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Minnesota State Department of Education
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July 20, 1983

Chairman, House Appropriations Committee
and
Chairman, Senate Finance Committee

Dear Sirs:

Pursuant to Minnesota Laws of 1981 Regular Session, Chapter 359, Section 2, Subdivision 6 (e), I am herewith transmitting to you the progress report of the Department of Education's Management Information Systems. This report covers the period January 1, 1983 through June 30, 1983.

If you have any questions regarding the contents of this report, please do not hesitate to contact me.

Sincerely,

DR. RUTH E. RANDALL
Commissioner of Education

RER:MIM

STATE DEPARTMENT OF EDUCATION INFORMATION SYSTEM (SDE-IS)

The State Department of Education Information System (SDE-IS) has been modified to provide additional subsystems in the areas of Child Nutrition, Teacher Licensing, Child Care, and the Data Base Element Dictionary. In addition, on line users have increased their usage of the systems report generating capability to conduct their own inquiry and to operate their own applications.

Specifically, the following modifications have been made:

1. **CHILD NUTRITION SYSTEM** - The development effort was completed and the system placed into operation under budget. Experience with the first five months of operation has shown that the cost to operate the new system is ten percent of the cost to run the previous system. The new system also has extensive capabilities that were not available in the old system.
2. **LEVIES** - Extensive changes and additions were made to the system to reflect current legislation. The LEVY calculation process was completed as required.
4. **TEACHER ASSIGNMENT SUMMARY MATRIX** - Extensive use has been made of the MATRIX to supply the SDE, the Legislature, and the University of Minnesota research personnel with data concerning districts' professional staff. The annual Staff Salary reports are now included in the capabilities of the MATRIX report program.
5. **TEACHER LICENSING** - The analysis and design effort to transfer the complete Teacher Licensing and Assignment Validation processes from ISB to the SDE-IS is well underway. This effort will bring the complete licensing process on-line by approximately January 1984, assignment processing by July 1, 1984.
6. **CHILD CARE SYSTEM** - The design and approval phases for the development of an on-line system to monitor and fund Child Care programs have been completed. Federal approval of the project has been received. The system and the project will be completed in time to make payments beginning with the federal fiscal year—October 1, 1983.
7. **VOCATIONAL EDUCATION'S USE OF SDE-FIN DATA** - The programs and procedure have been implemented to provide financial data to Vocational Education through the SDE-FIN system. This process eliminates the requirement that Vocational Education collect financial data independent of SDE-FIN data collection efforts.
8. **DATABASE ELEMENT DICTIONARY (DBED)** - The database element dictionary has been developed, implemented, and is now available for use. The staff has standardized and described the data elements in the SDE-IS databases and has entered the data into the on-line dictionary. Associated with this development effort is the operation of the SDE data review process through the Data Acquisition Review Committee.

DOCUMENTATION

The SDE-IS and the Department organization surrounding the SDE-IS have been criticized twice because of a perceived lack of documentation of the SDE-IS system. A major effort during this past year was to complete all systems documentation and user manuals which is now 82 percent completed. Each of the manuals has a detailed description of each program and each system has a user manual showing how to use the system.

Work remaining on the manuals includes the periodic "reality" testing of documentation and writing manuals for those systems which still have developmental

work remaining.

MICROCOMPUTER TECHNOLOGY

The Department continues to expand its use of the microcomputer. Through the use of inexpensive, commercially available software systems, the Department has avoided original systems development and performs database computing, spread sheet analysis, and word processing as needed. Orientation in the use of the microcomputer and training in the use of database management systems, electronic spread sheets, and/or word processing has been provided to 174 staff in the past year and a half.

At the present time, the Department has 20 microcomputers, a ratio of 1 to 35 staff. Additional microcomputers have been ordered or will be ordered when the statewide administrative microcomputer contract is in effect.

DATA MANAGEMENT

In the review of the SDE-IS by the Legislative Auditor, the recommendation that the Department acquire a commercially available data dictionary was further studied by Arthur Young and Company who concluded that the Department develop its own data dictionary.

The systems design and implementation was completed by Education Data Systems in early March and the data definition process initiated. Of the 3,621 data elements which have been identified for definition, 900 have been eliminated and the remainder have been included in the data dictionary.

By October 1983, the system will provide the capability to identify the data elements as they are used by various computer programs. This will show which computer programs will be affected by any change in data element definitions and will identify those report programs which use the data element.

By March 1984, a key word index will be available for persons needing information to search through the database and identify those data elements which will meet their needs.

During FY1983, the Department established a Data Acquisition Review Committee (DARC) charged with the responsibility to review and recommend approval/disapproval of proposed data collection activities. Of the 96 forms which have been reviewed, 42 have been approved for this year and targeted for modification next year. Twenty-one were substantially modified to use the financial data collected through the ESV finance system. Five data collection activities were not approved. The DARC membership consists of five school district personnel and four Department staff.

The Department's need for student and staff data has been reviewed during this past year. A list of data collected has been compiled. This list will be reviewed and refined into a final draft by December 1983.

MECC MANAGEMENT INFORMATION SERVICES (MECC-MIS)

The MECC Management Information Services (MIS) Division provides administrative data processing and management information services which support the statewide Elementary Secondary Vocational Information System (ESV-IS). Three major application systems comprise ESV-IS: Finance (ESV-FIN), Personnel/Payroll (ESV-PPS), and Student Support (ESV-SSS). The direction of each application area is guided by advisory teams comprised of representatives from each of the seven computer service regions statewide.

During 1982-83, primary services provided by MECC included the enhancement and maintenance of ESV-FIN and ESV-PPS, limited support of ESV-SSS, and development of administrative microcomputer applications.

During the FY1984-85 biennium, the major emphasis will be the continued maintenance of the ESV-FIN system, the ESV-PPS Version 2.0, the continued development of the use of the microcomputer as an intelligent terminal, and a file builder to these two systems and the development of administrative systems based on microcomputer technology.

THE FINANCE SYSTEM (ESV-IS) - The Finance System consists of 148 programs which contain over 500,000 lines of code. The Finance Team received 200 requests for service in the form of either enhancement requests or problem reports. Nearly 70 percent of these were resolved. In addition, approximately 10 percent of one FTE's time was spent responding to telephone requests. The 1982-83 modifications to ESV-FIN include:

- Improving the Governmental Accounting, Auditing, and Financial Reporting (GAAFR) processing which resulted in more timely and accurate auditing capabilities.
- Improving the conversion processing from user dimensions to Uniform Financial Accounting and Reporting System (UFARS) dimensions.
- Improving the efficiency in extracting database information for reporting purposes.
- Modifying the automated Annual Financial Report (AFR) pick up programs to better serve the needs of the State Department of Education (SDE) and its School Financial Management function (SFM) as well as the school districts.

THE PERSONNEL/PAYROLL SYSTEM (ESV-PPS) - The existing 2.0 version of ESV-PPS contains 110 programs and nearly 500,000 lines of code. This version was frozen at the request of the PPS Advisory Team and only critical maintenance was performed. Therefore, the Personnel/Payroll Team was released to work, in concert with the two metropolitan regions, toward the development of a replacement Personnel/Payroll Version 3.0. The new personnel system was developed by one of the metropolitan regions (TIES) and will require some modification prior to incorporation into PPS. Components of PPS 3.0 version include:

- Two hundred fifty (250) projected programs in total, of which 50 payroll programs have been completed.
- One million (1,000,000) projected lines of code and 1,500 projected data elements of which 200,000 lines and 900 data elements have been completed.
- The 42 data sets comprising 3.0 have been completed.
- Additionally, a major emphasis has been placed on the development of PPS 3.0 user documentation, and training sessions.

Fiscal year 1984 and 1985 funding priorities have caused a pull back from further development of Version 3.0.

THE STUDENT SUPPORT SYSTEM (ESV-SSS) - The Student Support System received only minimal maintenance support during FY1983. An initial evaluation of school district practices indicates that there are existing systems available from commercial vendors and school districts which meet their needs. Because

of the nature of student accounting, a large system on the mainframe computer may be superfluous to the systems on microcomputers, therefore, future efforts in support of student systems will be directed toward microcomputer based systems.

TECHNICAL SERVICES - Technical Services supported the application development teams relative to vendor software. A B1800 computer was used as the interface between MECC and the host regional center at METRO II to provide the printing of reports and other developmental output at the MECC office location.

ADMINISTRATIVE MICROCOMPUTER SOFTWARE

In contrast to previous years where the microcomputer was used to link to the Burroughs mainframe at the regional centers, new software as listed below has been developed or purchased to run in a school district without the aid of a regional central mainframe computer.

1. DATA HANDLER - This database package developed at MECC allows the user to enter their own data into the microcomputer and to search, sort, and print reports. The general nature of this software allows for numerous uses in a classroom or office setting.
2. MICROCOMPUTER PAYROLL - The microcomputer payroll developed by MECC used the Ortonville payroll system as its departure point. The programs were modified, and user documentation was written for the system. This system allows a school district to pay up to 180 employees.
3. MICROCOMPUTER FINANCE - This package allows up to 1,300 accounts, 1,000 vendors/customers, and 1,000 transactions per accounting period. One of the unique features of this system allows for checking of account codes so that finance information can be transmitted directly to the State Department of Education. In addition to the design, more than half of the system has been programmed and user documentation is being developed. The microcomputer finance system will be used on a pilot basis with eight school districts to test the ability of a microcomputer based system to meet a school district's needs for financial accounting and to report data to the Department either through the regional computer center or directly to the Department.

REGIONAL SUBSIDIES

The 1981 Legislature appropriated \$8,268,000 in support of the ESV Regions for reporting of school district data to the state and support of data communications between the school district and the regional computer center. The following table reflects the distribution of these funds among the regions.

Total biennial appropriations	\$8,268,000
Total amount of recisions	\$1,197,428
Net available to regions	\$7,070,572

Regional payments:

ESV Region I (Moorhead)	\$954,838
ESV Region II (Duluth)	\$827,176
ESV Region III (St. Cloud)	\$997,684
ESV Region IV (Marshall)	\$926,127
ESV Region V (Mankato)	\$1,088,862
ESV Region VI (METRO II)	\$912,769
ESV Region VII (TIES)	\$1,363,116
TOTAL	\$7,070,572

The 1983 Legislature appropriated \$3,634,000 for FY1984 and \$1,500,000 for FY1985. While the distribution of the FY1985 funds has not been decided, the FY1984 funds will be distributed as follows:

ESV Region I (Moorhead)	\$490,750
ESV Region II (Duluth)	\$425,136
ESV Region III (St. Cloud)	\$512,771
ESV Region IV (Marshall)	\$475,993
ESV Region V (Mankato)	\$559,633
ESV Region VI (METRO II)	\$469,128
ESV Region VII (TIES)	<u>\$700,559</u>
TOTAL	\$3,634,000