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(F) 69 790767

DEPARTMENT OF EDUCATION-OPMATION SYSTEM DEVELOPMENT MANAGE

January 1, 1978 to December 31, 1978 -

Introduction

This report is submitted to the Chairman of the House Appropriations and the Chairman of Senate Finance pursuant to Minnesota Laws 1977, Chapter 449, Section 2, subdivision 5.

II. Development of SDE-IS

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The State Department of Education Information System (SDE-IS) was initially designed with the School District Information Report as the first database. At the end of December, 1977 this had expanded to a single database containing 150,000 characters of data including summary data, by district, about pupils, licensed staff, and levies along with four years of detailed data about all licensed personnel in the State. As of December 30, 1978, there are four distinct databases containing nearly 300 million characters.

Developed along with these databases are a series of computer programs responsible for loading, validating and maintaining the data in the base. The major components of these databases are:

- A. Annual Financial Report (AFR) for 1976-77. The 1976-77 AFR processing was accomplished at the Information Systems Division (ISD) computer center and the resultant data files were used to construct the SDE-IS database. This database was designed to handle the Uniform Financial Accounting Reporting (UFARS) data as well as AFR data collected in the interim until all districts follow UFARS procedures. During this past year, computer programs were written to process the data from the 1977-78 school district's financial reports and to carry historical data from the 1976-77 reports. All AFR processing after FY 77-76 will be processed through the SDE-IS.
- B. Staff Summary Data. These are sets of data matrixes for each district that summarize full time equivalent (FTE) figures and salary costs of licensed staff. These matrixes have been significantly restructured from the December, 1977 version and now include five years of data instead of four.

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- C. Pupil Data. This data, organized by district, contains current pupil data and is the one source of pupil data for all appropriate systems in the Department. This database has been partially updated over the past year so that in some areas there are two years data.
- D. Levy Limitation Data. This data which is organized by school district, contains all the data needed to calculate levy limits for all school districts in the State. Historical data from the 1973-74 school year through projected data to the 1980-81 school year is currently available. The 1977-78 levy limitations were calculated using the first version of the computer programs. These computer programs were then modified to include the 1978 changes in the calculations of the levies which were mandated by the Legislature. The levy limitation data was distributed to the school districts by October 1, 1978, as provided by law.
- E. Detail Staff Data. This area of data is organized by individuals and identifies about 225,000 licensed educators. It contains the educational achievement, work experience, class assignments, and employment data of teachers and school administrators who have been active in any or all of the five school years 73-74 through 77-78. This group of data items has been restructured since December, 1977 for processing efficiency and now includes five years of data instead of four. During 1978, emphasis has been placed on the development of analytical reports requested by the Senate Research staff and the State Planning Agency.
- F. Enrollment Projection Database. This is a separate database containing both actual enrollment data and estimates for all school districts, Educational Cooperative Service Unit (ECSU) regions, and the State as a whole. It also contains the projection factors from which a variety of simulation and projection activities were produced and from which the Department produced reports on enrollment patterns for school districts, ECSU regions, and the State as a whole.
- G. Transportation Aid. A set of programs to maintain data for and to perform the calculations and accounting of the school transportation aid are in the final programming phase. These programs are

scheduled for completion by the end of February, 1979. At that time, the portion of the SDE-IS databases relative to the transportation aid will be loaded and brought up to date.

- H. Migrant Students. This small database and associated computer programs are in the initial development stage. They will be used to monitor the educational programs and the location and status of children of migrant workers within Minnesota.
- I. Production Reporting. Generally a system is completed prior to using the data for ongoing reporting and analysis. Because of the need for information by the legislature and its staff, the Department and a wide range of other organizations, a continually expanding amount of effort is being placed on the generation of special reports to satisfy requests for information. At the present time, about 30 percent of the man-effort and computer processing associated with the SDE-IS is of a production nature. Initially, such activity was not projected to arrive at its current level until late FY 79-80. This early productive use has lessened the pace of overall development, but made the SDE-IS useful much sooner than anticipated.

The 1978 Legislature made provisions for the utilization of the database by the Legislative Research Staff. During this past year, the staff has had orientation training to the database and some staff members have had access to the database through the computer terminals located both at the State Department of Education and at the Legislature.

III. Minnesota Educational Data Information Directory (MEDID)

The Department has long recognized that millions of dollars in manpower and other costs are expended by school districts in completing reporting requirements and filling out forms. In order to reduce this burden, the Department initiated a special project to examine each data item on every form sent to school districts in order to justify and control its collection.

The Minnesota Educational Data Information Directory (MEDID) was developed to provide a description and analysis of the use of each of these data items. At the beginning of the project, there were 751 forms containing approximately 42,000 data items which needed to be coded. Of this amount, the total number of forms

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have been reduced to 514 containing 34,000 data items. Already there are 438 forms and 29,000 data items coded. Seven thousand of the data items are on the MEDID database and the remainder are in the process of being readied for entry to the database. The computer programs to analyze the MEDID data and to produce a variety of reports from the MEDID database has been written so that as soon as the data items are ready, analysis can begin.

IV. Regional ESV-IS Centers

This section of the report provides a brief overview of the activities in each of the regions which provide service to school districts who use the Elementary, Secondary and Vocational Information System (ESV-IS).

- A. Region I Moorhead. The regional service center previously located at Detroit Lakes was moved to Moorhead this past year. It is staffed with a Director and support staff. The center has ordered a Remote Job Entry (RJE) terminal and contracted for specific services with the Region III computer in St. Cloud. School districts are being trained on the use of the ESV Financial System (ESV-FIN). The first thirteen schools began using the system in July, 1978.
- B. Region II Duluth. Region II currently has school districts with a total enrollment of 31,000 students on an interim financial system. A contract has been developed with Region III for data processing by Region II via an RJE located in foliuth.
- C. Region III St. Cloud. In March, St. Cloud employed a new Director. Installation of a large Burroughs computer was completed to replace a smaller computer which had reached its maximum capacity. There are currently 35 school districts on interim financial services. Rather than convert them immediately to the ESV-FIN, primary effort is being made to extend the ESV-IS to those school districts which are on manual systems with the conversion of the currently automated school districts later in the fiscal year 1979. As mentioned previously, arrangements have been developed with Region I and II to provide hardware services to those two regions.
- E. Region IV Marshall. The Hector School District in this region is the first school using the Personnel Payroll System (PPS) beginning July 1, 1979. School staff were trained, the documentation was reviewed and

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the debugging of computer programs took place. Currently, there are twelve schools on the ESV-PPS. Region IV has contracted with Pegion V to use their computer for services. Four school districts began using the ESV-FIN System July 1, 1978.

- E. Region V Mankato. The Region V computer had previously been transferred from Rochester to Mankato in anticipation of providing services to Region IV. Cooperative plans with Region IV have been accomplished and service begun. In addition, the area vocational schools which had an RJE linked to their own IBM computer are now linked to the Region V computer in Mankato. This allows for both administrative and instructional data processing to be conducted in one regional center. The IBM computer remains solely as an instructional machine. Interim services are being provided to those school districts which are already on automated systems. Three school districts which were using the ESV-FIN have also begun using the ESV-PPS.
- F. Region VI (METRO II) St. Paul. The Personnel Payroll System was piloted by the Mounds View school system and was completed December 30, 1978. The system was then released to other regions. The ESV Student System has become operational and is being piloted in the St. Paul School District. A large scale Burroughs computer (B6800) was installed in January and another B6800 has been ordered in order to provide on-line backup capability and computing power for their school districts. The Minneapolis School District decided to terminate its agreement with METRO II and withdraw from the Pegion. Minneapolis subsequently submitted an independent plan to the State Department of Education. This plan was not approved and resulted in a lawsuit which tested the need for Department approval. A decision was rendered January 17, 1979 affirming the Department's authority.
- G. Region VII (TIES) Roseville. The Legislature appropriated \$950,000 to begin conversion of the TIES schools during this biennium rather than waiting for the following biennium. A two-phase plan has been developed and approved. As phase one of this plan, twin B6800 computers were purchased and installed during April of 1978. Current TIES programs are Loing transferred to these computers. Phase two will convert the ESV-IS to meet the unique requirements of the TIES school districts.

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V. Communications Network

During 1978, the costs of providing data communications from school districts to a host computer has been based upon guidelines established under the instructional timesharing system. The guidelines need to be updated and a comprehensive data communications plan needs to be developed. The beginning of this planning effort was started in May. Basic costs have been developed for both years of the coming biennium based upon enhancements and processing capabilities for the smaller school districts. These guidelines are being reviewed by the ESV Advisory Task Force and modified guidelines are being developed along with their costs.

VI. FY 1979 Work Program

During FY 1979, each system of the ESV-IS will have been completed, fully tested, and implemented in each one of the regions. By June 30, 1979, there will be 159 second districts with 334,000 student enrollment using the Finance System, 115 school districts with a 289,000 student enrollment using the Personnel Payroll System, and 24 school districts with 200,000 student enrollment using the Student System.

In addition, the Minnesota Education Data Information Directory will be first published. This will allow users of the SDE-IS to identify the specific data items which they need in order to complete their reports. The Data Acquisition Calendar will be published and revised as needed.

One third of the Department's applications currently residing on the State computer will be transferred to the SDE-IS development computer.

Information requests from the Legislature will be handled, to the extent that is possible, via a telecommunications system to the computer. The staff of the Legislature will be trained in the use of the system and will be able to make their own inquiries to satisfy their informational needs.

An Annual Data Communications Plan will be developed based upon current guidelines. Revised guidelines will be developed based on experience in pilot districts and the cost effectiveness of districts to access their databases.