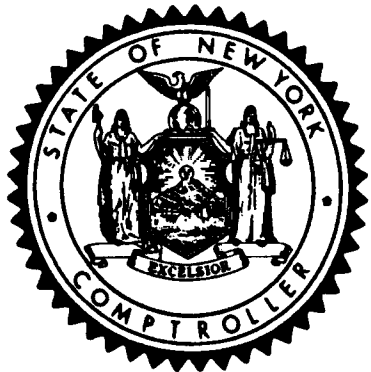


*State of New York
Office of the State Comptroller
Division of Management Audit*

**THE STATE EDUCATION
DEPARTMENT**

**ACHIEVEMENT OF GOALS FOR
SPECIFIC COMPUTER SYSTEMS**

REPORT 94-S-23



*H. Carl McCall
Comptroller*



State of New York Office of the State Comptroller

Division of Management Audit

Report 94-S-23

Mr. R. Carlos Carballada
Chancellor
The University of the State of New York
State Education Building
Albany, NY 12234

Dear Mr. Carballada:

The following is our report on the State Education Department's achievement of goals for the Student Information System and the Financial Applications for Management in Education System.

The audit was performed pursuant to the State Comptroller's Authority, as set forth in Section 1, Article V of the State Constitution and Section 8, Article 2 of the State Finance Law. Major contributors to this report are listed in Appendix A.

*Office of the State Comptroller
Division of Management Audit*

March 27, 1995

Executive Summary

The State Education Department Achievement of Goals for Specific Computer Systems

Scope of Audit

The New York State Education Department (SED or Department) started the Technology Network Ties Program (TNT) in 1985 to improve communications with the State's 41 Boards of Cooperative Educational Services (BOCES) and its more than 700 public school districts. As of June 30, 1994 about \$26.5 million has been spent on TNT, which connects the Department with Regional Information Computing Centers (Centers), BOCES, school districts and others. A major purpose of TNT is to make available new computer systems, including the Financial Applications for Management in Education (FAME) and the Student Information System (SIS). FAME provides school districts with financial and accounting functions; SIS enables districts to manage and report student information. Both were developed as cornerstone management systems of TNT, at a total cost of about \$4 million.

Our audit addressed the following questions about the Department's development of FAME and SIS:

- Did the Department successfully achieve the goals it had established for FAME and SIS?
- If any goals were not achieved, what effects did this have?
- If any goals were not achieved, what were the reasons they were not?

Audit Observations and Conclusions

The Department fully achieved only one of the six goals it had set for FAME and SIS: The development of consistent features in the student systems utilized by each of the State's five most populous cities, as well as the Department itself. In addition, the Department has partially achieved two other goals: The designs of both FAME and SIS make it possible for all of SED's data compiling and reporting requirements to be met electronically. The Department also designed FAME and SIS with additional features not found in its previous systems. However, most school districts do not take advantage of these capabilities. (see pp. 6-7)

The Department did not achieve three of its other stated goals. For example, it did not achieve its envisioned economies of scale, because far fewer than the anticipated 350 school districts use FAME or SIS.

The Department did not even replace its own antiquated NYSSCSS computer system with FAME and SIS. The Department also did not meet its goal of developing FAME and SIS within established cost and time parameters. (see p. 7)

Because the Department did not fully achieve its goals it has not achieved the greatest benefit from its \$26.5 million TNT investment. The underutilization of these systems has caused Center mainframes to be used at a much lower rate than acceptable by computer industry standards. Thus, this rate of mainframe usage is not cost-effective. Centers are incurring additional, duplicative costs because they are maintaining FAME and SIS at the same time the older, inefficient computer systems are being used. Some school districts have also incurred their own costs by purchasing alternative computer systems instead of using FAME and SIS. (see pp. 7-9)

The Department was unable to meet its goals primarily for controllable reasons, i.e., events that the Department could have affected and changed. One reason was that the Department did not get up-front commitment from the school districts before it started development. This commitment was necessary because SED officials believe that they do not have the legal authority to mandate school districts to use FAME and SIS. Such a commitment might have been forthcoming if the Department had prepared a strategic plan for these systems and communicated this plan to the districts before undertaking development of the system. To avoid a similar situation in the future, we recommend that the Department establish a formal planning process for assessing the need for such systems, and for obtaining input from all stakeholders. The product of this process should be a strategic plan that lays out the strategies the Department will follow to achieve and implement its long-range data processing goals. (see pp. 9-11)

Between the mid-1980s and the 1990s, the State Legislature's annual appropriation of funds for the TNT development project was routinely less than the Department had requested. According to SED officials, this lack of adequate funding over which they had no control, contributed to developmental delays. During this period, microcomputer capabilities were expanding, and other systems were being developed in the marketplace that were capable of performing functions that FAME and SIS had been expected to perform. As a result, many school districts that might have planned to use FAME and SIS decided instead to utilize alternative systems. (see pp. 9-11)

Comments of Department Officials

Department officials generally agreed with the report's recommendations.

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Introduction

Background

The State Education Department (SED or Department) started the Technology Network Ties Program (TNT) during 1985 in order to improve communications with the State's 41 Boards of Cooperative Educational Services (BOCES), and its more than 700 public school districts. TNT was planned to deliver management and instructional computer systems to the State's educational community, and to improve Department data collection from school districts through the use of telecommunications and computer support. TNT connects the Department, Regional Information and Computing Centers (Centers), BOCES, school districts and other organizations. During the nine-year period ending June 30, 1994, the Department spent about \$26.5 million to upgrade Center mainframes, purchase common software, develop systems, and link the Centers.

A critical purpose of TNT is to develop new computer systems that will replace NYSSCSS (the New York State School Computer Services System), which was developed in the late 1970s. As the cornerstone management systems of TNT, the Department developed the Financial Applications for Management in Education (FAME) and the Student Information System (SIS). FAME is a large-scale application that provides eight subsystems, including general ledger, accounts payable and other accounting functions. SIS enables school districts to manage programs and report student data through six subsystems. Major SIS functions deal with attendance, biographical information and special education. FAME and SIS development costs accounted for about \$4 million of the \$26.5 million spent on TNT.

The BOCES provide management and instructional computer services and support to the State's school districts. The Department is required by Section 1950 of the State Education Law to develop and administer policy concerning these BOCES services. Accordingly, to control and monitor the school districts' acquisition of computer services and systems, the Department has established guidelines for BOCES-provided computer services. It also provides aid to school districts for the purchase of on-site hardware and software if they are acquired through the BOCES. School districts can also purchase computer equipment on their own, but they are not reimbursed for these direct purchases.

During our field work, a consultant hired by the Department evaluated its management and instructional computer systems and services, including the cost-effectiveness and efficiency of these operations. The consultant also reviewed the roles of the Department, BOCES and school districts that were utilizing these systems and services. The consultant recommended several ways to enhance the effectiveness of future services, but did not review the manner in which the Department had developed the systems.

Audit Scope, Objectives and Methodology

For the period January 1, 1984 through March 18, 1994, we audited the actions the Department took to achieve the goals it had established for the primary systems on TNT, FAME and SIS. The objectives of this performance audit were to determine whether the Department had achieved these goals, why some goals might not have been achieved, and what were the effects of any failure to achieve the goals. To accomplish our objectives, we interviewed Department officials; reviewed and analyzed project documentation; and, where appropriate, relied on the results of the consultant's work.

We conducted our audit in accordance with generally accepted government auditing standards. Such standards require that we plan and perform our audit to adequately assess those Department operations which are included in our audit scope. Further, these standards require that we understand the Department's internal control structure and its compliance with those laws, rules and regulations that are relevant to the Department's operation which are included in our scope. An audit includes examining, on a test basis, evidence supporting transactions recorded in the accounting and operating records and applying such other auditing procedures as we consider necessary in the circumstances. An audit includes assessing the estimates, judgments, and decisions made by management. We believe that our audit provides a reasonable basis for our findings, conclusions and recommendations.

We used a risk-based approach for selecting activities to be audited. This approach focuses our audit efforts on those operations that have been identified through a preliminary survey as having the probability for needing improvement. Consequently, by design, finite audit resources are used to identify where and how improvements can be made. Thus, little audit effort is devoted to reviewing operations that may be relatively efficient or effective. As a result, our audit reports are prepared on an "exception basis". This report, therefore, highlights those areas needing improvement and does not address activities which may be functioning properly.

Response of Department Officials

Draft copies of this report were provided to Department officials for their review and comment. In responding to the draft report, Department officials agreed with the report's recommendations. Their comments have been considered in preparing this report and are included as Appendix B.

Within 90 days after final release of this report, as required by Section 170 of the Executive Law, the Commissioner of the State Education Department shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons therefor.

Achievement of Goals for FAME and SIS

Established Goals for FAME and SIS

Department officials informed us that when the development of SIS and FAME began, goals were not fully recorded. However, from available documentation, the goals for the project could be deduced to be the following:

- Produce new applications that would meet or exceed the functions found in the existing NYSSCSS systems;
- Stay within certain cost and time parameters;
- Meet Department reporting requirements;
- Ensure the development of consistent features in the student systems for the State's largest five cities as well as the remaining school districts in the State;
- Achieve economy of scale by persuading about 350 school districts to use FAME and SIS; and
- Replace existing management systems on NYSSCSS with FAME and SIS.

However, Department officials believe that they do not have the legal authority to mandate school districts to use FAME and SIS. Instead, the Department wanted to develop state-of-the-art systems that districts would voluntarily opt to use. At the same time, the Department was aware that there were many obstacles to persuading school districts to use the new systems. For example, some districts wanted to continue with familiar, existing systems available through their BOCES or Centers; others expressed an interest in purchasing their own computer hardware and software. In addition, the Department was aware that the capabilities of microcomputers were advancing, giving school districts more alternatives. Therefore, to assure achievement of its goals for FAME and SIS, it was essential that the Department secure advance commitment from a reasonable, cost-efficient number of school districts to use the systems it was planning to develop.

To obtain such commitment, the Department needed to properly plan its development activities, and communicate its plan to the school districts. This planning process could have provided the Department with an

opportunity to formalize its goals, establish priorities and explain the rationale behind the chosen goals. According to industry standards, a key element of a successful formal plan is the strategic plan, which articulates the mission, vision, goals, strategies, and issues in a context that users will understand. This approach would have provided school districts with a time frame indicating when they could expect system implementation. Finally, to maintain commitment to and enthusiasm for FAME and SIS, the Department needed to provide districts with timely and effectively-developed systems.

Degrees of Success in Attainment of Goals

The Department was not completely successful in achieving all of the goals it had established for these systems, partly because it did not take the necessary steps to convince school districts to commit to FAME and SIS. Only one goal was completely achieved and two others were partially achieved. The Department was unable to meet its three remaining goals.

Department officials stated that the districts were unwilling to make even a non-legally binding commitment until FAME and SIS were available. The Department likened its development process to a commercial effort where users had input into product design and developers offered a product for use.

We believe that if districts are unwilling to express a commitment, then it may not be advisable to proceed with system design. We also believe that the Department's systems design efforts are not entirely analogous to commercial efforts. The Department's efforts must be planned with great assurances of success because taxpayer dollars are at risk.

Successful Achievement of One Goal

Before the Department developed SIS, the Legislature had funded each of the State's five largest cities (New York, Buffalo, Syracuse, Rochester, and Yonkers), so that each could develop and implement a similar type of system for its own school district. These funds were to be used to purchase available hardware and software, develop their own software, or update existing systems. Department officials told us they had realized it was also necessary that all of the Student Information Systems obtain consistent critical information about students in all of the State's public school districts. Therefore, the Department established as a goal the development of such features that would be compatible statewide.

The Department has achieved this goal; all five of these Student Information Systems now employ a common data base management system. According to SED officials, these systems have consistent data fields that facilitate the sharing of data and use common system features.

Partial Achievement of Two Goals

The Department has only partially achieved two other goals. As intended, FAME and SIS both have functions that exceed the capabilities of those found in the NYSSCSS student and financial systems. Fifty-eight of FAME's functions and 38 of SIS's functions are not found in NYSSCSS. The major new feature of both systems is their ability to integrate information between subsystems. For example, the FAME accounts payable and purchasing subsystems share the same vendor files and can communicate without duplicating files. However, only a few school districts use all of these additional functions.

In addition, FAME and SIS satisfies the Department's reporting requirements. When a school district uses FAME and SIS, the required data is automatically extracted, and sent over the network electronically to the Department. However, a district must use the complete FAME and SIS systems to meet all of the SED's reporting requirements. Based on our review of an SED report, we determined that as of September 1993, only six school districts were using the complete FAME, and only one was using the complete SIS.

Three Goals Were Not Met

The Department did not meet three of the six goals it had established for FAME and SIS.

The economy of scale the Department had envisioned was not achieved, because far fewer than 350 school districts are using either FAME or SIS. SED officials acknowledge that as of September 1993, just 142 school districts were using FAME, and SIS was being used by just 74.

The Department also did not meet the cost and time parameters it had established for FAME. Both development and installation were expected to be completed by April 1988; costs were estimated to total between \$467,600 and \$507,600. Instead, FAME's installation occurred between Fall 1990 and Spring 1991, or almost three years later than planned. According to SED records, FAME cost \$2.5 million, or about \$2 million more than originally estimated.

Department officials pointed out that during systems development, the time line for FAME was extended to Spring 1990 and its total projected cost was increased to \$1.25 million.

The Department did not develop overall cost and time parameters for SIS. Thus, although the annual SIS development expenditures were monitored against the amount budgeted for each year, it was not possible to compare the total spent to an estimated amount.

The Department did not meet its goal of replacing the antiquated management systems that are running on NYSSCSS with FAME and SIS. Financial and student management systems are still maintained on NYSSCSS, which currently has twice as many users as FAME and SIS.

Results of Not Meeting Goals

Because the Department did not fully achieve all of its goals for FAME and SIS, it has not reaped the greatest possible benefit from its \$26.5 million investment in the TNT. Moreover, we question whether the Department would have decided it would be economically feasible to develop FAME and SIS if it had known that the school districts' usage of these systems would be so low. In addition, the economic burden to the State for running different systems that provide similar functions is very high.

Development, Acquisition and Utilization Costs

The low usage of FAME and SIS has a large impact on the overall utilization and cost-effectiveness of the Center mainframes. According to the consultant's report, industry standards state that mainframe utilization rates of up to 80 percent are acceptable. However, the consultant found that the average utilization of the Center mainframes is only about 46 percent, primarily because few school districts use FAME and SIS. If the highest possible percentage of school districts used FAME and SIS, the Center mainframes, which cost at least \$4 million annually to operate, would be utilized more heavily. This would lower the cost per user, as more users would share the cost of the service, support and overhead.

The Department's failure to replace NYSSCSS with FAME and SIS also increases the cost of operating the mainframes, because the Centers that maintain FAME, SIS and NYSSCSS are incurring duplicative costs by funding multiple operating environments. In responding to our observation, Department officials stated that they were working on a plan to consolidate Centers while speeding up the migration of districts from NYSSCSS to FAME and SIS and other BOCES service options.

In addition, some school districts acquired their own alternative management systems, rather than use FAME and SIS. These districts purchased hardware, developed and/or purchased software, and hired support personnel for their systems. Although we cannot determine the amount of these costs, we note that before FAME and SIS were developed, the Department estimated that the total cost for separate computer systems in each school district would be about \$350 million.

Inefficiencies of Not Using FAME and SIS

School districts that use FAME and SIS must use every subsystem to automatically meet the Department's electronic data reporting requirements. This process would be far more efficient than the procedures most school districts must follow now without utilizing all of FAME and SIS. Currently, the districts compile data from their own management systems and fill out reports manually. These reports are sent to the Centers, where the data is entered manually into the Centers' computers, then transmitted through TNT to the Department. Some school districts are a little more efficient, in that they enter the required information onto floppy disks, using personal computers, and then forward the disks to the Centers. However, it would be much more efficient to use FAME and SIS to transmit this data.

Finally, because the Department has not replaced NYSSCSS, the old system's inefficiencies still plague the school districts that use them. NYSSCSS does not provide for the automatic feeding of data from one subsystem to another subsystem. For example, vendor information from the purchasing subsystem is not fed automatically to the account payable subsystem. As a result, this data has to be entered separately into each system. This is time-consuming and costly, and increases the chance for errors. In addition, because NYSSCSS uses 1970s computer technology, needed program changes are cumbersome, time-consuming, and expensive.

Reasons for Not Meeting Goals

There are many reasons why the Department has been unable to achieve its goals for FAME and SIS. The Department could have controlled most of the obstacles to such achievement, through the policies it established or the processes it chose to follow. But there were also influencing events that the Department could not control.

Controllable Factors

The Department did not get the necessary commitment from school districts before it began developing FAME and SIS. There are several reasons for this. One reason is that the Department did not prepare a key document, the strategic plan, which is especially necessary for an organization preparing to move into a complex information technology environment. A strategic plan for TNT and its major systems, FAME and SIS, would have translated the Department's vision and direction into a concrete structure with goals and timeframes. Without this plan, the Department did not have a good way of explaining clearly to the school districts how and when FAME and SIS would evolve.

In responding to our observations, the Department commented that an initial single document strategic plan for the systems may not have been appropriate because the new functions of the systems were unknown until design was underway.

We maintain that a plan is necessary to provide a vision and a direction for new systems even though specific system functions may be uncertain at the time. If a vision and a direction can not be stated in a plan, it is questionable whether design resources should be expended.

Another reason SED did not get the commitment from school districts is that many of the districts never intended to use FAME and SIS. The school districts had the opportunity to use other pupil and financial accounting services from their BOCES, and took advantage of the Department policy to fund their use of these alternative systems, so long as they are provided through their BOCES. In addition, other school districts purchased their own pupil and financial accounting systems through other funding.

Uncontrollable Causes

There were also reasons for low utilization of FAME and SIS that the Department could not control. The major one was that the State Legislature provided the Department with less funding than it requested during each year of the TNT-development project. In addition, the Legislature mandated that the Department establish three new Centers without a corresponding increase in funds. This caused the Department to set priorities for the TNT that often did not include actions needed for the development of FAME and SIS. This, in turn, was a major cause of the delays that the Department experienced in its development of SIS and FAME.

Department officials contended that funding was insufficient to support either school district migration from NYSSCSS to SIS and FAME or user training for SIS and FAME. Some district officials told the consultant that FAME and SIS are too complex and difficult to learn.

While the project was being delayed, significant changes occurred in both hardware and software computer technology that made it advantageous for school districts to use alternative systems. Microcomputer capabilities expanded, and new software products became available that could perform many of the functions found in FAME and SIS. Thus, some school districts that might have been interested in using FAME and SIS decided they could wait no longer, and implemented other systems.

Planning for the Future

The Department is planning for its future. Its vision of the future includes an enhanced statewide information system that will support education in a manner consistent with its policies. The consultant has provided Department management with a proposal for enhancing TNT and its computer services, and has recommended that the Department get additional resources to expand instructional systems and make them available to more school districts. To encourage increased instructional uses of the TNT network by districts, the consultant proposed a modification of the TNT network to support connection to the Internet and other instructional systems. The consultant also recommended that the Department stop developing systems, and instead specify requirements.

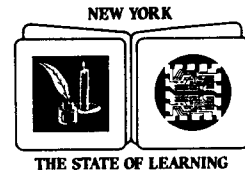
The Department's accomplishment of its vision will depend on the active participation and up-front commitment of all parties, including the Department, BOCES, Centers, and school districts. It should establish a strategic plan that will communicate to its constituents vital information regarding the projects' envisioned goals, strategies, time frames and resources. It should also solicit input from those stakeholders. In addition, this plan should be provided to the State Legislature along with the Department's request for funds.

Recommendations

1. Establish a formal planning process that will assess the need for future computer systems.
2. Prepare a strategic plan that lays out the strategies for achieving and implementing data processing goals for the future. Periodically update this plan.
3. Establish clearly-defined, measurable, attainable objectives for future systems that are consistent with the broader goals articulated in the strategic plan.

Major Contributors to This Report

Robert Blot
David R. Hancox
Henry Kagan
Jerry Barber
Michael Pergament
James Brunt
Robert Curtin
Debra Spaulding
Marticia Madory



THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12234

EXECUTIVE DEPUTY COMMISSIONER OF EDUCATION
THE NEW YORK STATE EDUCATION DEPARTMENT
ALBANY, NEW YORK 12234

OFFICE OF THE STATE COMPTROLLER
ROBERT H. ATTMORE
DEPUTY COMPTROLLER

January 31, 1995

FEB 1 1995

MGMT. AUDIT &
FINANCIAL REPORTING

Mr. Robert H. Attmore
Deputy Comptroller
Office of the State Comptroller
A.E. Smith State Office Building
Albany, NY 12236

Dear Mr. Attmore:

I am replying to your Draft Audit Report "Achievement of Goals for Specific Computer Systems" (No. 94-S-23) resulting from your review of the Education Department's FAME and SIS systems. The following is our formal response to the recommendations and findings of your report.

Recommendation 1

"Establish a formal planning process that will assess the need for future computer systems."

We agree with the recommendation. The success of any development and implementation project involving technology must have a formal, systematic planning process that identifies customer needs. While the Department believes that a formal planning process was implemented for both FAME and SIS, there are many aspects of the process which should have been described more clearly and explicitly.

Recommendation 2

"Prepare a strategic plan that lays out the strategies for achieving and implementing data processing goals for the future. Periodically update this plan."

We agree with the recommendation. Strategic planning is critical. The auditors noted that there is no **single** document which provides the full strategic plan for the FAME and SIS applications. The auditors have reviewed a wide variety of documents and

correspondence which highlight the multilevel planning efforts which went into the TNT program components such as FAME and SIS. Therefore, the lack of a single plan is not indicative of the lack of strategic planning.

The auditors were expecting a single document labeled strategic plan at the beginning of the development cycle prior to analysis. Although a single formal document labeled strategic plan may be appropriate when the software requirements are fixed and known, it may not be appropriate for development when users are specifying new functions. In fact, the software development teams for both FAME and SIS used a different software development strategy, known as the Joint Application Development (JAD) method. This method uses software prototyping to establish the actual requirements and specifications, based directly on user needs. These user requirements are then used to form multi-year planning documents.

Recommendation 3

"Establish clearly-defined, measurable, attainable objectives for future systems that are consistent with the broader goals articulated in the strategic plan."

We agree with the recommendation. Clearly defined, measurable and attainable goals must be established for successful software development efforts. We believe that we utilized an extensive planning process in the development of FAME and SIS. This process had substantial involvement of the end-users of the systems. However, we recognize that some of the documentation supporting the details of our planning process was not available, making it more difficult for the auditors to understand our planning. The documentation of goal and objective setting by user groups, meeting with the software development team, shows that extensive multi-year planning took place with FAME and SIS.

The Department would also note the following important points which are discussed in the report, but not addressed in the recommendations.

- The auditors concluded that the measures of success that were not attained, such as the early estimate of the number of school districts that might use the applications, were significantly related to deficiencies in the planning process. However, these differences were more closely related to other factors, including the changes in availability and pricing of alternative platforms. Although the Department and BOCES staff were "tracking" alternate systems and platforms, there was no way to identify their specific impact on the end-users until FAME and SIS were completed and available for districts to subscribe to as part of a formal BOCES service.

- The Executive Summary of the Audit Report states "School districts have also incurred duplicative costs by purchasing other computer systems instead of using FAME and SIS." This is not the case. As one of a small number of "approvable" information management alternatives available through BOCES, FAME and SIS are being used by a

substantial number of school districts. In order to meet the wide variety of district requirements, BOCES offer options in service, including mainframe options such as FAME and SIS. However, schools have alternatives to mainframe services within the BOCES structure. These options are important in offering flexibility to districts (as well as incentive for sharing), while at the same time creating economy of scale for the implementation and support of information systems. The Department does not have statutory authority to require school districts to purchase certain services from BOCES. Since that authority does not exist, FAME and SIS were designed to be attractive mainframe alternatives for districts.

■ As the auditors note, greater economies of scale could have been achieved if more districts had used the FAME or SIS systems and if existing systems such as NYSSCSS are replaced. The Department continues to work to achieve this goal, albeit with some difficulty given the lack of funding to help in the process of migration from the old NYSSCSS systems to FAME and SIS. The auditors' point, which we agree with, is that perhaps with greater planning and funding, the Department could have achieved greater economies of scale (and achieved them sooner) by having more districts use the new systems which were developed. This would be particularly true if districts which used FAME and SIS were not already using one of the alternate BOCES computer service. The comment in the Executive Summary is not consistent with this point, nor is it substantiated in the audit report. Specifically, the audit report states that the Department "did not achieve economies of scale because far fewer than the anticipated 350 school districts used FAME or SIS." We agree that the Department has not been successful, at least to-date, in getting half of the school districts in the State to use the new systems. This does not mean that the Department did not achieve an economy of scale with the hundreds of districts using the new FAME and SIS systems. It does mean that even greater economies of scale would have been achieved with more districts participating in its use.

■ The auditors' suggestion that the Department "secure advance commitment from a reasonable, cost-efficient number of school districts to use the systems it was planning to develop" while conceptually interesting, was considered, but ruled out because it is not legally feasible in the present BOCES context. Districts subscribe to BOCES services for which they pay, and then are reimbursed by the State in the subsequent year. Any commitment from school districts for a future service would not be legally binding. As mentioned earlier, the Department conducted widespread user group review sessions across the State for FAME and SIS during the development stage, in order to make districts more aware of what the new systems would incorporate, as well as to solicit input from districts as to their specific needs. At that same time the Department also considered getting districts to indicate their commitment (clearly non-binding) to implementing the new systems. Some districts (the early adopters who were part of the initial testing program) expressed their interest, but the large majority of districts took a "wait and see" attitude. The fact is that districts were unwilling to make any kind of commitment, even one which was not legally binding, until the products were available. This situation is not much different from the commercial sector where products are produced with user input, and then put out to the market for the consumers to purchase. Because of these factors, we do not believe that a

"commitment might have been forthcoming if the Department had prepared a strategic plan for these systems and communicated this plan to the districts." A more detailed plan would not have convinced districts to a greater degree than the detailed prototypes of the system shown around the State.

- We agree that the Department did not meet the cost and time parameters of FAME. However, the time and cost figures in the Draft Report (April 1988 and \$467,600-\$507,600 respectively) were based on very preliminary plans which were modified after working with the "User Group" to clarify design requirements. This point was raised during our meetings with the auditors, but seems to have been forgotten. The involvement of the "customers" extended the timeline to the Spring of 1990 and increased the total projected development costs for FAME to \$1,250,000. As the audit report points out, the total development cost for FAME was over \$2 million, and the combined, final costs for FAME and SIS were approximately \$4 million. Furthermore, it is important to note that these applications are now being used in hundreds of districts across the State. We believe that one of the most significant impediments to a more rapid development and timely implementation of large scale, statewide applications is the lack of consistent, long-term funding. The auditors' expectation for an all-encompassing plan prior to analysis resulted in their citing our initial analysis estimate as the only cost estimate for the project. However, the outline of tasks and costs included in this initial document were analyzed and broken down into actual costs based on persons per day required after working with the User Groups. These cost estimates are much closer to the final system development costs for FAME and SIS than were the initial estimates.

- The Department also agrees that the goal of replacing the old NYSSCSS systems with FAME and SIS has not been achieved, to-date. We continue to work with BOCES Regional Centers to migrate their existing NYSSCSS users to other systems, including FAME and SIS. The reality is that under the original TNT plan, funding would have been available as an incentive to districts to convert their existing data, train their users, parallel test, and then migrate to the new systems. However, without the leverage of funding which TNT provided for implementation, it is difficult to force a rapid move from the old systems. Districts are moving more slowly than originally planned or desired.

- On the issue of more cost-effective utilization of mainframes, the Department would note that we are working on a plan to consolidate Centers while at the same time speeding up the migration of districts from NYSSCSS to FAME and SIS and other BOCES service options. We believe that consolidation is essential to achieve greater efficiencies and economies of scale.

- The auditors note in the controllable factors section that "SED should have ensured that districts would be given the funds and/or training needed to utilize these systems (e.g., FAME and SIS)." We would only note that the Department's request for TNT

funding, which included FAME and SIS development and implementation costs, was substantially higher than what was ultimately approved each year by the Legislature. The Department has applied all funding sources within existing law and regulations to development and implementation. The need for training and support far exceeded the yearly funding made available. As noted above, the migration from NYSSCSS to alternative systems also requires short-term funding support to insure success. There is no migration funding available to support districts.

We appreciate the opportunity for our staff to work with your office in the improvement of our programs.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas E. Sheldon". The signature is fluid and cursive, with the first name being the most prominent.

Thomas E. Sheldon

Enclosure

cc: Chancellor R. Carlos Carballada
Commissioner Thomas Sobol

