

MEDIA AND TECHNOLOGY

Program Review

Subcommittee Report #4

Information Systems

Subcommittee Membership:

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June, 2008

INFORMATION SYSTEMS SUBCOMMITTEE REPORT

I – Introduction/Assessment of the Information Systems Environment Today

The information systems used throughout the district are the primary responsibility of the main user groups. As needed, the users have previewed products to meet their needs and made selections within budgeted allocations and technical guidelines. The 2002-2004 Technology Plan highlighted our initial efforts to bring this work under routine technology planning and evaluation by stating that one of our goals was to “Improve system-wide accountability by using specific tools to communicate to the community, gather and analyze data, improve financial practices, organize curriculum, and maintain student and personnel data.”

To that end, an Administrative Technology Advisory group was formed to guide decision-making and evaluate new systems proposed by administrators. Several members of that group participated in the work of the Information Systems Subcommittee. This is the first time that administrative systems have been reviewed in their entirety.

The information systems that deal with student data are up-to-date, supported and functioning well, as is our First Class communications system. There is no human resource system, rather a series of homegrown databases and work-arounds to gather and produce required data. The financial system is HTE, owned and managed by the town. Currently, a town/school group is meeting to evaluate its ability to meet future needs. Lastly, there is no formal curriculum/instructional management tool, rather a series of documents developed around the district.

The Information Systems Subcommittee had a broad area of responsibility. In order to focus the work, the group decided to divide its work into five areas:

- *Student Information System* – Currently the Needham Public Schools is using a number of systems including PowerSchool, Health Office, Naviance, and EasyIEP. The committee evaluated each tool to make a determination about its adequacy and efficacy.
- *Personnel Information Systems* – The Needham Public Schools does not currently have a functional human resources information system. There are different tools for payroll, EPIMS information management, internal HR information, staff development, recruiting, application management, and substitute management. For the most part, these are stand-alone systems that do not interact.

- *Business Management Systems* – The Needham Public Schools relies upon the Town’s HTE system for payroll, purchasing, and financial management. The HTE system also provides an array of other functions for the Town related to public safety, human resources, community services, and public works. The system is based on a PC platform, and there are a number of problems utilizing the system with the school’s MacIntosh products.
- *Communication Systems* – NPS relies heavily on the FirstClass tool, which is a communication and collaboration platform designed with schools in mind.
- *Instructional Management Systems (IMS)* – Needham does not currently have an IMS system. These tools typically allow teachers to keep and analyze important student learning data, share curricular and instruction resources, as well as to access and utilize assessment resources.

II - Data Collection Methods

The Subcommittee used three primary methods of data collections:

1. We reviewed the School Department Operations and Staffing Study conducted by a private consulting firm, Evergreen Solutions. Among other areas, this study had several relevant goals including:
 - Evaluating the current and potential use of technology and communication systems to support operations
 - Making recommendations for operational efficiency, improved management practices, and better customer relations.

In order to do their work, Evergreen consultants interviewed staff, conducted focus groups, examined current practices and systems, and surveyed a number of stakeholder groups.
2. We reviewed the questionnaire data that was gathered as part of the overall Media and Technology Program review process.
3. We met with Town officials David Davison, Director of Finance, and Roger MacDonald, Director of Management Information Systems, to discuss issues of joint concern such as safety and security, shared systems, possible areas of collaboration and economies of scale, as well as future initiatives that may impact on one another.

III - Data Analysis

For clarity, the major data findings will be organized into the five areas of inquiry:

- *Student Information Systems*

1. A very large majority of the teachers using PowerSchool indicated that they believe that it meets their needs with regard to grading (84.6%), student data (84.4%), attendance (83.0%), communication (74.0%), and instruction (83.4%).
2. A majority of parents of middle and high school parents (80.7%) report that they use PowerSchool to check the progress of their children.
3. The nurses indicate that they are pleased with the Health Office software. It provides a good mechanism for data collection and analysis, ensures confidentiality, and is compatible with DPH reporting systems. Because it is a PC-based system, there are some problems associated with another platform; however, until a MacIntosh tool is developed that will meet the basic requirements, Health Office appears to be the best option.
4. The High School Guidance Counselors are pleased with Naviance, a system that is used to manage the college and career advising process as well as to track data about student achievement and outcomes. There was a desire to increase its use among students for managing their application process.
5. A conversation with the Directors of Special Education indicates that EasyIEP, the system tool for managing Special Education data and paperwork, does not provide the latest forms required by DOE. There are also problems associated with its ease of use, reports, and integration with PowerSchool.

- *Personnel Information Systems*

1. The Evergreen Solutions study identified a number of areas of need:
 - Personnel data is stored in many different places: HTE, Excel spreadsheets, paper personnel files.
 - There is no electronic database of performance evaluations.
 - NPS does not have a functional Human Resource Information System (HRIS).
 - The Personnel Department staff is not well trained in technology.
 - The NPS needs an efficient system for managing substitutes.

- *Business Management System*

1. Only 31.6% of administrative survey respondents said that HTE met their needs.
2. The Evergreen study indicated that there are “impediments to productive use of the HTE finance system. More user frustration was reported with the HTE system than with other technology applications in the District.” It was discovered that most people have developed a redundant system for managing their accounts. Some of the problems identified by users include:
 - Difficulty understanding and printing reports
 - 37-digit account numbers
 - Journal entries do not register immediately.
 - Access to accounts takes time.
 - Deposits take time to post.
 - PO’s cumbersome
 - Difficulty balancing and reconciling accounts
 - Not user friendly

- *Communication Systems*

1. 99.3% of survey respondents indicated that First Class met their needs for email.
2. 39.8% of the teachers indicated that they maintain a webpage in First Class to communicate beyond the school community.
3. 89.8 of teachers make use of First Class conferences.
4. 83.2% of teachers said that email from parents helps facilitate student learning and parent/teacher communication.
5. Only 12.0% of administrators said that they maintain a listserv to communicate with parents.

- *Instructional Management Systems*

1. 94.0% of teachers indicated that it would be useful to have a system for accessing curriculum and sharing lesson plans. 83.7% of the administrators said such a system would be helpful.
2. 40.3% of teachers said that it would be helpful to have a system for creating and scoring student tests online. 46.0% of the administrators said such a system would be useful.
3. Only 27.1% of administrators indicated that they use TestWiz to analyze MCAS data.

IV – Prioritized Recommendations

The recommendations made by the Information Systems subcommittee are organized in the same five areas that have been used throughout the report along with a *General* category for systems that cross areas. They appear on the following pages.

- *General*

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Practice | Organizational Structure | Policies/Practices | Prof. Dev. | Priority |
|--|------------------------|---------------------|---|---|----------------------------|---|------------------|
| 4.1 Reconvene the Administrative Technology Committee to oversee administrative technology needs, directions, and purchases. | No | No | This committee has existed in the past. It was made up of administrative representatives from all over the system. | Membership will need to be determined. | No | No | High |
| 4.2 Select a survey administration and analysis tool for system use. | .2 Secretarial support | Yes | Surveys are used regularly, and the practice is expanding. Different tools and methodologies have been utilized to gather and analyze the data. | Such a tool could be used by all schools and departments. | Procedures will be needed. | Training for secretary | High (Immediate) |
| 4.3 Establish staff development priorities and implement training for secretarial staff | No | Yes | Current training is haphazard. | Administrative Technology Committee | No | Yes | High |
| 4.4 Establish policies and procedures for document storage retention, and retrieval. | No | No | No system or procedures are currently in place. | Administrative Technology Committee | Policy/procedure | Staff will need to be aware of policies that affect them. | Medium |

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Practice | Organizational Structure | Policies/Practices | Prof. Dev. | Priority |
|--|------------------------------|----------------------------|--|--|----------------------------|--|------------------------------|
| 4.5 Assess school needs for document storage and retrieval in conjunction with the Town's capital purchase item. | No | Yes, part of the CIP | A need has been demonstrated. | Administrative Technology Committee | No | No | High |
| 4.6 Include capacity for document warehousing, archiving, and retrieval as a consideration for purchase with any new management systems (e.g., personnel, special education, etc.) | No | Yes | The school system does not scan records or keep electronic copies. | Such as system would affect many departments. The process should be overseen by the Administrative Technology Committee. | Procedures will be needed. | Staff will need training. | As new software is purchased |
| 4.7 Establish a system for document sharing in the system | No | No | No system currently exists. | Administrative Technology Committee | Yes | No | High |
| 4.8 Participate in the new ESE Data Warehouse project for student and teacher data | Yes | Yes | This project allows storage of testing, student and personnel data. | Administrative Technology Committee | Policies will be needed. | Staff will need training. | High |
| 4.9 Align technology training for administrators with NETSA standards | No | No | Needs assessment indicates that training is necessary | Administrative Technology Committee | No | Yes | High |
| 4.10 Embed use of technology in administrative staff development opportunities | Technology staff can consult | No | Separating technology staff development has not reached all administrators | The Administrative Technology Committee should oversee this recommendation. | No | This is a professional development goal. | High |

• *Student Information Systems:*

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Prac. | Organizational Structure | Policies/ Practices | Prof. Dev. | Priority |
|---|---|--|--|---|--------------------------------|--|-----------------|
| 4.11 Replace EasyIEP with ESped | A system employee should be selected to oversee this process. | Yes, the new software will cost about \$20,000 annually. | The new software meets new state and federal guidelines, integrates with PowerSchool, and offers data storage. | The Special Education Directors will oversee training and implementation. | New procedures will be needed. | A train-the-trainer model will be used to train staff. | High |

• *Personnel Information Systems*

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Prac. | Organizational Structure | Policies/ Practices | Prof. Dev. | Priority |
|--|------------------------|-----------------------------|--|--|---------------------------------------|-----------------------------------|-----------------|
| 4.12 Obtain software for an employee procedures manual | No | Yes – limited cost (\$2000) | This does not currently exist in the system. | Responsibility of Human Resources Dept. | No | Secretary training | Medium |
| 4.13 Purchase a Human Resource Information System | No | Yes (\$80,000) | No unified system is currently in use. | A group should be created in 2008-09 to study and select an appropriate system which could be purchased and begin implementation in 2009-10. | No | Staff training will be necessary. | High |
| 4.14 Develop an electronic list of recruiting venues to facilitate advertising and recruiting. | No | No | No central system currently exists. | Human Resources Department | None needed | No | High |
| 4.15 Adopt a technology-based substitute teacher replacement system. | No | Yes (\$15,000) | No system currently in use in Needham. | A Human Resources function. | Procedures will need to be developed. | Training for subs | High |
| 4.16 Develop a web-based training system for substitutes. | | Yes (\$500) | No system currently in use in Needham. | A Human Resources function. | No | Yes | Low |
| 4.17 Provide on-going staff support for EPIMS compliance | .4 Secretarial support | Yes | PowerSchool is being used to gather information but requires a data manager. | A Human Resources function. | Practices need to be routinized. | No | High |
| 4.18 Maintain current human resources systems (AppliTrack, My Learning Plan) | No | Yes, annual costs | Systems are being piloted. | A Human Resources function. | Systems for usage are needed. | Staff training will be required. | High |

• *Business Management System*

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Prac. | Organizational Structure | Policies/ Practices | Prof. Dev. | Priority |
|--|--|--|---|--|--|-----------------------------|-----------------|
| 4.19 Provide modifications for budget management to better facilitate the use of HTE– including mechanisms for obtaining reports, functionality interface, training, and specialization of staff | While more staff is not recommended, staff may need to be utilized differently | Yes, software for reporting, screen and functionality interface, training. | The current HTE management system is the source of frustration. | HTE Study Committee | Practices will need to be addressed. | Staff training is essential | High |
| 4.20 Recommend to the Town that it conduct a comprehensive study of the current financial management tools to determine if it meets the needs of its users. | Staff time will be needed to carry out this task | Yes. Expenses to be shared with the Town. | The current system has many problems | HTE Study Committee | A meeting between our subcommittee and Town representatives occurred, and a study will be conducted. | Yes | High |
| 4.21 Provide technological support for the town and school financial system | .5 FTE is needed to support financial systems | \$25,000 | There is currently no support. | Superintendent | No | No | High |
| 4.22 Implement the electronic payment system currently being purchased by the Town | No | Item already funded | System is needed by multiple departments | Community Education Business Department Athletic Department Food Services | Yes | No | High |

• *Communication Systems*

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Prac. | Organizational Structure | Policies/ Practices | Prof. Dev. | Priority |
|--|-----------------|---|---|-------------------------------------|----------------------------|------------------------------|-----------------|
| 4.23 Study the benefit and feasibility of central student access to email | No | No | Desirability is uncertain | Administrative Technology Committee | Yes | No | Medium |
| 4.24 Ensure that all schools distribute their newsletters electronically | No | No | Currently, there is inconsistency at the elementary level. | Superintendent | No | No | High |
| 4.25 Implement the recommendations for crisis communications which are being made by the ad hoc crisis response committee. | None | Yes, the annual cost will be approximately \$25,000 | The recommendations involve reimbursing staff for maintaining a private emergency telephone option. | Superintendent | Yes | No | High |
| 4.26 Principals should maintain and use listserv for regular communication | No | No | Routine use will improve use during emergency situations. | Superintendent | Yes | No | High |
| 4.27 Explore updated and more efficient systems for internal and external electronic calendars | No | \$3-4,000 annually | The current tool does not meet system needs | Administrative Technology Committee | Yes | Minimal secretarial training | Medium |

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Prac. | Organizational Structure | Policies/ Practices | Prof. Dev. | Priority |
|--|-----------------|----------------------------|--|--|----------------------------|-------------------|-----------------|
| 4.29 Collaborate with the Town to ensure that the next telephone communication system meets the needs of the school system | No | No | A committee will need to be established to conduct a needs assessment and explore options. | New features and improvements are needed | Superintendent | No | Low |
| 4.30 Redesign and update the NPS webpage | No | \$5000 | A subcommittee is overseeing this process. | Update needed | Webpage committee | No | High |

• *Instructional Management Systems (IMS)*

| Recommendation | Staffing | Budget Implications | Emerging Tech. or Prac. | Organizational Structure | Policies/ Practices | Prof. Dev. | Priority |
|---|---|----------------------------|---|---------------------------------|----------------------------|-------------------|-----------------|
| 4.31 Form a task force to investigate and make recommendations about software for a curriculum management system. | Staff from all levels should be involved in this study. | Yes | New technology is emerging in this field and needs to be evaluated. | Office of Program Development | Yes | Yes | Moderate |