

H/W  
BW

Hloc #

792278

DEPARTMENT OF EDUCATION REPORT TO THE LEGISLATURE  
ON MANAGEMENT INFORMATION SYSTEM DEVELOPMENT  
JANUARY 1, 1979 TO JUNE 30, 1979

I. INTRODUCTION

*passed TO*  
This report is submitted to the Chairman of the House Appropriations and Chairman of the Senate Finance Committees pursuant Minn. Stat. 1979, Chapter 335, Section 2, subd. 6(B)(3)+(5) *Law*

*Note: Not mandated*  
This report covers the period from January 1, 1979 to June 30, 1979.

II. DEVELOPMENT OF SDE-IS

*To the Legislature the Legislature Committee*  
The State Department of Education Information System (SDE-IS) has been designed using a database approach which means that any data item, regardless of where it is used, is collected and stored in only one place in the system, and is available to users throughout the Department or elsewhere. During this reporting period, the database has expanded from 300 to 400 million characters. Most of this expansion is the result of adding an additional year of data to the Levy system and the Annual Financial Report, and of adding specific data items to maintain information on migrant students and their families, on persons receiving Indian scholarships and items needed for calculating and reporting on transportation aids, and for making more sophisticated projections on enrollments, students and staff. During this period, the Department has also secured and now operates a remote job entry station to provide more direct access to the computer and volume printing of reports from the computer.

Specific progress has been made in the following areas:

Levies. A new transaction processing system has been developed which speeds up data entry and editing of the database. Currently there is a problem with handling data when school districts consolidate. Identification of the problem and proposed solutions are being looked at. The 1979 Legislature made extensive changes to the levy system which have been identified and reprogramming has begun.

Annual Financial Report. This database has had another year of data added to it and extensive reporting has been made from the data. The same problem of data handling when there is a consolidation of school districts has been identified and is being looked at.

Pupil/Students. This database has been redesigned to include more detailed data, especially on prekindergarten through twelfth grade students. The redesign also has combined the former pupil database with the production database and the fall report database. This revised system also incorporates a redesign of the data input and editing function.

License/Staff. The license database has been updated with '78-'79 assignment and employment data on teachers. The staff database has been updated with '78-'79 school district data. Some of the data still resides at the Information Systems Division (ISD) computer and steps have been taken to bring this data into the SDE-IS.

Migrants. This system has been completed and is implemented as an ongoing system to secure information on migrant students and their families and to keep track of them regardless of where they go.

Indian Scholarship. This is a new system, designed similar to the migrant system, to provide data on students who are receiving Indian scholarships. The system secures its input from staff who are in the field and use portable terminal.

Transportation Aid. This is the first series of subsystems which provide for the input editing, calculating and reporting of transportation aids. This system has been completed and is operational.

Vocational Education. The Information needs of the Vocational Education Section have been documented and initial systems design has begun.

Production Reporting. There has been heavy use of the special reports capability of the system, especially for making projections in student

enrollments and for conducting aid simulations. The general areas of reports include:

- School Financial Equalization Management System (used by House Research staff).
- School District information reporting.
- School District consolidation studies.
- Staff salary studies.
- New hire studies.
- Teacher termination studies.
- Staff retirement studies.
- Curriculum studies.
- Council on Economic Status of Women Study.
- Public employment study.
- State Auditor reports.
- Federal reports for the Office of Education and the National Center for Educational Statistics.
- Pupil teacher ratios.
- Enrollment projections.
- Aid simulations.

Minnesota Educational Data Item Directory (MEDID). In 1977, the Department initiated a study to examine each data item on each form sent to school districts in order to justify and to control the collection of information. As a result of the initial effort of this study, the total number of forms used by the Department was reduced from 751 to 514. Because of the continued need for information, an additional 44 forms have been authorized. The annual data acquisition calendar for the 1979-80 school year is now being developed. It is expected that a number of forms will be deleted from the calendar and further reductions can take place.

The 1979 Legislature mandated that the Department develop a data acquisition calendar and a data element dictionary. As of June 30, 1979, there were 480 forms in the data acquisition calendar and there are 30,500 of an estimated 37,000 data elements coded with skeletal information. When the coding is complete, there will be a search for duplications, and definitions will be developed.

### III. REGIONAL ESV-IS CENTERS

The development of the Elementary Secondary Vocational Information System (ESV-IS) continues by the development team at the Minnesota Educational Computer Consortium (MECC). The ESV-FIN (Finance System) has been modified and version 2.0 which incorporates all of the modifications and enhancements to date has been distributed. The ESV-PPS (Personal Payroll System) was released January 1, 1979, and is beginning to be used by all regions. The ESV-SSS (Student Support System) has been piloted in St. Paul and an unofficial version released in St. Cloud for further testing. In this system, the Instructional Management System has been piloted in the St. Cloud region.

A major problem in completing the development of these systems is our inability to hire necessary staff due to a general shortage of persons with data processing background who can work in the area of systems design and development. A State Department of Personnel study showed that the state salary structure was an average of 6% lower than the data processing industry and that the State has shorter salary ranges. As a result, response to our position openings has not been very good. On July 1 the state increased the salary structure for systems development persons. Hopefully this difficulty will be overcome shortly.

During this past half year, the Department has developed and presented to the Legislature a program for maintaining support of the regional computing centers. The Department has reviewed the plans of each of the regions for providing computing services to the school districts and has worked with the regions to increase their service capability.

Considerable interest has been shown in the area of microcomputers especially with the advent of the state contract for the APPLE-II which is being used in the instructional time-sharing system. Preliminary study shows us that there is potential for using a microcomputer in the operation of a Management Information System. Further study of this option is being conducted in an informal manner at MECC.



In general, the regional computing centers have exceeded their goal in the number of districts which were anticipated to be on the finance system. Specific progress of each region is as follows:

ESV Region I--Moorhead. Of the 93 schools in the Moorhead region, 40 are on the finance system as of June 30 and 10 are on personnel/payroll system. During the past 6 months they have secured a new director. They have also ordered a Burroughs B1800 model computer for Moorhead area and have designated Thief River Falls and Alexandria as HUB sites to provide staff assistance and concentration of data input for the surrounding schools. Region I continues to contract with ESV Region III in St. Cloud for their necessary computer services.

ESV Region II--Duluth. Of the 37 school districts in the Duluth region, seven are on the finance system and one is on personnel/payroll system. As of June 30, an additional four were on interim finance and seven on interim personnel/payroll system. These will be converted to the ESV-IS in the next year. Plans have been developed to install a Burroughs B6800 computer in February. Until then Region II will receive computer services from St. Cloud. This region also is developing remote job entry sites in the Iron Range which will connect to the regional computer.

ESV Region III--St. Cloud. Of the 68 school districts in Region III there are 46 on the finance system and 13 on the personnel/payroll system. Three districts are currently building files and piloting the student support system. St. Cloud is also piloting the inventory and the fixed asset subsystems of the ESV-FIN. The Little Falls Co-op is piloting the Instructional Management System for the state. St. Cloud is using a Burroughs B80 terminal in seven schools for local editing and data input. This region provides large scale computer services to Regions I and II.

ESV Region IV--Marshall. Of the 87 school districts in this region 14 are on the finance system and 20 are on the personnel/payroll system. This region piloted the personnel/payroll system thereby

accounting for more schools using that system. Their plans call for installing a B1800 in the fall. During this past reporting period, they have moved to bigger quarters at Southwest State University. This region receives its B6800 services from Region V in Mankato.

ESV Region V--Mankato. Of the 100 school districts in the region, 55 are on the finance system and three are on the personnel/payroll system. An additional 11 schools are using the scheduling system. This region operates the computer which is used by AVTI's in Southern Minnesota to provide career training in computer science to vocational students of the area. Region V also provides large scale computing to Region IV at Marshall. The use of the same computer for administrative processing and for career training has produced some problems to the region and they now require additional computing capability. A study has been authorized to identify more clearly what these problems are and what potential solutions are available.

ESV Region VI--Metro II. This region has been the pilot region for the finance, payroll and student systems. All of the schools in the region are on the finance system and they are progressing to put the remaining schools on the personnel/payroll system. The St. Paul School District is pilot testing the student support system. The State Department of Education has contracted with this region to secure computing services for the Department.

ESV Region VII--TIES. This region has secured two B6800s and converted their current programs to these new machines. There were problems with them and an additional B6800 was secured on a loan basis from Burroughs to resolve the problem. Plans have been developed to convert all TIES districts to the ESV-FIN. These plans have been reviewed and their progress is being monitored by MECC.

#### IV. COMMUNICATIONS

With the increase in the number of school districts tying directly to computers a revised data communications plan for MIS is necessary. Planning has begun and is 80% completed. New phone lines and equipment have been ordered for all new schools using the ESV-IS.

The 1979 Legislature authorized funds for the Department, in consultation with MECC, to conduct a study on methods for reducing data communication costs. Such methods include the use of microcomputers to do local editing and alternative delivery systems such as the mail service UPS, or van delivery system. Planning for this study has begun.

V. FY 80 WORK PROGRAM. July 1, 1979 to December 30, 1979.

The Department and the regional boards are committed to bringing all the school districts in the state onto the ESV-FIN system by June 30, 1980, in order to comply with the Uniform Financial Accounting Reporting Standards (UFARS) mandate. During the next six months, primary attention will be paid to that objective. In addition, the Department will be working on the following list of tasks.

1. Complete the data acquisition calendar as required by law.
2. Complete the data element dictionary and report to the Legislature.
3. Complete the data communications plan as identified previously.  
Initiate the data communications alternative study.
4. Complete the ESV-FIN including the inventory and fixed assets subsystems. Revise the personnel/payroll system to make it more efficient. Complete the pilot testing of the student support system and implement it in each of the regions.
5. Complete the audit of the ESV-FIN controls.
6. Monitor the TIES conversion program.
7. Continue development of the SDE-IS in the area of the vocational education reporting system, foundation aid and special education aid system. Bring the annual financial report data for '78-'79 unto the database, revise the levy system to incorporate the '79 changes, and bring the teacher licensing data from the Information Systems Division computer to the Department's computer.
8. Continue to generate reports for the department the the public as they are requested.

VI. SUMMARY

Over the past six months we have seen the stabilization of the ESV-FIN system, the initial release of the personnel/payroll system and the pilot

testing of the student support system and the instructional management system.

The regions have acquired the necessary resources and have converted 167 school districts to the finance system and 50 school districts to personnel/ payroll system, with one school district on the student support system.

The SDE-IS database has expanded to include Migrant and Indian scholarship information as well as an additional year of data in levies, school finance, school district information, and staff data. The amount of usage of the database and special reporting has increased which indicates the value of that database.