about every public school staff member, including certified staff such as teachers and principals and noncertified staff such as bus drivers. The Profile of Educational Personnel database includes information on staff job code(s), salary, education level, years of experience, gender, race, and ethnicity. Class codes indicating all the classes taught by a teacher are also reported. District data summary tables are downloadable in Microsoft Excel format and published annually in two reports: Standard Teacher Counts and Salary Averages and Reported Personnel and District Salaries. Budgeted and actual end-of-year figures for staff and salaries (as of October 1) are reported. School districts submit Profile of Educational Personnel data to the state every fall and spring for the current school year.

3. The Student Information System (SIS) database includes information about every student enrolled in the public school system in Louisiana, including students in grades K–12, prekindergarten classes, infant and preschool programs, and nongraded classes. Districts report data annually (as of October 1) on each student's gender, race/ethnicity, free or reduced-price lunch program participation, limited English proficient status, special education status, class codes, and other variables. School and district summary tables are downloadable in Microsoft Excel format and available in portable document format (.pdf) from the Multiple Statistics Report on the agency's Web site.

4. The Louisiana Department of Education uses the Annual School Report to verify teacher certification, class size, and other measures. Districts submit data to the state every fall for the current school year. School and district summary reports are posted annually in the District Composite Reports, available on the Planning, Analysis, and Information Resources Web site in portable document format (.pdf).

In addition to the four databases managed by the Planning, Analysis, and Information Resources division, two other divisions in the Louisiana Department of Education manage student performance and teacher certification data (see Table LA1).

5. The Division of Student Standards and Assessment manages all student achievement data. This division maintains a central Web site (<http://www.doe.state.la.us/lde/ssa/testhome.html>) with summary reports of test data in portable document file (.pdf) format. School-, district-, and state-level data are also downloadable in Microsoft Excel format. Data reflect results from spring and summer administrations of the state's criterion-referenced and norm-referenced tests. Student test results are also published annually in the District Composite Reports. Users may also request student achievement data directly from the Louisiana Department of Education.

6. The Division of Teacher Certification and Higher Education houses the Teacher Certification Database (TCR), which contains information about every public school teacher certified to teach in Louisiana. Division staff update the database daily as requests for certification are received and completed. It includes information about every teacher's certificate type and level, certification area(s) and academic degree(s). The Web site (<http://www.teachlouisiana.net>) has a search tool enabling public users to look up information about teachers by name. The District Composite Reports provide teacher certification and

qualification information on an annual basis. However, the Web site contains neither downloadable raw data nor documentation on data variables.

Table LA1

Summary of Existing State Databases, Louisiana

Data Category	State Database	Managing Agency/Department
Instructional expenditures	Annual Financial Report (AFR)	Louisiana Department of Education Division of Planning, Analysis, and Information Resources
Staff characteristics	Profile of Educational Personnel (PEP) Annual School Report (ASR)	Louisiana Department of Education Division of Planning, Analysis, and Information Resources
Student characteristics	Student Information System (SIS) Annual School Report (ASR)	Louisiana Department of Education Division of Planning, Analysis, and Information Resources
Student performance	Test results database (TST) and Web site	Louisiana Department of Education Division of Student Standards and Assessment
Teacher characteristics	Teacher Certification Database (TCR)	Louisiana Department of Education Division of Teacher Certification and Higher Education

Instructional Spending

Money expended for instructional purposes by school districts in Louisiana can be examined via two data sources. First, data on each district's spending in specific instructional categories are available from the Annual Financial Report database. School-level expenditures are estimated for a limited range of function categories. Second, data on salaries can be obtained on individual staff persons from the Profile of Educational Personnel database. These data sources are summarized in Table LA2 and described below.

Table LA2

Measures of Instructional Expenditures From District Financial Data, Louisiana

Fiscal Measure	Variables Available	Description	Unit of Analysis
Instruction-related expenditure functions	Instruction	Activities dealing directly with the interaction between teachers and students	District School
	Student support services	Activities designed to assess and improve the well-being of students and to supplement the teaching process	District School
	Instructional staff support services	Activities associated with assisting the instructional staff with the content and process of providing learning experiences for students	District School
	General administration	Activities concerned with establishing and administering policy for the district	District
	School administration	Activities concerned with the overall administrative responsibility for a school	District
	Additional functions		District
Instruction-related expenditure objects	Salaries	Amounts paid to both permanent and temporary district employees, including substitutes	District
	Benefits	Amounts paid by the district on behalf of employees	District
	Additional objects		District
Staff salary data	Base pay	The employee's regular salary	Individual
	Extra compensation	Additional salary paid to an employee for additional duties outside his or her regular job assignment, such as coaching, yearbook advisor, and cheerleader sponsor	Individual
	Extended employment pay	The additional salary paid to vocational education instructors	Individual
	Professional Improvement Program salary amount	The additional amount of salary provided to an employee who is a participant in the Professional Improvement Program (PIP)	Individual

Instructional Expenditures. District-level fiscal data submitted via the Annual Financial Report include expenditures by function, object, and program. School districts in Louisiana maintain highly detailed fiscal data. However, the expenditure data submitted to the state consist of less-detailed summary data elements identified by keypunch codes. Each keypunch code represents the expenditure amount for a unique combination of function, object, and program

codes. For example, keypunch code 0015420 stands for the amount paid under the instruction function for salaries for kindergarten teachers in the regular program.

The fiscal data include expenditures for the following three function categories related to instruction:

1. The instruction function category is defined as activities dealing directly with the interaction between teachers and students. Expenditures in this function category are broken down by the following programs: regular education; special education; vocational education; other instructional programs such as driver's education, ROTC, band, and athletics; special programs such as bilingual education and prekindergarten; adult/continuing education; and community college programs. Within each of these program areas, expenditures are broken down into salaries (and several salary subcategories); employee benefits; purchased professional and technical services; repairs and maintenance services; tuition; travel expense reimbursements; instructional supplies; and equipment.

2. The pupil support services function is defined as activities designed to assess and improve the well-being of students and to supplement the teaching process. Expenditures in this function category are broken down into the following areas: child welfare and attendance services; guidance services; health services; pupil assessment and appraisal services; and other pupil support services. Within each of these areas, expenditures are broken down into salaries (and several salary subcategories); purchased professional and technical services; repairs and maintenance services; travel expense reimbursements; materials and supplies; and equipment. Employee benefits are reported as a total under pupil support services.

3. The instructional staff support services function category includes activities associated with assisting the instructional staff with the content and process of providing learning

experiences for students. Expenditures in this function category are broken down into the following areas: salaries of directors, supervisors, and coordinators; salaries of clerical and secretarial staff; instruction and curriculum development services; travel expense reimbursements; instructional staff training services; school library services; other educational media services; and other instructional staff services. Within each of these areas, expenditures are reported in numerous subcategories. Employee benefits are reported as a total under instructional staff services.

Object-level expenditures are also available in the Annual Financial Report data (salaries, benefits, and other objects). Datasets made available by the Louisiana Department of Education include total salary expenditures for a wide range of staff positions (e.g., elementary teachers in the regular program, principals, superintendents).

Salaries are reported separately for a variety of staff categories within each program under the instruction function. In the regular education program, salaries are reported separately for kindergarten teachers, elementary teachers (grades 1–8), secondary teachers (grades 9–12), and aides. In the special education program, salaries are broken down for teachers, therapists (physical therapy, occupational therapy, speech therapy, etc.), and aides. The gifted and talented program includes teachers and aides. The vocational education program includes agriculture teachers, home economics teachers, industrial arts teachers, business teachers, other vocation education teachers, and aides. Driver education, ROTC, band, athletics, Improving America’s Schools Act, bilingual education, prekindergarten, adult/continuing education, and community college programs include teachers and aides. All of these programs also report salaries for substitute teachers and aides as well as salaries for staff on sabbatical leave.

Salaries also are reported separately for a variety of staff categories under the support services function and its subfunctions, including pupil support, instructional staff services, general administration, and school administration. Under pupil support services, salaries are broken down for child welfare and attendance services; guidance services; health services; pupil assessment and appraisal services; and other pupil support services. Within these areas, salaries are listed separately for supervisors, counselors, nurses, physicians, dental hygienists, psychologists, social workers, and clerical staff. Under instructional staff services, salaries are listed separately for directors, supervisors, and coordinators; clerical staff; instruction and curriculum specialists, staff instructors, library supervisors, librarians, library aides, and audiovisual services personnel. Under general administration, salaries are listed separately for board of education members, board clerical staff, board legal services staff, superintendents, superintendent's clerical staff, assistant superintendents, assistant superintendent's clerical staff, and other executive administrative staff. Under school administration, salaries are listed separately for principals, assistant principals, and clerical staff.

The Annual Financial Report is the only source of benefits data available in Louisiana. Benefits expenditures are reported separately for each program under the instruction function (including regular education, special education, vocational education, other instructional programs, special programs, adult/continuing education, and community college programs) and for each of the support services subfunctions (including pupil support services, instructional staff services, general administration, and school administration). For each of these areas, benefits expenditures are reported separately for group insurance; Social Security; Medicare; employer's contribution to Louisiana's teacher retirement system, Louisiana's school employees' retirement,

and other retirement; unemployment compensation; worker's compensation; health benefits for retirees; sick leave severance pay; and other employee benefits.

Individual Staff Salary and Benefits Data. School districts submit Profile of Educational Personnel data to the Louisiana Department of Education twice a year, including salary amounts budgeted for every job position as of October 1 and salary amounts actually paid to every employee within the current fiscal year during the June 30 collection.

The Profile of Educational Personnel database includes four salary amounts for every employee: (a) base salary, defined as the employee's regular salary (including overtime pay for the entire year during the June 30 collection); (b) extra compensation, defined as the additional salary paid to an employee for additional duties outside of his or her regular job assignment, such as coaching, yearbook advisor, and cheerleader sponsor; (c) extended employment compensation, defined as the additional salary paid to vocational education instructors; and (d) Professional Improvement Program salary supplement, defined as the additional amount of salary provided to an employee who is a participant in the Professional Improvement Program. No information regarding benefits is collected at the individual staff level.

Data Usability. The accessibility and quality of data on instructional spending in Louisiana support the use of these data for policy research. District-level data from the Annual Financial Report and Profile of Educational Personnel are available online. Individual staff data from the Profile of Educational Personnel can be requested from the Louisiana Department of Education and easily aggregated to school and district levels. Data documentation for Annual Financial Report and Profile of Educational Personnel data are also available online and are fairly user-friendly. In addition to the raw datasets, the Louisiana Department of Education makes several reports and summaries available that are helpful to research audiences.

One limitation of these data is the lack of complete school-level data. School-level Annual Financial Report data were obtained by special request for the purposes of this study. However, these data represent estimates based on individual salary data and district-level fiscal data, not actual school expenditures. Also, only one year (2002–2003) and only two function categories (no object-level data) are available. Another limitation is the lack of benefits data at the individual staff level. Researchers interested in estimating expenditures on individual staff benefits must use a calculation of district-level benefits data and individual-level salary data.

Table LA3

Strengths and Challenges of Instructional Expenditure Data That Affect Their Use for Policy Research, Louisiana

Criterion	Strengths	Challenges
Availability and accessibility	<ul style="list-style-type: none"> • Complete Annual Financial Report district-level data are available online. • Documentation for the Annual Financial Report and Profile of Educational Personnel data is available and updated annually. 	<ul style="list-style-type: none"> • Individual- and school-level data from the Profile of Educational Personnel must be requested from the Louisiana Department of Education.
Completeness	<ul style="list-style-type: none"> • A comprehensive variety of expenditure categories is available by function, object, and program. • Individual salary data are reported as four components in the Profile of Educational Personnel. 	<ul style="list-style-type: none"> • Individual-level benefits data are not reported. • Actual school-level expenditure data are not reported (only estimates).
Accuracy	<ul style="list-style-type: none"> • The Louisiana Department of Education has multiple automatic mechanisms for checking the accuracy of Annual Financial Report and Profile of Educational Personnel data. 	
Consistency	<ul style="list-style-type: none"> • Annual Financial Report and Profile of Educational Personnel databases have been mainly consistent over time. • Changes in teacher salary calculations are well-documented. 	<ul style="list-style-type: none"> • Due to changes in data on the full-time equivalency (FTE) of staff positions, Profile of Educational Personnel salary average calculations have changed over time.
Alignment	<ul style="list-style-type: none"> • Profile of Educational Personnel salary data and Annual Financial Report function and object codes are aligned. 	

Staff Characteristics

The Profile of Educational Personnel database contains information about staff characteristics. This database includes information collected at the individual level regarding all staff, including certified staff (e.g., teachers, administrators, and instructional support staff) and uncertified staff (e.g., bus drivers). Data include variables for gender, race/ethnicity, job codes with corresponding full-time equivalency (FTE), education level, and years of professional experience. For teachers, pilot data for the 2002–2003 school year include all classes taught

during that school year. The Teacher Certification Database contains information on all teachers and includes data elements such as state certification types, certification areas, degrees, academic institutions, national board certification, and teacher test scores (on the NTE, WCET, and PRAXIS). Also, data on a teacher's route to certification (standard or alternative) are available from two sources: (a) as part of practitioner license information and (b) with teacher degree codes.

Table LA4

Staff Characteristics Available in State Databases, Louisiana

Staff Characteristic	Variables Available	Unit of Analysis	Source
Demographics	Gender and race/ethnicity	Individual	Profile of Educational Personnel
Job code	Each job assigned to an individual (multiple codes possible)	Individual	Profile of Educational Personnel
Full-time equivalency (FTE)	Full-time equivalency in each job code	Individual	Profile of Educational Personnel
Class codes	Classes taught (for teachers, pilot data 2002–2003)	Individual	Profile of Educational Personnel
Experience	The years of experience on which a salary is based	Individual	Profile of Educational Personnel
Education	Education level	Individual	Profile of Educational Personnel
	Degree (e.g., BA, BS)	Individual	Teacher Certification Database
	Degree institution	Individual	Teacher Certification Database
Certification	Certificate type (i.e., standard, nonstandard, and practitioner license)	Individual	Teacher Certification Database
	Certificate level (i.e., A, B, C)	Individual	Teacher Certification Database
	Certification area	Individual	Teacher Certification Database
	National board certification	Individual	Teacher Certification Database
	Route to certification	Individual	Teacher Certification Database
Test scores	Scores on NTE, WCET, or PRAXIS	Individual	Teacher Certification Database

Counts and Ratios. Staff full-time equivalency (FTE) counts can be calculated by job code, school, district, and demographic characteristics. Researchers also can calculate staff ratios

including pupil:teacher, pupil:administrator, and teacher:administrator. The Annual School Report includes information about class size ranges at the school level, indicating the number and percentage of core classes with 1–20 students, 21–26 students, 27–34 students, and more than 34 students.

Table LA5

Student and Staff Counts and Ratios, Louisiana

Count/Ratio Measure	Data Available	Unit of Analysis	Source
Staff full-time equivalency (FTE) counts	Can be calculated with existing data	Job code School District Demographics	Profile of Educational Personnel
Class size	Class size reported by school districts	School District	Annual School Report
Pupil:teacher Pupil:administrator Teacher:administrator	Can be calculated from existing data	School District	Profile of Educational Personnel

Data Usability. State data in Louisiana contain useful information about individual staff, with an emphasis on classroom teacher data. Datasets and reports are easily accessible; many are downloadable from the agency’s Web site, and annual staffing reports have used consistent formats over time. The inclusion of all staff (not simply certified staff) in the Profile of Educational Personnel database provides for one central source of staffing data. Two collection periods (October 1 and end of year) yield a complete and updated picture of the state’s education staff. Users can keep track of multiple job records for any individual staff by using the full-time equivalency measures for staff positions. For example, one teacher may be employed at one school for 75 percent of a full-time equivalency as a regular classroom teacher and at another school (and possibly in another district) for 25 percent of a full-time equivalency as a special education teacher. Class codes link teachers to the courses they teach and will link teachers and

students starting in 2004–2005. Documentation for the Profile of Educational Personnel database is available on the Louisiana Department of Education Web site and is updated annually.

Other strengths include the fact that the Teacher Certification Database contains all certification and education records for the state’s teachers. Teachers with up to seven certificate types, up to 16 certification areas, and up to seven degree/institution records were found in the Teacher Certification Database. The use of three certification levels (A, B, and C) makes it possible to identify new teachers, experienced teachers who have passed the state’s assessment program, and experienced teachers with master’s degrees. School-level reports showing the number of classes taught by highly qualified teachers integrate data on teacher certification level and subject areas and classes taught. Researchers can request individual-level data contained in the Profile of Educational Personnel and Teacher Certification Database from the Louisiana Department of Education. These individual data can be aggregated to school and district levels.

Major concerns regarding the Teacher Certification Database are the lack of printed documentation and the fact that it is updated continuously with no year-to-year archiving of information. Constructing a subset of certified teachers for any given study period is somewhat difficult and time-consuming. The annual District Composite Report includes year-to-year school-level summaries of teacher certification information, but this information is not consistent over time. Specifically, data from the 2000–2001 school year are available on the number and percentage of certified teachers, whereas the 2002–2003 report includes number and percentage of classes taught by highly qualified teachers, and no information is available for 2001–2002. A related challenge concerns the changes in the state’s certification structure. Changes have occurred over the last several years, making it difficult to create a coherent picture of the state’s teacher certification data.

A major challenge regarding the Profile of Educational Personnel database is the inconsistent reporting of staff years of experience. State data managers reported that school districts interpret the definition of this measure inconsistently, making it unclear whether these data reflect staff experience in a position (job code), at the current school or district, or in the profession. To reduce inconsistency in these data, the Louisiana Department of Education checks the years of experience against certification status, which in part corresponds to years of teaching experience.

Another concern is the use of multiple databases for staff data, increasing the likelihood of misaligned data. Staff records are located in the Profile of Educational Personnel database, the Teacher Certification Database, and a database containing teacher test scores. Each of these databases uses different unique identifiers to organize staff records that must be reconciled before data can be merged. Also, the lack of specific grade-level and subject-area identifiers makes it difficult to link teachers to the grades and subjects that they teach. Although class codes and certification data provide some information on the grade levels and subjects that each teacher is teaching (or is certified to teach), this information is only approximate. Additionally, it is difficult to link teachers to specific student achievement results, which are reported at the grade level and separately for various subject areas (e.g., grade 4 English language arts or grade 8 mathematics).

Table LA6

Strengths and Challenges of Staff Data That Affect Their Use for Policy Research, Louisiana

Criterion	Strength	Challenge
Availability and accessibility	<ul style="list-style-type: none"> • Many datasets and reports are available online. • The use of anonymous identifiers (as opposed to Social Security numbers) protects confidentiality. • Profile of Educational Personnel User Guide is updated annually. 	<ul style="list-style-type: none"> • Individual-level data must be requested from the Louisiana Department of Education. • No printed Teacher Certification Database documentation. • Online data are not available in formats conducive to research use (downloadable raw data).
Completeness	<ul style="list-style-type: none"> • Individual-level data are available. • Profile of Educational Personnel database is a central source of data for all staff. • All Profile of Educational Personnel data are prorated by full-time equivalency. • Two data collection periods are required for the Profile of Educational Personnel data. • Teacher Certification Database includes data on highly qualified teachers and national board certification. • Separate records are maintained for every certificate, certificate area, and degree. 	<ul style="list-style-type: none"> • No year-by-year teacher certification data are collected at the individual level. • Dates are incomplete in the Teacher Certification Database (e.g., year of degree, issue date, sequence of degrees attained). • No data are collected on teachers' degree major or coursework.
Accuracy	<ul style="list-style-type: none"> • Class size data are available and more accurate than pupil:teacher ratio. 	<ul style="list-style-type: none"> • Years of experience data may not be accurate. • Full-time equivalency counts and headcounts are identical in school-level datasets.
Consistency	<ul style="list-style-type: none"> • Profile of Educational Personnel reports have been consistent over several years. 	<ul style="list-style-type: none"> • Changes have been made over time in reporting of certification information.
Alignment	<ul style="list-style-type: none"> • Class code variable links teachers to classes taught (and will link teachers and students in 2004–2005). 	<ul style="list-style-type: none"> • The use of several personal identifiers increases potential for misaligned data. • Linking teachers to grade levels and subjects taught is difficult.

Student Performance

Louisiana has developed a comprehensive system to assess student performance called the Louisiana Educational Assessment Program for the 21st Century (LEAP-21). This includes criterion-referenced tests in grades 4, 8, and 10 and norm-referenced tests in grades 3, 5, 6, 7, and 9. In addition, school-level accountability labels are used based on student achievement test results, attendance rates, and dropout rates.

Criterion-Referenced Tests. Students in Louisiana take the Louisiana Educational Assessment Program for the 21st Century (LEAP-21) tests in the spring of grades 4 and 8. These include tests in mathematics, English language arts, science, and social studies. Students take the Graduation Exit Exam (GEE-21) for mathematics and English language arts in the spring of 10th grade and for science and social studies in the spring of 11th grade.

After an extensive process of test development, the implementation of these tests was a gradual process. Starting in the spring of 1999, the Louisiana Educational Assessment Program for the 21st Century (LEAP-21) tests in mathematics and English language arts were given to students in grades 4 and 8. The Louisiana Educational Assessment Program for the 21st Century (LEAP-21) tests in science and social studies for grades 4 and 8 were added in the spring of 2000. The Graduation Exit Exam (GEE-21) for mathematics and English language arts for 10th grade were added in the spring of 2001. Finally, the Graduation Exit Exam (GEE-21) for science and social studies for 11th grade were added in the spring of 2002.

The criterion-referenced tests in grades 4 and 8 are used for promotion purposes, and those students who do not score at the required level are offered intensive summer remediation and the opportunity to re-test at the end of the summer. Similarly, the criterion-referenced tests in

grades 10 and 11 are used to determine eligibility for high school graduation, and those students who do not score at the required level are given re-test opportunities in the summer and fall.

The Louisiana Department of Education Web site provides downloadable files with achievement test results as well as reports and data documentation. The information regarding the Spring 2003 Louisiana Educational Assessment Program for the 21st Century (LEAP-21) and Graduation Exit Exam (GEE-21) test administrations is the most complete. It includes data files with statewide, district-level, and school-level results that indicate the number and percentage of students at each of five achievement levels (advanced, mastery, basic, approaching basic, and unsatisfactory). Data files include separate results for the initial (spring) test takers, the re-testers, and all test takers combined, as well as for the four subject areas. Less complete information is available for prior years.

Norm-Referenced Tests. Students in Louisiana take the Iowa Test of Basic Skills (ITBS) in the spring of grades 3, 5, 6, and 7 and the Iowa Test of Educational Development (ITED) in the spring of grade 9. These include tests in reading, language, mathematics, science, social studies, and sources of information. The test results for 1999, 2000, 2001, and 2002 were based on national normative data from 1995. However, the 2003 test results were based on normative data from 2000. Therefore, caution must be used when interpreting these data over time.

The Louisiana Department of Education Web site provides downloadable files with Iowa Test of Basic Skills (ITBS) and Iowa Test of Educational Development (ITED) test results as well as reports and data documentation. The information regarding the Spring 2003 test administration is the most complete. It includes data files with statewide, district-level, and school-level results that indicate the composite national percentile rank of the average standard

scores. As with the criterion-referenced test data, less complete information is available for prior years.

State Accountability Rankings. Louisiana's school-based accountability system is nationally recognized for its success. Each school in the state is rated every fall based on the school's performance the previous school year. The rankings are based on achievement test results (60 percent criterion-referenced tests and 30 percent norm-referenced tests) as well as on attendance and dropout rates (10 percent).

Table LA7

Student Performance Tests, Louisiana

Test	Type	Scoring	Grades	Subject Areas
Louisiana Educational Assessment Program for the 21st Century	Criterion-referenced test	Raw score Scale score Percentage of students at each of five achievement levels	4 and 8	English language arts Mathematics Science Social studies
Graduation Exit Exam	Criterion-referenced test	Raw score Scale score Percentage of students at each of five achievement levels	10 and 11	English language arts (10) Mathematics (10) Science (11) Social studies (11)
Iowa Test of Basic Skills Iowa Test of Educational Development	Norm-referenced test	Composite national percentile rank of the average standard scores	3, 5, 6, 7, and 9	Reading Language Mathematics Science Social studies Sources of information

Data Usability. Student performance data for Louisiana are very accessible. Data are easily downloadable from the agency's Web site. Reports and data documentation are also available online. Individual student-level data, however, must be obtained by special request to the Louisiana Department of Education.

Researchers must be aware of the challenges concerning the use of criterion-referenced test scores. A major challenge of these test data is the lack of consistent testing over time. As discussed above, the criterion-referenced tests were phased in gradually, limiting the capacity for any analysis over time. Results are available for fourth- and eighth-grade English language arts and mathematics for 1999 through 2003. However, results for grades 4 and 8 in science and social studies only go back to 2000. Results for high school English language arts and mathematics go back to 2001, whereas high school science and social studies go back only to 2002. According to data documentation (*Annual Louisiana Educational Assessment Program for the 21st Century and Graduation Exit Exam Report from Spring 2003*), the difficulty of the tests remains the same from year to year through the use of a process known as test equating that involves scaled scores (computed from raw scores). However, data managers cautioned against any comparisons across years and across grades, which obviously represents a challenge to policymakers and researchers interested in longitudinal analysis.

The way that the test results are reported on the Louisiana Department of Education Web site also has changed over time. As mentioned above, the spring 2003 information is the most complete. Prior to this year, data files on the Web site did not include separate results for initial test takers, re-testers, and all test takers combined. Data files also did not indicate the number of students at each achievement level (that is, in some cases only the percentage of students at each level is listed). Furthermore, it is not always clear whether the results are for all test takers, initial test takers, or re-testers and if they represent number of students or percentages of students. Finally, the spring 1999 Louisiana Educational Assessment Program for the 21st Century data are available only at state and district levels (not school level). These challenges are surmountable, however. School-level analyses can be performed with data from the spring 2000 through spring

2003 tests, and conversations with data managers can clear up any confusion about the reporting of the results.

A major strength of the data from the norm-referenced tests is the capacity for analysis over time. The test administrations of the Iowa Test of Basic Skills (ITBS) and Iowa Test of Educational Development (ITED) have remained consistent from spring 1999 through spring 2002. A challenge concerns the spring 2003 test administration that yielded test results based on normative data from 2000 (a change from the earlier 1995 norms). Another challenge is the lack of detail in the test data available online because only composite scores are reported (no specific subject-area data). Finally, only statewide and district-level data are available online from the 1999 test administration; school-level data must be requested from the Louisiana Department of Education.

Two major strengths of the state accountability ratings are the reporting of adequate yearly progress (AYP) and the recent addition of the subgroups reports. The most obvious concerns with the system relate to the many changes since its inception in 1998–1999, the most recent being changes in the definitions of the performance labels (2002–2003) and of the growth labels (2003–2004).

Table LA8

Strengths and Challenges of Student Performance Data That Affect Their Use for Policy Research, Louisiana

Criterion	Strengths	Challenges
Availability and accessibility	<ul style="list-style-type: none"> • School- and district-level performance data (percentage of students at five proficiency levels) are downloadable from the Louisiana Department of Education Web site. • Other score formats (raw score and scale score) can be requested from the Louisiana Department of Education. 	<ul style="list-style-type: none"> • Student-level data are not publicly available and must be obtained by special request to the Louisiana Department of Education.
Completeness	<ul style="list-style-type: none"> • Student performance data are available on all test takers and on subgroups (free and reduced-price lunch program participants, race/ethnic groups, special education, and limited English proficient students). 	<ul style="list-style-type: none"> • Criterion-referenced test scores are available for a limited number of years (i.e., grades 4 and 8 Louisiana Educational Assessment Program for the 21st Century and grade 10 Graduation Exit Exam).
Accuracy		<ul style="list-style-type: none"> • Criterion-referenced test data available on the Louisiana Department of Education Web site are limited to percentage of students at five achievement levels, limiting the full range of variability in test results for research purposes.
Consistency	<ul style="list-style-type: none"> • Grades tested for Iowa Test of Basic Skills, Iowa Test of Educational Development, and Louisiana Educational Assessment Program for the 21st Century, in combination, provide a consistent span of grade levels. 	<ul style="list-style-type: none"> • Criterion-referenced test measures only go back a few years in some cases. • In 2003, the state added a pre-GED Iowa Test of Basic Skills. • Iowa Test of Basic Skills scores reflect 1995 norms until 2003, when the new 2000 norms were applied. • Accountability labels change over time.
Alignment	<ul style="list-style-type: none"> • Demographic and programmatic information about test takers are in some cases reported with test results. 	<ul style="list-style-type: none"> • Due to changes in norming standards for the norm-referenced test and incompatible scaling for the criterion-referenced tests (grades 4, 8, and 10), possibility for longitudinal analysis is limited.

Student, School, and District Characteristics

Student Characteristics. School districts submit data to the state on the characteristics of individual students via the Student Information System. Data elements include each student's gender, race/ethnicity, free and reduced-price lunch program participation, special education status, limited English proficiency (LEP) status, grade level, and other characteristics. Many important school and district characteristics can be derived from the student-level Student Information System data. The Louisiana Department of Education publishes numerous files on its Web site with aggregates of these data (the Multi-Stats Reports). Researchers also can request student-level and grade-level data from the Louisiana Department of Education.

Table LA9

Data Available in State Education Databases on Student Characteristics, Louisiana

Student Characteristic	Source			
	Individual	Grade	School	District
Gender	By request from the Louisiana Department of Education	By request from the Louisiana Department of Education	Multi-Stats Report	Multi-Stats Report
Race/ethnicity	By request from the Louisiana Department of Education	By request from the Louisiana Department of Education	Multi-Stats Report	Multi-Stats Report
Special education status	By request from the Louisiana Department of Education	By request from the Louisiana Department of Education	Multi-Stats Report	Multi-Stats Report
Limited English proficient (LEP) status	By request from the Louisiana Department of Education	By request from the Louisiana Department of Education	Multi-Stats Report	Multi-Stats Report
Free and reduced-price lunch program participation	By request from the Louisiana Department of Education	Multi-Stats Report	Multi-Stats Report	Multi-Stats Report
Grade enrollment	By request from the Louisiana Department of Education	Multi-Stats Report	Multi-Stats Report	Multi-Stats Report

School Characteristics. In addition to the student characteristics data that can be aggregated to the school level, several variables are available to measure school characteristics. These include type of school (elementary, middle/junior high, high, and combination school) and grades enrolled (e.g., kindergarten only, grades 2–5, grades 6–8). Four different student counts are available: K–12 student count, all elementary and secondary student count, students funded under the state’s funding formula, and all reported students.

District Characteristics. In addition to the student- and school-level characteristics that can be aggregated to the district level, district wealth measures are available. Two commonly used indicators include the local wealth factor and fiscal capacity per pupil. The school and district characteristics of interest to researchers are available from several databases, including the Annual School Report and the Annual Financial Report (discussed above), the Multi-Stats Reports, the Reported Salaries and Personnel, the Minimum Foundation Program Funding Formula Accountability Report, and online accountability reports.

Table LA10

Data Sources for School and District Characteristics, Louisiana

Characteristics	Data Sources	
	School	District
School type	Annual School Report	N/A
Grade range	Annual School Report	Annual School Report
Total enrollment	Multi-Stats Report	Multi-Stats Report
Class size	Annual School Report	Annual School Report
Number of teachers	Reported Salaries and Personnel	Reported Salaries and Personnel
Per pupil expenditures	MFP Funding Formula Accountability Report	Annual Financial Report
Accountability data	Online accountability reports	Online accountability reports
District wealth	N/A	Annual Financial Report

Community Characteristics. Education databases do not contain information about the characteristics of the communities within which schools or districts are located. Census information provides a number of relevant indicators for community well-being, including family income, parent education levels, and receipt of public assistance.

Summary of Findings

Data collected and managed by the Louisiana Department of Education provide useful information for resource allocation policy research. At the same time, improvements in ways that

data are collected, reported, and made available to data users could enhance the capacity of these data.

Accessibility. Most of the education data in Louisiana are accessible through the central Data and Reports section of the Louisiana Department of Education Web site. Data are available online on instructional spending; staff characteristics; student performance; and student, school, and district characteristics. Much information is available at state and district levels, although some is also available at the school level. Student characteristics and achievement test results are reported at the grade level. Additional data can be requested easily and obtained in a timely manner from the Louisiana Department of Education, whose staff and data managers are both knowledgeable and helpful.

The accessibility of these data would be improved if additional datasets were made available online (e.g., school-level fiscal and staffing data; individual-level student and staff data with anonymous identifiers that are consistent across datasets; raw data in Microsoft Access or SAS formats; and raw and scale score formats of student achievement data). The accessibility of these data would also be enhanced with improved data documentation that is posted on the same Web site. Improved documentation of student achievement data and teacher certification and education data would be especially helpful.

Alignment. The consistent use of numeric district- and school-level identifiers makes it possible to aggregate individual student and staff data to these levels. Individual-level student and staff data also make it possible to specify which individuals should be included in a given aggregate (e.g., all classroom teachers or only classroom teachers in the regular program in a given school or district).

Regarding the alignment of various types of staffing data, the use of several different identifiers is somewhat problematic. When collecting data on teacher salary, experience, certification, education, and test scores, researchers originally obtained separate data files, which included four different identifiers. A subsequent request to the Louisiana Department of Education yielded data files with only two different identifiers, but the potential of misaligned data was not eliminated. Obviously, the usability of these data would be improved by the use of a single identifier.

The possibility of linking teachers to the grades and subjects that they teach (and thus to student achievement results, which are reported separately by grade level and subject area) is uncertain but may possibly be achieved through the use of class codes and/or certification area data. Finally, the education data have the capacity to link teachers to the actual classes they teach during a given school year. For the 2002–2003 school year, data also were collected on the number of students in each class taught. Data collection is currently being piloted to link students to classes (which will allow the linking of teachers and students) and is projected to be fully in effect starting with the 2004–2005 school year.

Usability. The education data from the Louisiana Department of Education have high usability for policy research because they are generally complete, accurate, and consistent. In terms of completeness, data are available at a great level of detail and without overwhelming complexity. Much information is collected at the individual student and staff levels. The sophisticated staffing system allows for the prorating of full-time equivalents (FTEs) and salaries through one central database that includes all education staff (not simply certified staff or instructional staff); student achievement results can be reported along with the demographics of the test takers and for various student subgroups. Additional indicators of completeness include

class size data, the class codes that soon will link teachers and students, and the teacher certification database with separate records for each of a given teacher's certificates and academic degrees (as opposed to current certificate or highest degree).

More detailed data would nevertheless enhance usability. Lower levels of data would improve the capacity for research use. For example, actual school-level expenditures (as opposed to estimates) and individual staff data on benefits would provide important detail to financial data. Additional data that would be useful for research purposes include each teacher's degree major and coursework. Criterion-referenced student achievement data for additional grade levels also would greatly enhance the potential for research; the Louisiana Department of Education is currently developing test items for new criterion-referenced tests to be added to the current tests for grades 4, 8, and 10.

In terms of accuracy, examinations of these data along with conversations with data managers showed that the education data are generally valid, accurate representations of what they are intended to measure. Among the few exceptions are data on staff years of professional experience, which are problematic due to inconsistent reporting by districts. Data accuracy might of course be improved with better instructions on what type of experience to report (years of experience in the current job assignment, at the school, in the district, or in the profession). Examinations of school-level staffing aggregates revealed no differences between the full-time equivalency count data and the headcount data, which also may indicate inaccurate reporting.

Finally, in terms of consistency, most of the Louisiana Department of Education data have been fairly consistent during the period of years examined for this study. However, teacher certification data and reports have undergone certain changes due to shifts in the certification structure and requirements, and data on teacher test scores have been inconsistent due to changes

in the test used to assess teacher skills and knowledge. Even more importantly, the implementation of new criterion-referenced student achievement tests starting in 1998–1999 limits the capacity for certain analyses over time; the worst case is high school science and social studies because the new test was not implemented until the spring of 2002. The possibility may exist for conducting valid school-level analyses of improvements in student achievement by comparing fourth-grade achievement for several consecutive years, even though the process of test equating (which is supposed to make the test equally difficult from year to year) is imperfect. However, the ability of researchers to conduct any longitudinal cohort analysis—where individual students are tracked over time—depends on having student-level data as well as comparable test scaling (e.g., from the fourth-grade to the eighth-grade criterion-reference tests). Cohort analysis may be conducted with the norm-referenced student achievement data up until the spring of 2003, when the national norming group changed. However, policymakers tend to view the norm-referenced test as less relevant than the criterion-referenced test, making a longitudinal analysis of criterion-referenced scores the preferred choice.