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ABSTRACT

The purpose of this project was to develop data from the classroom to guide technology planning decisions as Oswego City School District (New York) implements its vision statement on technology. A survey was completed by 357 district teachers (88% response rate) which explored teachers' technology background and expertise, attitudes toward technology and instruction, instructional support and staff development requirements, and general and specific curricular priorities. An alternative model of technology planning was developed which was based on teachers' perceptions of their instructional needs. This report presents summary data and recommendations that apply across all four school levels: elementary, middle school, high school, and academy. It describes how the "Oswego Model" of technology planning was developed along with the instruments used in this model to collect classroom-based data. A summary of results are presented and organized around five general categories of items included in the survey: technology related demographics; continuing education; attitudes toward technology; instructional support; and staff development. Ten recommendations are provided focusing on these five categories. Appendices include the survey instrument with combined results and the survey instruments for the four educational levels. (AEF)

Developing Classroom-based Data for Technology Decisions: Assisting the Implementation of Oswego's Vision for the Use of Technology

DISTRICT-WIDE SUMMARY REPORT

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Oswego City School District / Oswego, New York / October 5, 1995

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INTRODUCTION

This report presents summary data and recommendations that apply across all four school levels: elementary, middle school, high school and academy. It begins by describing the purpose of this project. Then it describes how the "Oswego Model" of technology planning was developed along with the instruments used in this model to collect classroom-based data. It concludes by summarizing the results and makes ten recommendations to the district about next steps to take in planning for technology use.

More specific recommendations about curricular priorities, as well as the data that drove these recommendations, are presented in the separate school-level reports.

PURPOSE

The purpose of this project was to develop data from the classroom to guide technology planning decisions as Oswego City School District implements its vision statement on technology. We developed an alternative model of technology planning, one based on teachers' perceptions of their instructional needs. This "Oswego Model" is one where decisions about purchase, training, support, and use are based on extensive data generated by teachers about their instructional requirements. It was expected that such a model would result in greater ownership in the decision-making process, a better understanding of the technology itself, a closer fit between instructional requirements and technology planning, and a smoother path to technology integration in the classroom. The model was grounded in Oswego's "Vision Statement" and included the following procedures:

1. Interviewing all available teachers in discussion groups to determine their instructional needs.
2. Developing preliminary discussion group reports for each school based on interview data.
3. Sharing preliminary discussion group reports with each school.
4. Meeting with teachers at each school to obtain their revision suggestions for the discussion group reports.
5. Revising discussion group reports.
6. Using these revised discussion group reports to develop a draft of the survey instrument.
7. Sharing the draft survey instrument with school personnel to seek revision comments.
8. Revising the survey instrument based on discussions with school personnel.
9. Providing all available teachers with an opportunity to complete the survey instrument.
10. Developing recommendations to the Oswego City School District's Board of Education based on the survey results and the discussion group reports.

The final survey instrument (See Appendix B) explored teachers' perceptions in these areas:

- Teachers' technology background and expertise
- Teachers' attitudes toward technology and instruction
- Teachers' instructional support requirements
- Teachers' staff development requirements
- Teachers' instructional requirements

Among all teachers, 357 or 88% completed the survey, a response rate considered to be outstanding for survey research and one that is thought to directly represent the population surveyed.

PROCEDURES: DEVELOPING A CLASSROOM-BASED MODEL OF TECHNOLOGY PLANNING

A paradox exists with respect to the use of computers and other technologies in school classrooms: while increasing amounts of technology are becoming available to teachers there is little evidence that this technology is being systematically integrated into classroom instruction. The ratio of students to computers available for precollege instruction has decreased from 30 to 1 in 1988 (U.S. Congress, Office of Technology Assessment, 1988) to 9 to 1 in 1995 (U.S. Congress, Office of Technology Assessment, 1995) as the number of available computers increases at about 10 percent each year (Anderson, 1993). Despite this increase in available technology, one study (Goodson, 1991) indicates that fewer than 15 percent of all teachers actually use computers in their teaching. Moreover, the most recent data indicates that, despite an average ratio of one computer for each nine students in the U.S., student use of computers only averages 24 minutes per week in grade 5, 38 minutes per week in grade 8, and 61 minutes per week in grade 11 (U.S. Congress, Office of Technology Assessment, 1995). Computer technology is becoming more widely available, but it is not becoming fully appropriated by teachers and integrated into classroom learning experiences.

This conclusion is also supported by Becker (1993) who reports that while 40 percent of math and science teachers use some computer software in their classes, only three percent of computer-using math teachers engaged students in the use of graphing programs on more than five occasions and only one percent of computer-using science teachers used computer programs that connected with lab equipment on more than five occasions. It seems clear that teachers are not sufficiently appropriating technology and integrating these experiences into their classrooms.

Undoubtedly, there are many factors which contribute to the fact that computers and other technologies, while increasingly available, are not always used to support learning goals in school classrooms. In many cases however, the cause of this situation is that technology planning decisions have not involved a central stakeholder, the teacher (Leu, 1994). Traditional models of technology planning and purchase follow a largely top-down process where decisions about what to purchase have been made at central administrative levels with little teacher input. Decisions about which technologies to purchase are not always based on teachers' perceptions of actual classroom needs either because central administrators are unfamiliar with these needs or because administrators perceive different needs to be essential. As a result, teachers often resist the integration of technology into the curriculum because it fails to meet their instructional needs or because they do not own the decisions that were made (Miller & Olson, in press).

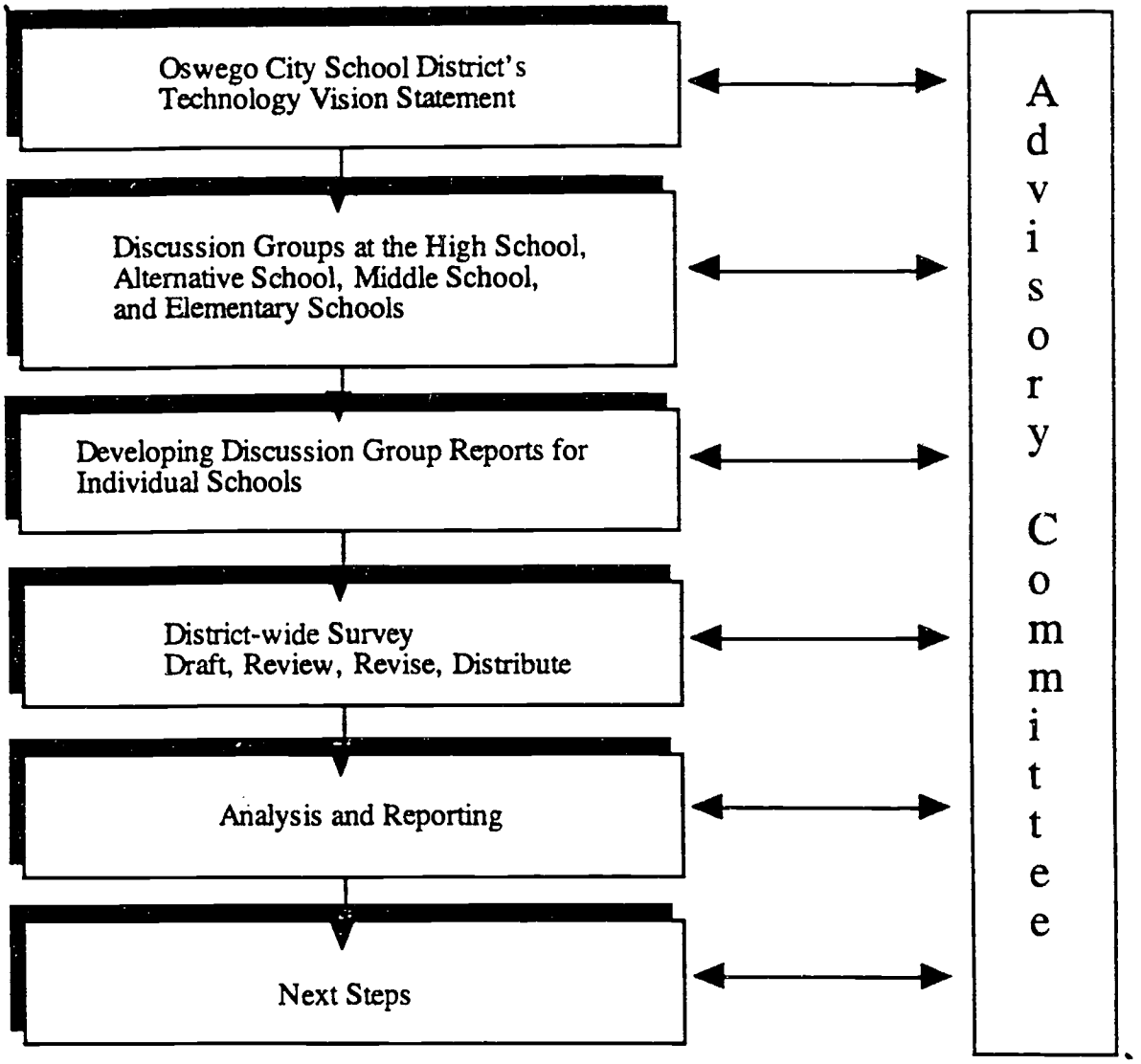
To avoid these problems and increase the degree to which technology is integrated into the classroom to support teaching and learning needs, the Oswego City School District decided to

attempt to develop an alternative model of technology planning, one based on teachers' perceptions of their instructional needs. This "Oswego Model" is one where decisions about purchase, training, support, and use would be based on extensive data generated by teachers about their instructional requirements. It was expected that such a model, if successfully implemented, would result in greater ownership in the decision-making process, a better understanding of the technology itself, a closer fit between instructional requirements and technology decisions, and a smoother path to technology integration in the classroom.

The Oswego Model Of Technology Planning

Figure 1 represents the Oswego Model of Technology Planning developed in this project and used to gather data about teachers' perceptions of their instructional requirements. The model consists of procedural steps that were followed to gather data about teachers' instructional requirements during the first phase. These included: using Oswego's Vision Statement on Technology to guide the entire process, conducting discussion groups at the high school, alternative school, middle school, and each of the elementary schools to identify instructional areas of concern, developing discussion group reports for each of the schools in the district, using these discussion group reports to develop a district-wide survey instrument, and using the results of the district-wide survey as a data base to inform technology decisions and prioritize instructional requirements. The procedures used in each of these phases will be described below.

Figure 1. The Oswego Process Model for Identifying Instructional Requirements



Using Oswego's Vision Statement on Technology to Guide the Technology Planning Process

The vision statement on technology developed by the Oswego City School District provides a broad framework for thinking about technology in the districts' schools. This vision statement informed the development of the Oswego Model and guided our data gathering efforts. We used this vision statement to begin our discussions with groups of teachers about their instructional requirements. The Oswego Vision Statement is presented in Figure 2.

Conducting Discussion Groups at The High School, Alternative School, Middle School, and Each of The Elementary Schools

We met with groups of teachers in the district to gather preliminary information about the instructional requirements at each school. These discussion groups often formed in subject area or grade level groups. Every available teacher participated in these discussion groups during the school day. While each discussion group varied in the direction of its discussion, the purpose of these conversations was to develop an understanding of teachers' responses to the vision statement and to identify important instructional requirements and instructional support requirements. Typically, the discussion groups responded to the following questions:

What do you like about the district's vision statement on technology?

What are your concerns about the district's vision statement on technology?

What are your needs related to instruction and instructional support?

Field notes of teachers' responses to these issues were recorded and used as a primary source to develop a draft report of the instructional requirements for each school. These discussion groups provided valuable information about teachers' instructional requirements and served to more widely communicate the nature of the district's vision statement and commitment to technology.

Developing Discussion Group Reports for Individual Schools

Constant-comparative analytic techniques were applied to field notes to develop themes at each of the schools. These themes were used to draft a preliminary report, describing responses to the district's vision statement and identifying instructional requirements as expressed by teachers. Drafts of the discussion group reports were then shared with each school faculty at a meeting in order to obtain teachers' comments and suggestions for revisions. Our purpose here was to ensure that the concerns we heard teachers express were accurately recorded and to ensure that discussion group reports accurately represented areas of instructional concern at each school site. Again, field notes of teachers' concerns were recorded. These were used to revise the preliminary report for each school.

Figure 2. Oswego City School District's Vision Statement on the Use of Technology

Vision
For the Use of Technology in Support of Teaching and Learning within the City School District of Oswego
Adopted May 3, 1994

The City School District of Oswego is committed to creating an environment which supports effective teaching and learning and maximizes the opportunity for each student to learn and the capacity of each instructor to teach. In order to "work smarter" and make the most effective use of our human resources, we must extend our capabilities through the use of technology in support of teaching and learning:

- To permit students to be taught what each is capable of learning in cost-effective ways and at a rate which increases his or her opportunity to be successful;

- To fulfill our responsibilities established by the mandates of the New York State Department of Education curriculum frameworks, which require students to demonstrate the ability to use a variety of technologies, including computers and telecommunications, to solve significant problems and communicate with a wide variety of audiences locally, nationally, and internationally; and

- To prepare our students to compete successfully for admission to institutions of higher education, to secure employment and succeed on the job, and to demonstrate the skills, attitudes, and habits of mind which allow them to become life long learners.

In order to realize our vision, we must plan aggressively to implement four elements:

1. An electronic network or information pathway which increases access to and facilitates the exchange of information and resources in support of teaching and learning by linking schools and institutions in the community.

   Just as leaders in industry and government judge the emerging "information superhighway" to be essential for maintaining our national economic competitiveness, we believe that the ability to exchange information and to access resources electronically is essential to maintaining our students' competitiveness in the job market and to succeed in post-secondary education and training. Ease of access means to the greatest extent possible standardizing the user interface and protocols for accessing data from a single source; for example, a common database showing the location and availability of library resources, or network access to optical storage devices for research and retrieval of commonly used instrucuonal resources, such as encyclopedias, maps, atlases, abstracts, and full-text versions of periodicals frequently used for research by students or teachers. Therefore, implementation of an information network which supports the exchange of all forms of information - sound, graphics, dsta, text, video images - both within the Oswego schools and beyond, should be given high priority in our technology planning.

2. Equity of opportunity to learn using technology and access to the network resources, which to the greatest extent possible should be independent of the time of day or the location of the learner.

   We recognize the dangers of creating information elites, or technology "haves" and "have-nots" which inevitably result in loss for some students of opportunity to be successful in school and after graduation. Therefore, the school district must act aggressively to establish and maintain equity in the opportunity to learn, including access to technology and information resources for all students and staff. This means providing the quantity and quality of technology, including computers and peripheral devices, appropriate to the instructional needs of our students. At a minimum, every classroom should have at least one networked computer and the appropriate peripheral devices necessary for instructional and administrative purposes; ideally, the district can provide teachers with the means to connect to the network out of school in order to make more effective use of time and encourage use of free resources readily available through Internet, or other electronic sources. While every student does not need his or her own computer, every student does need access to computing resources in classrooms and at locations where learning takes place without the need to wait unreasonable amounts of time, leave the classroom, or work in unsupervised areas. We believe this can be best accomplished by increasing the number of computers in classrooms to a ratio of at least 1:6 computers per student, and by maintaining a ratio of not less than 1:1 in microcomputer labs used for direct instruction, and 1:2 in areas where computer intensive applications are taught, such as desktop publishing or multimedia production.

3. The ability of students and teachers to use the networked resources effectively to support teaching and learning.

   The ability to use the technological and networked resources effectively cannot be left to chance. Adequate training and continuing support are necessary in order for students and teachers to make the most cost effective use of the increasingly powerful and complex technologies now available. This will require significant commitment of time for training, possible redesign of instructional and professional development strategies, and more effective support for teachers who wish to use new applications of technology in schools.

4. To the maximum extent possible, eliminating the barriers to the effective use of technology associated with inadequate maintenance and obsolescence.

   Instructional technologies, as is true of any tools we use at home or work, are subject to wearing out or breakage. There is no educational return on the investment, we are adding no value to the learning process, when a computer is not usable. Ongoing routine maintenance, quick repair of minor problems on-site, and replacement of units when major repairs are required will allow us to use technology more effectively and to increase our return on the original investment in equipment and training. Similarly, obsolete technology inhibits our ability to fulfill our responsibilities. Although we should not expect to maintain technology in schools at a state-of-the-art level, we should do everything possible to stay within three to five years of this state in order to graduate students better prepared to enter the work force and for post-secondary education. In order to achieve this, we must replace already obsolete technologies, especially computers, within the next three years and, thereafter, expect to replace 20% - 25% of the existing inventory annually to upgrade equipment and avoid excessive obsolescence.

In adopting this vision, we recognize that there are many options available for implementation. Therefore, the school district administration should prepare and submit a report and technology plan to the Board annually prior to budget approval showing the current status of the use of technology in support of teaching and learning, accomplishments, and planned actions to realize this vision, and periodic reports at other times as appropriate to keep the board members fully informed of progress.

Figure 2. Oswego City School District's Vision Statement on the Use of Technology

Using the Discussion Group Reports to Develop a District-Wide Survey Instrument

The individual school reports provide a broad, qualitative picture of the instructional requirements expressed by teachers (Please see the individual school level reports.) They do not, however, provide the hard data that would allow the district to identify teachers' technology backgrounds, attitudes towards technology and instruction, instructional support requirements, staff development requirements. Most importantly, the discussion group reports would not allow the district to prioritize instructional requirements. Thus, we used the results of the individual school reports to develop a district-wide survey instrument that would provide more precise data on instructional requirements and allow us to develop the classroom-based data that may be used to inform technology decisions in the district. A draft survey instrument was prepared based on the data in the individual school reports. This was then revised after several meetings with school personnel.

The final survey instrument can be seen in Appendix B. They explored several areas that appeared as themes in the discussion groups and in meetings with school personnel to revise the survey instrument. These areas included:

1. Teachers' Technology Background and Expertise
2. Teachers' Attitudes Toward Technology and Instruction
3. Teachers' Instructional Support Requirements
4. Teachers' Staff Development Requirements
5. Teachers' Curricular Priorities (general)
6. Teachers' Curricular Priorities (specific)

In the spring of 1995, the survey was distributed to all teachers in the district. 357 teachers in the district completed and returned the survey for an overall response rate of 88%.

Appendix A contains the general section of the survey instrument with the combined school results presented by level and overall. More detailed and comprehensive reports have been prepared to present the results of each specific level. Those data and recommendations will not be duplicated in this overall district report. Thus, such issues as curriculum priorities by specific levels (e.g., elementary) are included only in the more extensive grade level reports.

SUMMARY RESULTS AND OBSERVATIONS

The summary data presented in this summary are intended to focus attention on broader general issues many of which are addressed in greater detail in specific school level final reports. Observations and comments which follow are intended to lead the reader through the summary data that report mean responses to relevant items across all school levels including the Academy as a separate entity (See Appendix A). Comments are organized around five general categories of items included in the survey:

- Technology Related Demographics
- Continuing Education
- Attitudes Toward Technology
- Instructional Support
- Staff Development

General recommendations related to these categories follow these preliminary observations.

Technology Related Demographics: (Items 1-3)

Reviewing the data portraying the numbers and percentages of teachers who have computers in their homes and classrooms suggests that two thirds of all teachers have access to some kind of computing device in at least one of the locations. The percentage range across levels for both home and classroom access (61-80% in the home and 41-88% in the classroom) has implications for how the district plans for continuing staff development, speed of technology rollout and integration, as well as the types and amount of support services required.

The kinds of equipment to be found in both locations reflects relatively typical purchase decisions made by families and school districts over the past two decades. What these data suggest for future decisions about hardware, courseware and software purchase is not obvious. If past purchase and use history were the primary factors to be considered in such decisions, we still might be searching for new rear wheel drive, standard shift Studebakers as our preferred transportation medium. These data are relevant and important as partial evidence of current experience and familiarity. Decisions about future platform, network and courseware applications can be informed by these data but the necessity for continuous staff development, curriculum review and instructional materials revision will exist regardless of past history or future procurement decisions.

Given these equipment related data, it is also not surprising that the range of self reported expertise (Item No. 3) reflects familiarity with specific equipment. The newer technology applications (e.g., Telecommunications) could not be expected to be viewed with confidence at this

time. Cross level differences in these areas may not be as critical in planning next steps as are the considerable differences in perceived expertise between different kinds of applications.

Continuing Education: (Item 4)

Sources of information about technology reported to have been used in the past year provide interesting issues to consider. Since most teachers at all levels have been teaching for five or more years, it is possible that such issues as external incentives (e.g., permanent certification) do not apply and the more formal approaches to continuing education (workshops and courses) do not appear to have had much influence. Changes in this pattern, if deemed appropriate and acceptable, may require careful consideration of policies, practices, access, and relevance for each level and perhaps each individual.

Attitudes Toward Technology: (Items 5-6)

Survey items seeking to identify teacher attitudes about technology focused on their skills, application and organizational structure, support systems and access. Relatively high mean responses (4.0 and above on a five point scale) to many of the items across all levels suggests that many of the items as written accurately reflect teacher attitudes. Items receiving a somewhat more neutral response (2.5-3.4) may require additional attention since they reflect organizational issues (computer labs and clusters) as well as roles and confidence related to technology. Higher scores in these areas would perhaps have offered a conflicting sense of personal commitment and necessity for support.

Survey area number six addressed a range of issues related to technology applications in the classroom, the school facility, the district and the community. Differences across levels in this survey of importance are relatively small. The small numbers of faculty in the Academy along with consistent responses among them make their high scores in some areas stand out but the larger mean scores in most instances are not what might be of most utility when planning next steps. Relatively positive and consistent responses, across all levels and within most categories merit brief review.

Six general categories of issues can be used to summarize these data. They are as follows:

Category Label	Item Code	Comment
Organization	a, b	both supportive
Communication	f, g, h	all supported
Information	c, i	role parental access
Assessment	j	all important
Classroom Management	d, e, k	lunch count and standardized test result tracking are outliers
Applications	l	consistent support across all items and levels

Instructional Support: (Item 7)

Issues related to instructional support for technology application addressed equipment access, storage, maintenance and software assistance. Responses from teachers across all levels and for each of the seven items are consistent, quite high and not surprising. Planning to address these support concerns and program implementation will require careful thought and continuous communication.

Staff Development: (Items 8-9)

Little data existed prior to this survey on whether all, most or some faculty were ready and committed to participating in a technology implementation program. Item eight in the survey addressed the issues of readiness. The data are clear and consistent across each of the levels. When three fourths of the faculty in any educational institution agree on an issue like this, it is commendable and encouraging. The fourteen individuals who expressed a lack of interest in participating (out of 330 responding to the item) is a small number or percentage (4%) in any context.

Item number nine asked teachers to consider the means by which staff development could be addressed. Determining which strategies, methods and schedules would be preferable as approaches to staff development required nine categories with several sub items for one of them. What is obvious from this first pass at a staff development feasibility study is that faculty are not eager to devote weekends and holidays to continuing professional development. This should come as no surprise. The evening class or workshop was also not strongly supported. What was not asked was how many evenings teachers already devote to school and related professional events. Whatever the current teacher availability, their relatively strong support for a variety of approaches and schedules offers multiple options that can be addressed by staff development personnel and committees.

RECOMMENDATIONS

The following ten recommendations reflect issues common to all levels of the district. More specific elaborations on these recommendations are included in each school level report along with the data that support each. It is also important to note that recommendations related to specific curricular issues and priorities are listed in the four school-level reports.

1. **Computer technology should be extensively upgraded in classrooms if the district hopes to maximize the instructional impact of their technology plan.**

2. **The district should assist teachers in developing familiarity with newer types of computer operating systems.**

3. **Equipment acquisition, training, and support should include a focus on telecommunication technologies, especially if hardware and network systems permit these to be incorporated into classroom instruction.**

4. **Teachers will require instructional support in newer digital technologies such as the use of scanners, digital cameras, and laser discs, especially if these are incorporated into classroom instruction and student-developed multimedia presentations. Additional instructional support will have to be provided with the use of subject area instructional software, CD-ROMs, spreadsheets, databases, and presentation software.**

5. **While teachers report only low to moderate levels of expertise in most newer technologies, they are ready right now to begin to upgrade their familiarity with these technologies, given the understanding that training and staff development would be required.**

6. **As the technology plan is implemented, extensive, systematic instructional support must be provided to assist teachers with new technologies on an on-going basis.**

7. **Technology acquisition and training should support teachers' concerns about being able to individualize instruction to meet students' unique learning needs, especially in math, reading, science, and writing.**

8. **It will be useful for schools to consider the issue of where computer technologies should be located.**

9. **Staff development should be certain to provide learning experiences for teachers that are relevant to their needs and geared to their level of expertise.**

10. **Staff development should take place during planned staff development days and include half-day or full-day sessions organized in mini-workshops with hands-on and in-school experiences.**

Appendix A: The Survey Instrument with the Combined Results

OSWEGO CITY SCHOOL DISTRICT
Technology Planning Survey Results
(N=357)

Years of Teaching Experience: (Circle one.)

	Elementary		Middle		High		Academy		All	
	N	%	N	%	N	%	N	%	N	%
0-2	9	5.6%	1	1.6%	4	4.3%	0	0.0%	14	4.3%
3-5	20	12.3%	4	6.6%	11	11.8%	2	28.6%	37	11.5%
6-10	21	13.0%	9	14.8%	9	9.7%	3	42.9%	42	13.0%
11-15	39	24.1%	5	8.2%	21	22.6%	1	14.3%	66	18.3%
16-20	25	15.4%	17	27.9%	17	18.3%	0	0.0%	59	20.4%
More than 20	48	29.6%	25	41.0%	31	33.3%	1	14.3%	105	32.5%

Technology Background

1. Do you have a computer at home?

Yes	105	60.7%	53	80.3%	69	67.6%	6	75.0%	232	66.7%
No	68	39.3%	13	19.7%	33	32.4%	2	25.0%	116	33.3%
If yes, what kind is it? (Circle all that apply.)										
Apple	22	22.7%	5	9.8%	2	3.0%	1	16.7%	30	13.6%
Mac	42	43.3%	33	64.7%	37	55.2%	2	33.3%	114	51.6%
DOS	6	6.2%	6	11.8%	7	10.4%	1	16.7%	20	9.0%
Windows	27	27.8%	7	13.7%	21	31.3%	2	33.3%	57	25.8%

2. Do you have a computer in your classroom?

Yes	151	87.8%	36	55.4%	41	41.4%	6	75.0%	234	68.0%
No	21	12.2%	29	44.6%	58	58.6%	2	25.0%	1101	32.0%
If yes, what kind is it? (Circle all that apply.)										
Apple	127	88.8%	22	66.7%	16	40.0%	0	0.0%	165	74.3%
Mac	9	6.3%	8	24.2%	14	35.0%	3	50.0%	34	15.3%
DOS	4	2.8%	1	3.0%	3	7.5%	2	33.3%	310	4.5%
Windows	3	2.1%	2	6.1%	7	17.5%	1	16.7%	13	5.9%

3. Please rate your expertise in the following areas by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

	Elementary		Middle		High		Academy		All	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
a. Using an Apple computer (IIc, IIe, IIgs)	168	3.0	58	2.9	85	2.7	7	2.1	318	2.9
b. Using a Macintosh computer	149	2.3	60	3.3	88	3.0	8	3.3	305	2.7
c. Using a DOS based computer	123	1.7	48	2.1	72	2.3	8	2.9	251	2.0
d. Using a Windows based computer	124	2.0	45	2.5	77	2.5	8	2.6	254	2.2
e. Word Processing	163	3.4	64	3.8	94	3.6	8	3.6	329	3.6
f. Spreadsheet	131	2.0	60	2.9	83	2.8	8	3.3	282	2.4
g. Database	127	2.0	57	2.8	83	2.6	8	2.8	275	2.3
h. Presentation Software	122	2.0	43	2.1	66	2.4	8	2.4	239	2.2
i. Subject Area Instructional Software	153	2.9	52	2.6	77	2.6	8	2.8	290	2.8
j. Telecommunications (e.g., Internet)	117	1.7	47	1.4	71	2.0	8	2.6	243	1.8
k. CD-ROM	138	2.1	53	2.2	77	2.3	8	2.8	276	2.2
l. Laser disc	123	1.5	42	1.4	68	1.9	7	2.0	240	1.6
m. Scanner	111	1.5	43	1.4	62	1.7	8	1.9	224	1.5
n. Digital camera	108	1.4	38	2.1	56	1.6	6	1.5	208	1.4
o. Printer	162	3.2	64	3.5	94	3.1	7	3.3	327	3.2
p. FAX	108	1.8	48	1.9	72	2.0	8	2.9	236	1.9
q. VCR	166	3.8	62	4.1	96	4.0	8	3.6	332	3.9
r. Cam-corder	155	3.3	57	3.5	91	3.3	8	3.1	311	3.4

4. Which of the following have you utilized in the past year to learn more about technology?

	Elementary		Middle		High		Academy		All	
	N	%	N	%	N	%	N	%	N	%
a. Workshops	6	3.8%	4	6.3%	7	7.1%	0	0.0%	17	5.2%
b. Courses	10	6.4%	16	25.0%	1	1.0%	0	0.0%	11	3.4%
c. Colleagues	50	31.8%	15	23.4%	23	23.2%	3	37.5%	92	28.0%
d. Magazines	29	18.5%	0	0.0%	16	16.2%	3	37.5%	63	19.2%
e. Books	21	13.4%	9	14.1%	25	25.3%	1	12.5%	56	17.1%
f. Other	41	26.1%	20	31.3%	27	27.3%	1	12.5%	89	27.1%

Attitudes

5. Please rate your level of agreement with the following statements by circling the appropriate response on the scale: 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Neutral (N) 4 = Agree (A) 5 = Strongly Agree (SA)

	Elementary		Middle		High		Academy		All	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
a. It is important for:										
• me to integrate instruction with technology	173	4.0	65	4.1	100	4.1	7	4.3	345	4.0
• students to learn about technology	174	4.5	67	4.6	100	4.6	8	4.6	349	4.5
• students to use technology for learning	172	4.3	67	4.5	99	4.4	8	4.8	346	4.4
• teachers to have access to technology for class preparation	174	4.3	67	4.6	101	4.4	8	4.6	350	4.4
• teachers to have access to technology for classroom presentation	172	4.3	67	4.4	100	4.4	8	4.9	347	4.4
b. I would like to improve my computer skills	174	4.5	65	4.5	101	4.6	8	4.6	348	4.5
c. I would like to have a computer in my classroom for me to use	173	4.4	65	4.5	98	4.5	8	4.5	344	4.5
d. I would like to have a portable computer to use	172	4.1	67	4.1	101	4.1	8	4.0	348	4.1
e. A computer laboratory will respond to most of my instructional needs	173	3.3	65	3.2	101	3.2	8	2.5	347	3.3
f. A computer cluster will respond to most of my instructional needs	159	3.3	59	3.3	92	3.4	8	4.1	318	3.3
g. I am concerned about the availability of follow-up resources for this project	171	4.1	65	4.4	96	4.2	8	4.1	340	4.2
h. It is important for me to receive on-going instructional support for technology	173	4.4	67	4.4	100	4.4	8	4.5	348	4.4
i. Technology will change my role as ateacher	171	3.7	66	3.7	99	3.8	8	4.4	344	3.7
j. With technology in the classroom the teacher should maintain the primary role	167	4.1	64	4.2	102	4.1	8	3.0	341	4.1
k. I am comfortable using technology	172	3.3	65	3.7	102	3.6	8	4.1	347	3.5
l. I am interested in exploring new uses for technology in solving instructional problems	173	4.0	67	4.2	102	4.2	8	4.8	350	4.1

6. Please indicate how important the following are to you as a teacher in your area by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

	Elementary		Middle		High		Academy		All	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
a. Students working in teams	160	4.0	63	3.8	100	3.8	8	4.3	331	3.9
b. Individualized instruction	164	4.2	63	4.3	100	4.1	8	4.8	335	4.2
c. Access to information resources	168	4.3	65	4.4	101	4.2	8	4.8	343	4.3
d. Responding to the range of abilities	167	4.6	63	4.5	10	4.4	8	4.9	340	4.5
e. Adaptive technology for special needs students	153	4.1	62	4.2	96	3.9	8	4.8	319	4.1
f. Communication with faculty and administrators in the school district	167	4.1	65	4.0	102	3.9	8	3.6	342	4.0
g. Communication with parents	167	4.4	66	4.2	103	4.1	8	3.9	344	4.2
h. Communication with people outside the school district	161	3.7	66	3.6	101	3.8	8	4.4	336	3.7
i. Parent access to student records	158	3.4	64	3.5	94	3.2	8	4.0	324	3.4
j. Assessment issues:										
• Assessment in general	164	4.0	62	4.0	97	3.9	8	4.0	331	4.0
• Record keeping of student progress	165	4.2	65	4.2	97	4.1	8	4.3	335	4.2
• Keeping anecdotal records	162	4.0	63	3.8	94	3.5	8	4.3	327	3.8
• Authentic assessment	150	3.9	56	3.8	85	3.9	8	4.4	299	3.9
• Portfolio assessment	150	3.8	53	3.7	88	3.8	8	4.5	299	3.8
k. Classroom management issues:										
• Classroom management in general	159	4.2	63	4.0	95	4.0	8	4.0	325	4.1
• Grading	147	3.8	62	3.8	94	4.0	6	3.6	310	3.8
• Attendance	144	3.8	62	3.9	95	4.1	8	4.1	309	3.9
• Lunch count	125	3.0	22	2.5	28	3.1	6	2.8	181	3.0
• Tracking standardized test scores	140	3.4	45	3.4	59	3.1	6	2.7	250	3.3
• Student profiles	149	3.8	56	3.6	80	3.3	7	4.3	292	3.7
• IEP development	128	3.7	44	3.8	61	3.3	7	4.1	240	3.6
l. Using technology for:										
• Practice	160	3.9	61	3.8	88	3.9	8	4.0	317	3.9
• Feedback	160	3.7	61	3.8	87	3.9	8	3.8	316	3.8
• Simulations	158	3.7	61	3.9	89	4.1	8	4.3	316	3.9
• Remediation	156	4.0	61	3.9	88	3.8	8	4.3	311	3.9
• Elaboration or enrichment	161	4.1	59	4.0	92	4.1	8	4.3	321	4.1

Instructional Support

7. Please rate the following items in terms of their importance to you as a teacher by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

	Elementary		Middle		High		Academy		All	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
a. Having a VCR/television in my classroom	162	3.9	61	4.0	97	4.0	8	4.0	328	3.9
b. Having computers in my classroom	167	4.4	63	4.4	97	4.0	8	4.5	335	4.3
c. Having a computer laboratory	165	4.2	62	3.9	99	4.0	8	3.9	334	4.1
d. Space for housing technology	165	4.4	61	4.1	96	4.2	8	4.6	330	4.3
e. Storage for technology related equipment	167	4.2	61	4.1	97	4.1	8	4.6	333	4.2
f. Maintenance of technology	164	4.5	61	4.4	97	4.3	8	4.6	330	4.4
g. Technical support for software	166	4.5	64	4.2	99	4.4	8	4.6	337	4.4

Staff Development

8. How ready are you to participate in the technology implementation given the understanding that training and staff development will be required? (Circle one.)

	Elementary		Middle		High		Academy		All	
	N	%	N	%	N	%	N	%	N	%
I am ready to participate right now	121	74.7%	50	76.9%	80	84.2%	6	75.0%	257	77.9%
I would like to participate at a later time	36	22.2%	9	13.8%	13	13.7%	1	12.5%	59	17.9%
I am not interested in participating	5	3.1%	6	9.2%	2	2.1%	1	12.5%	14	4.2%

9. Please indicate the likelihood of your participating in the following activities related to new technology by circling the appropriate response on the scale below.

	Elementary		Middle		High		Academy		All	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
a. Demonstrations of technology	168	3.8	62	4.1	98	4.1	8	4.3	336	4.0
b. Training geared to my level of expertise	172	4.4	64	4.5	101	4.5	8	4.4	345	4.4
c. Training relevant to my needs	171	4.5	66	4.5	100	4.6	8	4.4	345	4.5
d. Mini-workshops (hands-on, in-school)	171	4.5	66	4.4	100	4.5	8	4.5	345	4.5
e. Half-day in-service programs	171	4.3	64	4.3	99	4.1	8	4.5	342	4.2
f. Full day in-service programs	169	4.0	66	4.2	99	4.1	8	4.0	342	4.1
g. Several days of intensive training	167	3.7	65	3.8	101	3.9	8	3.9	341	3.8
h. Participating in a pilot or field test study	167	2.9	65	3.1	100	3.2	8	4.4	340	3.0
i. Staff development programs occurring:										
• right after school	171	3.0	67	3.2	100	3.3	8	4.1	346	3.1
• evenings	170	2.4	66	2.6	99	2.6	8	3.5	343	2.5
• during school hours	172	3.7	66	3.7	99	3.7	8	4.1	345	3.7
• on weekends	169	1.6	66	1.8	101	2.1	8	2.9	344	1.8
• in the summer	167	3.3	66	2.9	100	3.3	8	3.5	341	3.2
• during vacations other than summer	171	1.9	66	1.8	101	2.4	8	2.8	346	2.1
• during planned staff development days	172	4.5	66	4.5	101	4.5	8	4.6	347	4.5

Appendix B: The Survey Instruments

Elementary

OSWEGO CITY SCHOOL DISTRICT
Technology Planning Survey—Elementary Level

PLEASE RETURN THIS COMPLETED SURVEY TO YOUR BUILDING OFFICE BY THE END OF THE DAY ON MARCH 24.

School:_____ (4)

Grade(s): (Circle one.) K 1 2 3 4 5 6 All (5)

Area: (Circle all that apply.) Art Enrichment Guidance (6-7)
Librarian Music Physical Education
Reading Resource Room School Nurse Teacher
Speech Other_____

Years of Teaching Experience: (Circle one.) 0-2 3-5 6-10 11-15 16-20 More than 20 (8)

Technology Background

1. Do you have a computer at home? Yes No (9)
   If yes, what kind is it? (Circle all that apply.) Apple Mac DOS Windows (10-13)

2. Do you have a computer in your classroom? Yes No (14)
   If yes, what kind is it? (Circle all that apply.) Apple Mac DOS Windows (15-18)

3. Please rate your **expertise** in the following areas by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Low		Moderate		High	
a.	Using an Apple computer (IIc, IIe, IIgs)	0	1	2	3	4	5	(19)
b.	Using a Macintosh computer	0	1	2	3	4	5	
c.	Using a DOS based computer	0	1	2	3	4	5	
d.	Using a Windows based computer	0	1	2	3	4	5	
e.	Word Processing	0	1	2	3	4	5	
f.	Spreadsheet	0	1	2	3	4	5	
g.	Database	0	1	2	3	4	5	
h.	Presentation Software	0	1	2	3	4	5	
i.	Subject Area Instructional Software	0	1	2	3	4	5	
j.	Telecommunications (e.g., Internet)	0	1	2	3	4	5	
k.	CD-ROM	0	1	2	3	4	5	
l.	Laser disc	0	1	2	3	4	5	
m.	Scanner	0	1	2	3	4	5	
n.	Digital camera	0	1	2	3	4	5	
o.	Printer	0	1	2	3	4	5	
p.	FAX	0	1	2	3	4	5	
q.	CR	0	1	2	3	4	5	
r.	Cam-corder	0	1	2	3	4	5	(36)

Please continue

4. Which of the following have you utilized in the past year to learn more about technology? (Circle all that apply.)

a.	Workshops	d.	Magazines	(37-42)
b.	Courses	e.	Books	
c.	Colleagues	f.	Other_____	

Attitudes

5. Please rate **your level of agreement** with the following statements by circling the appropriate response on the scale: 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Neutral (N) 4 = Agree (A) 5 = Strongly Agree (SA)

		SD	D	N	A	SA	
a.	It is important for:						
	• me to integrate instruction with technology	1	2	3	4	5	(43)
	• students to learn about technology	1	2	3	4	5	
	• students to use technology for learning	1	2	3	4	5	
	• teachers to have access to technology for class preparation	1	2	3	4	5	
	• teachers to have access to technology for classroom presentation	1	2	3	4	5	
b.	I would like to improve my computer skills	1	2	3	4	5	
c.	I would like to have a computer in my classroom for me to use	1	2	3	4	5	
d.	I would like to have a portable computer to use	1	2	3	4	5	
e.	A **computer laboratory** will respond to most of my instructional needs	1	2	3	4	5	
f.	A **computer cluster** will respond to most of my instructional needs	1	2	3	4	5	
g.	I am concerned about the availability of follow-up resources for this project	1	2	3	4	5	
h.	It is important for me to receive on-going instructional support for technology	1	2	3	4	5	
i.	Technology will change my role as a teacher	1	2	3	4	5	
j.	With technology in the classroom the teacher should maintain the primary role	1	2	3	4	5	
k.	I am comfortable using technology	1	2	3	4	5	
l.	I am interested in exploring new uses for technology in solving instructional problems	1	2	3	4	5	(58)

6. Please indicate how **important** the following are to you as a teacher in your area by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		How Important					
		Not Applicable	Not at All	Somewhat		Very	
a.	Students working in teams	0	1	2	3	4	5 (59)
b.	Individualized instruction	0	1	2	3	4	5
c.	Access to information resources	0	1	2	3	4	5
d.	Responding to the range of abilities	0	1	2	3	4	5
e.	Adaptive technology for special needs students	0	1	2	3	4	5
f.	Communication with faculty and administrators in the school district	0	1	2	3	4	5
g.	Communication with parents	0	1	2	3	4	5
h.	Communication with people outside the school district	0	1	2	3	4	5
i.	Parent access to student records	0	1	2	3	4	5
j.	Assessment issues:						
	• Assessment in general	0	1	2	3	4	5
	• Record keeping of student progress	0	1	2	3	4	5
	• Keeping anecdotal records	0	1	2	3	4	5
	• Authentic assessment	0	1	2	3	4	5
	• Portfolio assessment	0	1	2	3	4	5
k.	Classroom management issues:						
	• Classroom management in general	0	1	2	3	4	5
	• Grading	0	1	2	3	4	5
	• Attendance	0	1	2	3	4	5
	• Lunch count	0	1	2	3	4	5
	• Tracking standardized test scores	0	1	2	3	4	5
	• Student profiles	0	1	2	3	4	5
	• IEP development	0	1	2	3	4	5
l.	Using technology for:						
	• Practice	0	1	2	3	4	5 (80)
	• Feedback	0	1	2	3	4	5 (4)
	• Simulations	0	1	2	3	4	5
	• Remediation	0	1	2	3	4	5
	• Elaboration or enrichment	0	1	2	3	4	5 (7)

Instructional Support

7. Please rate the following items in terms of their **importance** to you as a teacher by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		How Important					
		Not Applicable	Not at All		Somewhat		Very	
a.	Having a VCR/television in my classroom	0	1	2	3	4	5	(8)
b.	Having computers in my classroom	0	1	2	3	4	5	
c.	Having a computer laboratory	0	1	2	3	4	5	
d.	Space for housing technology	0	1	2	3	4	5	
e.	Storage for technology related equipment	0	1	2	3	4	5	
f.	Maintenance of technology	0	1	2	3	4	5	
g.	Technical support for software	0	1	2	3	4	5	(14)

Staff Development

8. How **ready** are you to participate in the technology implementation given the understanding that training and staff development will be required? (Circle one.) (15)

   I am ready to participate right now.

   I would like to participate at a later time.

   I am not interested in participating.

9. Please indicate the **likelihood of your participating** in the following activities related to new technology by circling the appropriate response on the scale below.

		Not at All			Somewhat		Very	
a.	Demonstrations of technology	1	2	3	4	5		(16)
b.	Training geared to my level of expertise	1	2	3	4	5		
c.	Training relevant to my needs	1	2	3	4	5		
d.	Mini-workshops (hands-on, in-school)	1	2	3	4	5		
e.	Half-day in-service programs	1	2	3	4	5		
f.	Full day in-service programs	1	2	3	4	5		
g.	Several days of intensive training	1	2	3	4	5		
h.	Participating in a pilot or field test study	1	2	3	4	5		
i.	Staff development programs occurring:							
	• right after school	1	2	3	4	5		
	• evenings	1	2	3	4	5		
	• during school hours	1	2	3	4	5		
	• on weekends	1	2	3	4	5		
	• in the summer	1	2	3	4	5		
	• during vacations other than summer	1	2	3	4	5		
	• during planned staff development days	1	2	3	4	5		(30)

Curriculum

10. Before we look at specific topics under each general area, please indicate how challenging each of these general areas is to you in your work with students by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All			Somewhat			Very	
a.	Art	0	1	2	3	4	5	6	7	(31)
b.	Health	0	1	2	3	4	5	6	7	
c.	Library	0	1	2	3	4	5	6	7	
d.	Listening	0	1	2	3	4	5	6	7	
e.	Math	0	1	2	3	4	5	6	7	
f.	Music	0	1	2	3	4	5	6	7	
g.	Physical Education	0	1	2	3	4	5	6	7	
h.	Reading	0	1	2	3	4	5	6	7	
i.	Science	0	1	2	3	4	5	6	7	
j.	Social Studies	0	1	2	3	4	5	6	7	
k.	Speaking	0	1	2	3	4	5	6	7	
l.	Writing	0	1	2	3	4	5	6	7	
m.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	(43)

11. **Complete all of the following areas.** Please indicate how **challenging** each of these specific topics is to you as a teacher. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All			Somewhat			Very	
Art										
a.	making connections and supporting class projects in other subjects	0	1	2	3	4	5	6	7	(44)
b.	understanding art and artists	0	1	2	3	4	5	6	7	
c.	applications of art	0	1	2	3	4	5	6	7	
d.	creating art: image and idea	0	1	2	3	4	5	6	7	
e.	structure (mode, principles of design, technique and style)	0	1	2	3	4	5	6	7	
f.	materials (media, tools, and elements)	0	1	2	3	4	5	6	7	
g.	evaluating artwork	0	1	2	3	4	5	6	7	
h.	using artwork as a learning resource	0	1	2	3	4	5	6	7	
i.	art appreciation	0	1	2	3	4	5	6	7	
j.	providing for individual differences	0	1	2	3	4	5	6	7	
k.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(55)

Please continue

		Not Applicable	Not at All	How Challenging					Very	
					Somewhat					
Health										
a.	human growth and development	0	1	2	3	4	5	6	7	(56)
b.	emotional health	0	1	2	3	4	5	6	7	
c.	nutrition	0	1	2	3	4	5	6	7	
d.	environmental health	0	1	2	3	4	5	6	7	
e.	family life education	0	1	2	3	4	5	6	7	
f.	diseases and disorders	0	1	2	3	4	5	6	7	
g.	consumer health	0	1	2	3	4	5	6	7	
h.	alcohol, tobacco, and other drug substances	0	1	2	3	4	5	6	7	
i.	safety, first aid, and survival	0	1	2	3	4	5	6	7	
j.	community health	0	1	2	3	4	5	6	7	
k.	healthy lifestyles	0	1	2	3	4	5	6	7	
l.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(68)
Library										
a.	literary genres	0	1	2	3	4	5	6	7	(69)
b.	skills of location and use	0	1	2	3	4	5	6	7	
c.	skills of inquiry and investigation	0	1	2	3	4	5	6	7	
d.	literary appreciation	0	1	2	3	4	5	6	7	
e.	literary analysis	0	1	2	3	4	5	6	7	
f.	biographical inquiry	0	1	2	3	4	5	6	7	
g.	reference skills	0	1	2	3	4	5	6	7	
h.	research skills	0	1	2	3	4	5	6	7	
i.	chronological inquiry	0	1	2	3	4	5	6	7	
j.	Dewey Decimal System	0	1	2	3	4	5	6	7	
k.	interest in reading	0	1	2	3	4	5	6	7	
l.	illustration and writing awards	0	1	2	3	4	5	6	7	(80)
m.	demonstrate various authors and illustrating styles	0	1	2	3	4	5	6	7	(4)
n.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(6)

Please continue

		Not Applicable	Not at All	How Challenging: Somewhat				Very	
Listening									
a.	auditory discrimination	0	1	2	3	4	5	6	7 (7)
b.	following directions	0	1	2	3	4	5	6	7
c.	paying attention	0	1	2	3	4	5	6	7
d.	oral comprehension	0	1	2	3	4	5	6	7
e.	other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (12)
Math									
a.	math facts	0	1	2	3	4	5	6	7 (13)
b.	story problems	0	1	2	3	4	5	6	7
c.	addition	0	1	2	3	4	5	6	7
d.	subtraction	0	1	2	3	4	5	6	7
e.	multiplication	0	1	2	3	4	5	6	7
f.	division	0	1	2	3	4	5	6	7
g.	time	0	1	2	3	4	5	6	7
h.	money	0	1	2	3	4	5	6	7
i.	interest (money)	0	1	2	3	4	5	6	7
j.	estimation	0	1	2	3	4	5	6	7
k.	fractions and decimals	0	1	2	3	4	5	6	7
l.	percentages	0	1	2	3	4	5	6	7
m.	measurement	0	1	2	3	4	5	6	7
n.	probability and statistics	0	1	2	3	4	5	6	7
o.	geometry	0	1	2	3	4	5	6	7
p.	number theory	0	1	2	3	4	5	6	7
q.	thinking and reasoning skills	0	1	2	3	4	5	6	7
r.	providing for individual differences	0	1	2	3	4	5	6	7
s.	other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (32)
Music									
a.	theory development	0	1	2	3	4	5	6	7 (33)
b.	rhythm	0	1	2	3	4	5	6	7
c.	melody	0	1	2	3	4	5	6	7
d.	pitch	0	1	2	3	4	5	6	7
e.	composition	0	1	2	3	4	5	6	7 (39)

		Not Applicable	Not at All	How Challenging					Very	
					Somewhat					
Music (continued)										
f.	understanding of composers and musicians	0	1	2	3	4	5	6	7	(38)
g.	music appreciation	0	1	2	3	4	5	6	7	
h.	listening	0	1	2	3	4	5	6	7	
i.	vocabulary	0	1	2	3	4	5	6	7	
j.	notation	0	1	2	3	4	5	6	7	
k.	instrument groups	0	1	2	3	4	5	6	7	
l.	providing for individual differences	0	1	2	3	4	5	6	7	
m.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(46)
Physical Education										
a.	perceptual motor skills	0	1	2	3	4	5	6	7	(47)
b.	rhythm and dance	0	1	2	3	4	5	6	7	
c.	games	0	1	2	3	4	5	6	7	
d.	sports	0	1	2	3	4	5	6	7	
e.	gymnastics	0	1	2	3	4	5	6	7	
f.	physical conditioning	0	1	2	3	4	5	6	7	
g.	outdoor living skills	0	1	2	3	4	5	6	7	
h.	aquatics	0	1	2	3	4	5	6	7	
i.	cardiovascular fitness	0	1	2	3	4	5	6	7	
j.	physical fitness	0	1	2	3	4	5	6	7	
k.	safety	0	1	2	3	4	5	6	7	
l.	sportsmanship	0	1	2	3	4	5	6	7	
m.	cooperation	0	1	2	3	4	5	6	7	
n.	providing for individual differences	0	1	2	3	4	5	6	7	
o.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(62)
Reading										
a.	critical thinking	0	1	2	3	4	5	6	7	(63)
b.	visual discrimination	0	1	2	3	4	5	6	7	
c.	following directions	0	1	2	3	4	5	6	7	
d.	decoding	0	1	2	3	4	5	6	7	
e.	use of appropriate cueing systems	0	1	2	3	4	5	6	7	
f.	vocabulary	0	1	2	3	4	5	6	7	
g.	cloze procedure tasks/context use	0	1	2	3	4	5	6	7	(69)

Please continue

		Not Applicable	How Challenging: Not at All			Somewhat			Very	
Reading (continued)										
h.	comprehension/reading for meaning	0	1	2	3	4	5	6	7	(70)
i.	responding to children's literature	0	1	2	3	4	5	6	7	
j.	main ideas and details	0	1	2	3	4	5	6	7	
k.	cause-effect relationships	0	1	2	3	4	5	6	7	
l.	inferential reasoning	0	1	2	3	4	5	6	7	
m.	predicting outcomes	0	1	2	3	4	5	6	7	
n.	suffixes and prefixes	0	1	2	3	4	5	6	7	
o.	building interest in reading	0	1	2	3	4	5	6	7	
p.	reading in content areas	0	1	2	3	4	5	6	7	
q.	reasoning with text	0	1	2	3	4	5	6	7	
r.	sequencing	0	1	2	3	4	5	6	7	(80)
s.	author studies	0	1	2	3	4	5	6	7	(4)
t.	poetry	0	1	2	3	4	5	6	7	
u.	providing for individual differences	0	1	2	3	4	5	6	7	
v.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(8)
Science										
a.	understanding the scientific method	0	1	2	3	4	5	6	7	(9)
b.	access to information and resources	0	1	2	3	4	5	6	7	
c.	classifying	0	1	2	3	4	5	6	7	
d.	data interpretation	0	1	2	3	4	5	6	7	
e.	plant kingdom	0	1	2	3	4	5	6	7	
f.	animal kingdom	0	1	2	3	4	5	6	7	
g.	inquiry skills (predicting, observing, etc.)	0	1	2	3	4	5	6	7	
h.	ecosystems	0	1	2	3	4	5	6	7	
i.	developing vocabulary	0	1	2	3	4	5	6	7	
j.	appreciation of natural world	0	1	2	3	4	5	6	7	
k.	problem solving	0	1	2	3	4	5	6	7	
l.	technology	0	1	2	3	4	5	6	7	
m.	heat and light	0	1	2	3	4	5	6	7	
n.	electrical energy	0	1	2	3	4	5	6	7	
o.	extinction	0	1	2	3	4	5	6	7	
p.	interaction of materials and energy	0	1	2	3	4	5	6	7	
q.	measuring	0	1	2	3	4	5	6	7	
r.	environment	0	1	2	3	4	5	6	7	
s.	forms and properties of energy	0	1	2	3	4	5	6	7	(27)

Please continue

		Not Applicable	Not at All			How Challenging: Somewhat			Very	
Science (continued)										
t.	magnetic energy	0	1	2	3	4	5	6	7	(28)
u.	senses	0	1	2	3	4	5	6	7	
v.	chemical energy	0	1	2	3	4	5	6	7	
w.	adaptation	0	1	2	3	4	5	6	7	
x.	providing for individual differences	0	1	2	3	4	5	6	7	
y.	other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(34)
Social Studies										
a.	awareness of the world around us	0	1	2	3	4	5	6	7	(35)
b.	access to information and resources	0	1	2	3	4	5	6	7	
c.	problem solving	0	1	2	3	4	5	6	7	
d.	understanding land features	0	1	2	3	4	5	6	7	
e.	current events	0	1	2	3	4	5	6	7	
f.	conceptual development	0	1	2	3	4	5	6	7	
g.	critical thinking	0	1	2	3	4	5	6	7	
h.	information discovery skills	0	1	2	3	4	5	6	7	
i.	time and chronology	0	1	2	3	4	5	6	7	
j.	map and globe skills	0	1	2	3	4	5	6	7	
k.	world culture	0	1	2	3	4	5	6	7	
l.	local history	0	1	2	3	4	5	6	7	
m.	citizenship	0	1	2	3	4	5	6	7	
n.	economic institutions	0	1	2	3	4	5	6	7	
o.	environment	0	1	2	3	4	5	6	7	
p.	communities	0	1	2	3	4	5	6	7	
q.	nationalism	0	1	2	3	4	5	6	7	
r.	scarcity	0	1	2	3	4	5	6	7	
s.	interdependence	0	1	2	3	4	5	6	7	
t.	identifying countries and states	0	1	2	3	4	5	6	7	
u.	transportation	0	1	2	3	4	5	6	7	
v.	conflict	0	1	2	3	4	5	6	7	
w.	political systems	0	1	2	3	4	5	6	7	
x.	technology	0	1	2	3	4	5	6	7	
y.	medieval times	0	1	2	3	4	5	6	7	
z.	laws	0	1	2	3	4	5	6	7	
aa.	constitutional principles	0	1	2	3	4	5	6	7	(61)

		Not Applicable	Not at All	How Challenging: Somewhat				Very	
Social Studies (continued)									
bb.	trading money	0	1	2	3	4	5	6	7 (62)
cc.	role of government	0	1	2	3	4	5	6	7
dd.	providing for individual differences	0	1	2	3	4	5	6	7
ee.	other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (66)
Speaking									
a.	formal presentations	0	1	2	3	4	5	6	7 (67)
b.	audience awareness	0	1	2	3	4	5	6	7
c.	oral interpretation	0	1	2	3	4	5	6	7
d.	other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (71)
Writing									
a.	writing mechanics (grammar, etc.)	0	1	2	3	4	5	6	7 (72)
b.	using correct sentence structures	0	1	2	3	4	5	6	7
c.	using different forms of narratives	0	1	2	3	4	5	6	7
d.	note taking skills	0	1	2	3	4	5	6	7
e.	pre-writing	0	1	2	3	4	5	6	7
f.	drafting	0	1	2	3	4	5	6	7
g.	revising	0	1	2	3	4	5	6	7
h.	editing	0	1	2	3	4	5	6	7
i.	publishing	0	1	2	3	4	5	6	7 (80)
j.	developing imagination	0	1	2	3	4	5	6	7 (4)
k.	research skills and report writing	0	1	2	3	4	5	6	7
l.	writing for purposeful communication	0	1	2	3	4	5	6	7
m.	spelling	0	1	2	3	4	5	6	7
n.	letter writing	0	1	2	3	4	5	6	7
o.	providing for individual differences.	0	1	2	3	4	5	6	7
p.	other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (11)

Additional Comments

12. Please provide comments on any topics related to this survey.

Thank you for taking the time to complete this survey. (October 3, 1995)

Please return this completed survey to your building office by the end of the day on March 24.

Middle School

OSWEGO CITY SCHOOL DISTRICT
Technology Planning Survey—Middle School Level

PLEASE RETURN THIS COMPLETED SURVEY TO YOUR BUILDING OFFICE BY THE END OF THE DAY ON MARCH 24.

School:_____ (4)

Grade(s): (Circle one.) 7 8 7-8 (5)

Area: (Circle all that apply.) (6-7)

Art	English	Foreign Language
Guidance	Health	Home & Careers
Librarian	Math	Music
Physical Education	Reading	Resource Room
School Nurse Teacher	Science	Social Studies
Speech	Technology	Other_____

Years of Teaching Experience: (Circle one.) 0-2 3-5 6-10 11-15 16-20 More than 20 (8)

Technology Background

1. Do you have a computer at home? Yes No (9)
   If yes, what kind is it? (Circle all that apply.) Apple Mac DOS Windows (10-13)
2. Do you have a computer in your classroom? Yes No (14)
   If yes, what kind is it? (Circle all that apply.) Apple Mac DOS Windows (15-18)
3. Please rate your **expertise** in the following areas by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Low		Moderate		High	
a.	Using an Apple computer (IIc, IIe, IIgs)	0	1	2	3	4	5	(19)
b.	Using a Macintosh computer	0	1	2	3	4	5	
c.	Using a DOS based computer	0	1	2	3	4	5	
d.	Using a Windows based computer	0	1	2	3	4	5	
e.	Word Processing	0	1	2	3	4	5	
f.	Spreadsheet	0	1	2	3	4	5	
g.	Database	0	1	2	3	4	5	
h.	Presentation Software	0	1	2	3	4	5	
i.	Subject Area Instructional Software	0	1	2	3	4	5	
j.	Telecommunications (e.g., Internet)	0	1	2	3	4	5	
k.	CD-ROM	0	1	2	3	4	5	
l.	Laser disc	0	1	2	3	4	5	
m.	Scanner	0	1	2	3	4	5	
n.	Digital camera	0	1	2	3	4	5	(32)

Please continue ☞

		Level of Expertise					
		Not Applicable	Low	Moderate			High
o.	Printer	0	1	2	3	4	5 (33)
p.	FAX	0	1	2	3	4	5
q.	VCR	0	1	2	3	4	5
r.	Cam-corder	0	1	2	3	4	5 (36)

4. Which of the following have you utilized in the past year to learn more about technology? (Circle all that apply.)

a.	Workshops	d.	Magazines	(37-42)
b.	Courses	e.	Books	
c.	Colleagues	f.	Other_____	

Attitudes

5. Please rate **your level of agreement** with the following statements by circling the appropriate response on the scale: 1 = Strongly Disagree (SD) 2 = Disagree (D) 3 = Neutral (N) 4 = Agree (A) 5 = Strongly Agree (SA)

	It is important for:	SD	D	N	A	SA	
a.	• me to integrate instruction with technology	1	2	3	4	5	(43)
	• students to learn about technology	1	2	3	4	5	
	• students to use technology for learning	1	2	3	4	5	
	• teachers to have access to technology for class preparation	1	2	3	4	5	
	• teachers to have access to technology for classroom presentation	1	2	3	4	5	
b.	I would like to improve my computer skills	1	2	3	4	5	
c.	I would like to have a computer in my classroom for me to use	1	2	3	4	5	
d.	I would like to have a portable computer to use	1	2	3	4	5	
e.	A **computer laboratory** will respond to most of my instructional needs	1	2	3	4	5	
f.	A **computer cluster** will respond to most of my instructional needs	1	2	3	4	5	
g.	I am concerned about the availability of follow-up resources for this project	1	2	3	4	5	
h.	It is important for me to receive on-going instructional support for technology	1	2	3	4	5	
i.	Technology will change my role as a teacher	1	2	3	4	5	(55)

Please continue ☞

		SD	D	N	A	SA	
j.	With technology in the classroom the teacher should maintain the primary role	1	2	3	4	5	(56)
k.	I am comfortable using technology	1	2	3	4	5	
l.	I am interested in exploring new uses for technology in solving instructional problems	1	2	3	4	5	(58)

6. Please indicate how **important** the following are to you as a teacher in your area by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

			How Important				
		Not Applicable	Not at All	Somewhat		Very	
a.	Students working in teams	0	1	2	3	4	5 (59)
b.	Individualized instruction	0	1	2	3	4	5
c.	Access to information resources	0	1	2	3	4	5
d.	Responding to the range of abilities	0	1	2	3	4	5
e.	Adaptive technology for special needs students	0	1	2	3	4	5
f.	Communication with faculty and administrators in the school district	0	1	2	3	4	5
g.	Communication with parents	0	1	2	3	4	5
h.	Communication with people outside the school district	0	1	2	3	4	5
i.	Parent access to student records	0	1	2	3	4	5
j.	Assessment issues:						
	• Assessment in general	0	1	2	3	4	5
	• Record keeping of student progress	0	1	2	3	4	5
	• Keeping anecdotal records	0	1	2	3	4	5
	• Authentic assessment	0	1	2	3	4	5
	• Portfolio assessment	0	1	2	3	4	5
k.	Classroom management issues:						
	• Classroom management in general	0	1	2	3	4	5
	• Grading	0	1	2	3	4	5
	• Attendance	0	1	2	3	4	5
	• Lunch count	0	1	2	3	4	5
	• Tracking standardized test scores	0	1	2	3	4	5
	• Student profiles	0	1	2	3	4	5
	• IEP development	0	1	2	3	4	5 (79)

Please continue ☞

		How Important					
	Not Applicable	Not at All		Somewhat		Very	
1. Using technology for:							
• Practice	0	1	2	3	4	5	(4)
• Feedback	0	1	2	3	4	5	
• Simulations	0	1	2	3	4	5	
• Remediation	0	1	2	3	4	5	
• Elaboration or enrichment	0	1	2	3	4	5	(8)

Instructional Support

7. Please rate the following items in terms of their **importance** to you as a teacher by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All		Somewhat		Very	
a.	Having a VCR/television in my classroom	0	1	2	3	4	5	(9)
b.	Having computers in my classroom	0	1	2	3	4	5	
c.	Having a computer laboratory	0	1	2	3	4	5	
d.	Space for housing technology	0	1	2	3	4	5	
e.	Storage for technology related equipment	0	1	2	3	4	5	
f.	Maintenance of technology	0	1	2	3	4	5	
g.	Technical support for software	0	1	2	3	4	5	(15)

Staff Development

8. How ready are you to participate in the technology implementation given the understanding that training and staff development will be required? (Circle one.) (16)

   I am ready to participate right now.

   I would like to participate at a later time.

   I am not interested in participating.

9. Please indicate the **likelihood of your participating** in the following activities related to new technology by circling the appropriate response on the scale below.

		Not at All		Somewhat		Very	
a.	Demonstrations of technology	1	2	3	4	5	(17)
b.	Training geared to my level of expertise	1	2	3	4	5	
c.	Training relevant to my needs	1	2	3	4	5	
d.	Mini-workshops (hands-on, in-school)	1	2	3	4	5	
e.	Half-day in-service programs	1	2	3	4	5	
f.	Full day in-service programs	1	2	3	4	5	
g.	Several days of intensive training	1	2	3	4	5	(23)

Please continue ☞

		Likelihood of Participation					
		Not at All		Somewhat		Very	
h.	Participating in a pilot or field test study	1	2	3	4	5	(24)
i.	Staff development programs occurring:						
	• right after school	1	2	3	4	5	
	• evenings	1	2	3	4	5	
	• during school hours	1	2	3	4	5	
	• on weekends	1	2	3	4	5	
	• in the summer	1	2	3	4	5	
	• during vacations other than summer	1	2	3	4	5	
	• during planned staff development days	1	2	3	4	5	(31)

Curriculum

10. For the following topics that are applicable across all subjects, please indicate how **challenging** each is to you in your work with students. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All		Somewhat			Very	
a.	Critical thinking	0	1	2	3	4	5	6	7 (32)
b.	Following directions	0	1	2	3	4	5	6	7
c.	Listening	0	1	2	3	4	5	6	7
d.	Math skills	0	1	2	3	4	5	6	7
e.	Reading	0	1	2	3	4	5	6	7
f.	Providing for individual differences	0	1	2	3	4	5	6	7
g.	Speaking	0	1	2	3	4	5	6	7
h.	Writing	0	1	2	3	4	5	6	7
i.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (41)

11. **Complete all of the following areas.** Please indicate how **challenging** each of these specific topics is to you as a teacher. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All		Somewhat			Very	
Art									
a.	making connections and supporting class projects in other classes	0	1	2	3	4	5	6	7 (42)
b.	appreciation	0	1	2	3	4	5	6	7
c.	media	0	1	2	3	4	5	6	7
d.	technology	0	1	2	3	4	5	6	7
e.	color	0	1	2	3	4	5	6	7 (46)

Please continue ☞

		Not Applicable	Not at All	How Challenging: Somewhat				Very	
Art (continued)									
f.	texture	0	1	2	3	4	5	6	7 (47)
g.	light	0	1	2	3	4	5	6	7
h.	form	0	1	2	3	4	5	6	7
i.	vocabulary	0	1	2	3	4	5	6	7
j.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (52)
English									
a.	literary analysis	0	1	2	3	4	5	6	7 (53)
b.	vocabulary	0	1	2	3	4	5	6	7
c.	comprehension/reading for meaning	0	1	2	3	4	5	6	7
d.	responding to literature	0	1	2	3	4	5	6	7
e.	main ideas and details	0	1	2	3	4	5	6	7
f.	cause-effect relationships	0	1	2	3	4	5	6	7
g.	inferential reasoning	0	1	2	3	4	5	6	7
h.	building interest in reading	0	1	2	3	4	5	6	7
i.	reading in content areas	0	1	2	3	4	5	6	7
j.	writing mechanics	0	1	2	3	4	5	6	7
k.	using correct sentence structures	0	1	2	3	4	5	6	7
l.	using different forms of narratives	0	1	2	3	4	5	6	7
m.	note taking skills	0	1	2	3	4	5	6	7
n.	pre-writing	0	1	2	3	4	5	6	7
o.	drafting	0	1	2	3	4	5	6	7
p.	revising	0	1	2	3	4	5	6	7
q.	editing	0	1	2	3	4	5	6	7
r.	publishing	0	1	2	3	4	5	6	7
s.	developing imagination	0	1	2	3	4	5	6	7
t.	research skills and report writing	0	1	2	3	4	5	6	7
u.	writing for purposeful communication	0	1	2	3	4	5	6	7
v.	spelling	0	1	2	3	4	5	6	7
w.	access to writing tools	0	1	2	3	4	5	6	7
x.	formal speeches	0	1	2	3	4	5	6	7
y.	delivery methods	0	1	2	3	4	5	6	7
z.	oral interpretation	0	1	2	3	4	5	6	7
aa.	listening to and analyzing what is heard	0	1	2	3	4	5	6	7
bb.	author recognition	0	1	2	3	4	5	6	7 (80)

Please continue ☞

		Not Applicable	Not at All	How Challenging							
						Somewhat				Very	
English (continued)											
cc.	identification of genres	0	1	2	3	4	5	6	7		(4)
dd.	poetic forms	0	1	2	3	4	5	6	7		
ee.	literary themes	0	1	2	3	4	5	6	7		
ff.	Other areas (please identify)										
	_____		1	2	3	4	5	6	7		
	_____		1	2	3	4	5	6	7		(8)
Foreign Languages											
a.	listening comprehension	0	1	2	3	4	5	6	7		(9)
b.	reading comprehension	0	1	2	3	4	5	6	7		
c.	speaking skills	0	1	2	3	4	5	6	7		
d.	alphabet	0	1	2	3	4	5	6	7		
e.	grammar	0	1	2	3	4	5	6	7		
f.	culture	0	1	2	3	4	5	6	7		
g.	written expression	0	1	2	3	4	5	6	7		
h.	Other areas (please identify)										
	_____		1	2	3	4	5	6	7		
	_____		1	2	3	4	5	6	7		(17)
Health											
a.	anatomy and physiology	0	1	2	3	4	5	6	7		(18)
b.	reproduction	0	1	2	3	4	5	6	7		
c.	substance abuse	0	1	2	3	4	5	6	7		
d.	hygiene	0	1	2	3	4	5	6	7		
e.	interpersonal relationships	0	1	2	3	4	5	6	7		
f.	Other areas (please identify)										
	_____		1	2	3	4	5	6	7		
	_____		1	2	3	4	5	6	7		(24)
Home and Careers											
a.	food (preparation, presentation)	0	1	2	3	4	5	6	7		(25)
b.	textiles	0	1	2	3	4	5	6	7		
c.	child care	0	1	2	3	4	5	6	7		
d.	technology impact	0	1	2	3	4	5	6	7		
e.	Other areas (please identify)										
	_____		1	2	3	4	5	6	7		
	_____		1	2	3	4	5	6	7		(30)

Please continue ☞

		Not Applicable	Not at All	How Challenging					Very	
Library						Somewhat				
a.	research skills	0	1	2	3	4	5	6	7	(31)
b.	record system (catalogue)	0	1	2	3	4	5	6	7	
c.	genre identification	0	1	2	3	4	5	6	7	
d.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(35)
Math										
a	problem solving skills	0	1	2	3	4	5	6	7	(36)
b.	graphing	0	1	2	3	4	5	6	7	
c.	data analysis	0	1	2	3	4	5	6	7	
d.	math concepts	0	1	2	3	4	5	6	7	
e.	thinking and reasoning skills	0	1	2	3	4	5	6	7	
f.	using equations	0	1	2	3	4	5	6	7	
g.	logic	0	1	2	3	4	5	6	7	
h.	statistics and probability	0	1	2	3	4	5	6	7	
i.	finite relationships	0	1	2	3	4	5	6	7	
j.	geometric relationships	0	1	2	3	4	5	6	7	
k.	number theory	0	1	2	3	4	5	6	7	
l.	operations on numbers	0	1	2	3	4	5	6	7	
m.	geometric transformations	0	1	2	3	4	5	6	7	
n.	measurement	0	1	2	3	4	5	6	7	
o.	trigonometric solutions	0	1	2	3	4	5	6	7	
p.	differentiation/integration	0	1	2	3	4	5	6	7	
q.	addition	0	1	2	3	4	5	6	7	
r.	subtraction	0	1	2	3	4	5	6	7	
s.	multiplication	0	1	2	3	4	5	6	7	
t.	division	0	1	2	3	4	5	6	7	
u.	powers and roots	0	1	2	3	4	5	6	7	
v.	fractions	0	1	2	3	4	5	6	7	
w.	decimals	0	1	2	3	4	5	6	7	
x.	percents	0	1	2	3	4	5	6	7	
y.	interest	0	1	2	3	4	5	6	7	
z.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(62)

Please continue ☞

		Not Applicable	Not at All	How Challenging					Very	
Music						Somewhat				
a.	theory	0	1	2	3	4	5	6	7	(63)
b.	rhythm.	0	1	2	3	4	5	6	7	
c.	melody	0	1	2	3	4	5	6	7	
d.	pitch	0	1	2	3	4	5	6	7	
e.	composition	0	1	2	3	4	5	6	7	
f.	appreciation	0	1	2	3	4	5	6	7	
g.	performance	0	1	2	3	4	5	6	7	
h.	instrument families	0	1	2	3	4	5	6	7	
i.	listening	0	1	2	3	4	5	6	7	
j.	vocabulary	0	1	2	3	4	5	6	7	
k.	notation	0	1	2	3	4	5	6	7	
l.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(75)
Physical Education										
a.	perceptual motor skills	0	1	2	3	4	5	6	7	(76)
b.	rhythm and dance	0	1	2	3	4	5	6	7	
c.	games	0	1	2	3	4	5	6	7	
d.	sports	0	1	2	3	4	5	6	7	
e.	gymnastics	0	1	2	3	4	5	6	7	(80)
f.	physical conditioning	0	1	2	3	4	5	6	7	(4)
g.	outdoor living skills	0	1	2	3	4	5	6	7	
h.	aquatics	0	1	2	3	4	5	6	7	
i.	cardio-vascular fitness	0	1	2	3	4	5	6	7	
j.	physical fitness	0	1	2	3	4	5	6	7	
k.	safety	0	1	2	3	4	5	6	7	
l.	sportsmanship	0	1	2	3	4	5	6	7	
m.	cooperation	0	1	2	3	4	5	6	7	
n.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(13)
Science										
a.	understanding the scientific method	0	1	2	3	4	5	6	7	(14)
b.	access to information and resources	0	1	2	3	4	5	6	7	
c.	data collection	0	1	2	3	4	5	6	7	
d.	conducting experiments	0	1	2	3	4	5	6	7	(17)

Please continue ☞

		Not Applicable	Not at All	How Challenging: Somewhat					Very	
Science (continued)										
e.	data analysis	0	1	2	3	4	5	6	7	(18)
f.	planetary relationships	0	1	2	3	4	5	6	7	
g.	energy	0	1	2	3	4	5	6	7	
h.	gravity	0	1	2	3	4	5	6	7	
i.	genetics	0	1	2	3	4	5	6	7	
j.	anatomy and physiology	0	1	2	3	4	5	6	7	
k.	reproduction	0	1	2	3	4	5	6	7	
l.	atomic structure	0	1	2	3	4	5	6	7	
m.	chemical structures	0	1	2	3	4	5	6	7	
n.	heat	0	1	2	3	4	5	6	7	
o.	light	0	1	2	3	4	5	6	7	
p.	matter	0	1	2	3	4	5	6	7	
q.	vectors	0	1	2	3	4	5	6	7	
r.	motion	0	1	2	3	4	5	6	7	
s.	speed/velocity	0	1	2	3	4	5	6	7	
t.	geological formations	0	1	2	3	4	5	6	7	
u.	time	0	1	2	3	4	5	6	7	
v.	ecosystems	0	1	2	3	4	5	6	7	
w.	map reading	0	1	2	3	4	5	6	7	
x.	technology	0	1	2	3	4	5	6	7	
y.	plant kingdom	0	1	2	3	4	5	6	7	
z.	animal kingdom	0	1	2	3	4	5	6	7	
aa.	evolution	0	1	2	3	4	5	6	7	
bb.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(42)
Social Studies										
a.	staying updated with current events	0	1	2	3	4	5	6	7	(43)
b.	access to information and resources	0	1	2	3	4	5	6	7	
c.	problem solving	0	1	2	3	4	5	6	7	
d.	critical thinking	0	1	2	3	4	5	6	7	
e.	world cultures	0	1	2	3	4	5	6	7	
f.	world religions	0	1	2	3	4	5	6	7	
g.	political systems	0	1	2	3	4	5	6	7	
h.	nationalism	0	1	2	3	4	5	6	7	
i.	geography	0	1	2	3	4	5	6	7	(51)

Please continue ☞

		Not Applicable	Not at All	How Challenging					Very	
Social Studies (continued)										
j.	map and globe skills	0	1	2	3	4	5	6	7	(52)
k.	industrial revolution	0	1	2	3	4	5	6	7	
l.	citizenship	0	1	2	3	4	5	6	7	
m.	environment	0	1	2	3	4	5	6	7	
n.	technology	0	1	2	3	4	5	6	7	
o.	ancient civilizations	0	1	2	3	4	5	6	7	
p.	feudalism	0	1	2	3	4	5	6	7	
q.	population trends	0	1	2	3	4	5	6	7	
r.	identifying countries and states	0	1	2	3	4	5	6	7	
s.	markets (role, formation, etc.)	0	1	2	3	4	5	6	7	
t.	economic systems	0	1	2	3	4	5	6	7	
u.	checks and balances	0	1	2	3	4	5	6	7	
v.	judicial review	0	1	2	3	4	5	6	7	
w.	sovereignty	0	1	2	3	4	5	6	7	
x.	multinationalism	0	1	2	3	4	5	6	7	
y.	Cold War	0	1	2	3	4	5	6	7	
z.	inflation	0	1	2	3	4	5	6	7	
aa.	labor (unemployment, labor force, etc.)	0	1	2	3	4	5	6	7	
bb.	domestic product	0	1	2	3	4	5	6	7	
cc.	supply and demand	0	1	2	3	4	5	6	7	
dd.	New Deal	0	1	2	3	4	5	6	7	
ee.	business cycle	0	1	2	3	4	5	6	7	
ff.	Civil War	0	1	2	3	4	5	6	7	
gg.	scarcity	0	1	2	3	4	5	6	7	
hh.	chronological sequence	0	1	2	3	4	5	6	7	
ii.	World Wars	0	1	2	3	4	5	6	7	
jj.	political leaders	0	1	2	3	4	5	6	7	
kk.	legal codes	0	1	2	3	4	5	6	7	
ll.	constitutional principles	0	1	2	3	4	5	6	7	(80)
mm.	money	0	1	2	3	4	5	6	7	(4)
nn.	role of government	0	1	2	3	4	5	6	7	
oo.	economic institutions	0	1	2	3	4	5	6	7	
pp.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(8)

Please continue ☞

		Not Applicable	Not at All	How Challenging						
						Somewhat			Very	
Technology Education										
a.	communication systems	0	1	2	3	4	5	6	7	(9)
b.	graphics	0	1	2	3	4	5	6	7	
c.	photography	0	1	2	3	4	5	6	7	
d.	radio and TV	0	1	2	3	4	5	6	7	
e.	technical drawing	0	1	2	3	4	5	6	7	
f.	manufacturing systems	0	1	2	3	4	5	6	7	
g.	systems theory	0	1	2	3	4	5	6	7	
h.	tool use	0	1	2	3	4	5	6	7	
i.	industrial safety	0	1	2	3	4	5	6	7	
j.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(19)

Additional Comments

12. Please provide comments on any topics related to this survey.

Thank you for taking the time to complete this survey. (March 17, 1995)

Please return this completed survey to your building office by the end of the day on March 24.

High School and Academy

OSWEGO CITY SCHOOL DISTRICT
Technology Planning Survey—High School Level

PLEASE RETURN THIS COMPLETED SURVEY TO YOUR BUILDING OFFICE BY THE END OF THE DAY ON MARCH 24.

School:_____ (4)

Grade(s): (Circle one.) 9 10 11 12 9-10 11-12 9-12 (5)

Area: (Circle all that apply.) (6-7)

Art	Business	Driver Education
English	Foreign Language	Guidance
Health	Home & Careers	Librarian
Math	Music	Physical Education
Reading	Resource Room	School Nurse Teacher
Science	Social Studies	Speech
Technology	Other_____	

Years of Teaching Experience: (Circle one.) 0-2 3-5 6-10 11-15 16-20 More than 20 (8)

Technology Background

1. Do you have a computer at home? Yes No (9)
   If yes, what kind is it? (Circle all that apply.) Apple Mac DOS Windows (10-13)
2. Do you have a computer in your classroom? Yes No (14)
   If yes, what kind is it? (Circle all that apply.) Apple Mac DOS Windows (10-13)
3. Please rate your **expertise** in the following areas by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Low		Moderate		High	
a.	Using an Apple computer (IIc, IIe, IIgs)	0	1	2	3	4	5	(19)
b.	Using a Macintosh computer	0	1	2	3	4	5	
c.	Using a DOS based computer	0	1	2	3	4	5	
d.	Using a Windows based computer	0	1	2	3	4	5	
e.	Word Processing	0	1	2	3	4	5	
f.	Spreadsheet	0	1	2	3	4	5	
g.	Database	0	1	2	3	4	5	
h.	Presentation Software	0	1	2	3	4	5	
i.	Subject Area Instructional Software	0	1	2	3	4	5	
j.	Telecommunications (e.g., Internet)	0	1	2	3	4	5	
k.	CD-ROM	0	1	2	3	4	5	
l.	Laser disc	0	1	2	3	4	5	
m.	Scanner	0	1	2	3	4	5	
n.	Digital camera	0	1	2	3	4	5	(32)

Please continue

		Level of Expertise						
		Not Applicable	Low		Moderate		High	
o.	Printer	0	1	2	3	4	5	(33)
p.	FAX	0	1	2	3	4	5	
q.	VCR	0	1	2	3	4	5	
r.	Cam-corder	0	1	2	3	4	5	(36)

4. Which of the following have you utilized in the past year to learn more about technology? (Circle all that apply.)

a.	Workshops	d.	Magazines	(37-42)
b.	Courses	e.	Books	
c.	Colleagues	f.	Other_____	

Attitudes

5. Please rate **your level of agreement** with the following statements by circling the appropriate response on the scale: 1 = Strongly Disagree (SD) 2 = Disagree (D)
3 = Neutral (N) 4 = Agree (A) 5 = Strongly Agree (SA)

	It is important for:	SD	D	N	A	SA	
a.	• me to integrate instruction with technology	1	2	3	4	5	(43)
	• students to learn about technology	1	2	3	4	5	
	• students to use technology for learning	1	2	3	4	5	
	• teachers to have access to technology for class preparation	1	2	3	4	5	
	• teachers to have access to technology for classroom presentation	1	2	3	4	5	
b.	I would like to improve my computer skills	1	2	3	4	5	
c.	I would like to have a computer in my classroom for me to use	1	2	3	4	5	
d.	I would like to have a portable computer to use	1	2	3	4	5	
e.	A **computer laboratory** will respond to most of my instructional needs	1	2	3	4	5	
f.	A **computer cluster** will respond to most of my instructional needs	1	2	3	4	5	
g.	I am concerned about the availability of follow-up resources for this project	1	2	3	4	5	
h.	It is important for me to receive on-going instructional support for technology	1	2	3	4	5	
i.	Technology will change my role as a teacher	1	2	3	4	5	(55)

Please continue

		SD	D	N	A	SA	
j.	With technology in the classroom the teacher should maintain the primary role	1	2	3	4	5	(56)
k.	I am comfortable using technology	1	2	3	4	5	
l.	I am interested in exploring new uses for technology in solving instructional problems	1	2	3	4	5	(58)

6. Please indicate how **important** the following are to you as a teacher in your area by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

			How Important				
		Not Applicable	Not at All	Somewhat		Very	
a.	Students working in teams	0	1	2	3	4	5 (59)
b.	Individualized instruction	0	1	2	3	4	5
c.	Access to information resources	0	1	2	3	4	5
d.	Responding to the range of abilities	0	1	2	3	4	5
e.	Adaptive technology for special needs students	0	1	2	3	4	5
f.	Communication with faculty and administrators in the school district	0	1	2	3	4	5
g.	Communication with parents	0	1	2	3	4	5
h.	Communication with people outside the school district	0	1	2	3	4	5
i.	Parent access to student records	0	1	2	3	4	5
j.	Assessment issues:						
	• Assessment in general	0	1	2	3	4	5
	• Record keeping of student progress	0	1	2	3	4	5
	• Keeping anecdotal records	0	1	2	3	4	5
	• Authentic assessment	0	1	2	3	4	5
	• Portfolio assessment	0	1	2	3	4	5
k.	Classroom management issues:						
	• Classroom management in general	0	1	2	3	4	5
	• Grading	0	1	2	3	4	5
	• Attendance	0	1	2	3	4	5
	• Lunch count	0	1	2	3	4	5
	• Tracking standardized test scores	0	1	2	3	4	5
	• Student profiles	0	1	2	3	4	5
	• IEP development	0	1	2	3	4	5 (79)

		How Important					
	Not Applicable	Not at All		Somewhat		Very	
1. Using technology for:							
• Practice	0	1	2	3	4	5	(4)
• Feedback	0	1	2	3	4	5	
• Simulations	0	1	2	3	4	5	
• Remediation	0	1	2	3	4	5	
• Elaboration or enrichment	0	1	2	3	4	5	(8)

Instructional Support

7. Please rate the following items in terms of their **importance** to you as a teacher by circling the appropriate response on the scale below. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All		Somewhat		Very	
a.	Having a VCR/television in my classroom	0	1	2	3	4	5	(9)
b.	Having computers in my classroom	0	1	2	3	4	5	
c.	Having a computer laboratory	0	1	2	3	4	5	
d.	Space for housing technology	0	1	2	3	4	5	
e.	Storage for technology related equipment	0	1	2	3	4	5	
f.	Maintenance of technology	0	1	2	3	4	5	
g.	Technical support for software	0	1	2	3	4	5	(15)

Staff Development

8. How **ready** are you to participate in the technology implementation given the understanding that training and staff development will be required? (Circle one.) (16)

   I am ready to participate right now.

   I would like to participate at a later time.

   I am not interested in participating.

9. Please indicate the **likelihood of your participating** in the following activities related to new technology by circling the appropriate response on the scale below.

		Not at All		Somewhat		Very	
a.	Demonstrations of technology	1	2	3	4	5	(17)
b.	Training geared to my level of expertise	1	2	3	4	5	
c.	Training relevant to my needs	1	2	3	4	5	
d.	Mini-workshops (hands-on, in-school)	1	2	3	4	5	
e.	Half-day in-service programs	1	2	3	4	5	
f.	Full day in-service programs	1	2	3	4	5	
g.	Several days of intensive training	1	2	3	4	5	(23)

		Likelihood of Participation					
		Not at All		Somewhat		Very	
h.	Participating in a pilot or field test study	1	2	3	4	5	(24)
i.	Staff development programs occurring:						
	• right after school	1	2	3	4	5	
	• evenings	1	2	3	4	5	
	• during school hours	1	2	3	4	5	
	• on weekends	1	2	3	4	5	
	• in the summer	1	2	3	4	5	
	• during vacations other than summer	1	2	3	4	5	
	• during planned staff development days	1	2	3	4	5	(31)

Curriculum

10. For the following topics that are applicable across all subjects, please indicate how **challenging** each is to you in your work with students. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All		Somewhat			Very	
a.	Critical thinking	0	1	2	3	4	5	6	7 (32)
b.	Following directions	0	1	2	3	4	5	6	7
c.	Listening	0	1	2	3	4	5	6	7
d.	Math skills	0	1	2	3	4	5	6	7
e.	Reading	0	1	2	3	4	5	6	7
f.	Providing for individual differences	0	1	2	3	4	5	6	7
g.	Speaking	0	1	2	3	4	5	6	7
h.	Writing	0	1	2	3	4	5	6	7
i.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (41)

11. **Complete all of the following areas.** Please indicate how **challenging** each of these specific topics is to you as a teacher. Use 0 (Not Applicable) for those topics that do not apply to you.

		Not Applicable	Not at All		Somewhat			Very	
Art									
a.	making connections and supporting class projects in other classes	0	1	2	3	4	5	6	7 (42)
b.	appreciation	0	1	2	3	4	5	6	7
c.	media	0	1	2	3	4	5	6	7
d.	technology	0	1	2	3	4	5	6	7
e.	color	0	1	2	3	4	5	6	7 (46)

		Not Applicable	How Challenging: Not at All			Somewhat			Very	
Art (continued)										
f.	texture	0	1	2	3	4	5	6	7	(47)
g.	light	0	1	2	3	4	5	6	7	
h.	form	0	1	2	3	4	5	6	7	
i.	vocabulary	0	1	2	3	4	5	6	7	
j.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(52)
Business										
a.	technology impact	0	1	2	3	4	5	6	7	(53)
b.	computation	0	1	2	3	4	5	6	7	
c.	keyboarding	0	1	2	3	4	5	6	7	
d.	tabulation	0	1	2	3	4	5	6	7	
e.	writing	0	1	2	3	4	5	6	7	
f.	law	0	1	2	3	4	5	6	7	
g.	accounting	0	1	2	3	4	5	6	7	
h.	stenography	0	1	2	3	4	5	6	7	
i.	advertising/marketing	0	1	2	3	4	5	6	7	
j.	sales	0	1	2	3	4	5	6	7	
k.	machines	0	1	2	3	4	5	6	7	
l.	word processing	0	1	2	3	4	5	6	7	
m.	problem solving	0	1	2	3	4	5	6	7	
n.	human relations	0	1	2	3	4	5	6	7	
o.	office procedures	0	1	2	3	4	5	6	7	
p.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(69)
Driver Education										
a.	traffic safety	0	1	2	3	4	5	6	7	(70)
b.	motor vehicle law	0	1	2	3	4	5	6	7	
c.	motor vehicle maintenance	0	1	2	3	4	5	6	7	
d.	driving skills	0	1	2	3	4	5	6	7	
e.	alcohol awareness	0	1	2	3	4	5	6	7	
f.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(76)

Please continue

		Not Applicable	Not at All	How Challenging					Very	
English						Somewhat				
a.	literary analysis	0	1	2	3	4	5	6	7	(77)
b.	vocabulary	0	1	2	3	4	5	6	7	
c.	comprehension/reading for meaning	0	1	2	3	4	5	6	7	
d.	responding to literature	0	1	2	3	4	5	6	7	(80)
e.	main ideas and details	0	1	2	3	4	5	6	7	(4)
f.	cause-effect relationships	0	1	2	3	4	5	6	7	
g.	inferential reasoning	0	1	2	3	4	5	6	7	
h.	building interest in reading	0	1	2	3	4	5	6	7	
i.	reading in content areas	0	1	2	3	4	5	6	7	
j.	writing mechanics	0	1	2	3	4	5	6	7	
k.	using correct sentence structures	0	1	2	3	4	5	6	7	
l.	using different forms of narratives	0	1	2	3	4	5	6	7	
m.	note taking skills	0	1	2	3	4	5	6	7	
n.	pre-writing	0	1	2	3	4	5	6	7	
o.	drafting	0	1	2	3	4	5	6	7	
p.	revising	0	1	2	3	4	5	6	7	
q.	editing	0	1	2	3	4	5	6	7	
r.	publishing	0	1	2	3	4	5	6	7	
s.	developing imagination	0	1	2	3	4	5	6	7	
t.	research skills and report writing	0	1	2	3	4	5	6	7	
u.	writing for purposeful communication	0	1	2	3	4	5	6	7	
v.	spelling	0	1	2	3	4	5	6	7	
w.	access to writing tools	0	1	2	3	4	5	6	7	
x.	formal speeches	0	1	2	3	4	5	6	7	
y.	delivery methods	0	1	2	3	4	5	6	7	
z.	oral interpretation	0	1	2	3	4	5	6	7	
aa.	listening to and analyzing what is heard	0	1	2	3	4	5	6	7	
bb.	author recognition	0	1	2	3	4	5	6	7	
cc.	identification of genres	0	1	2	3	4	5	6	7	
dd.	poetic forms	0	1	2	3	4	5	6	7	
ee.	literary themes	0	1	2	3	4	5	6	7	
ff.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(32)
Foreign Languages										
a.	listening comprehension	0	1	2	3	4	5	6	7	
b.	reading comprehension	0	1	2	3	4	5	6	7	(34)

Please continue

		Not Applicable	Not at All	How Challenging: Somewhat				Very	
Foreign Languages (continued)									
c.	speaking skills	0	1	2	3	4	5	6	7 (35)
d.	alphabet	0	1	2	3	4	5	6	7
e.	grammar	0	1	2	3	4	5	6	7
f.	culture	0	1	2	3	4	5	6	7
g.	written expression	0	1	2	3	4	5	6	7
h.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (41)
Health									
a.	anatomy and physiology	0	1	2	3	4	5	6	7 (42)
b.	reproduction	0	1	2	3	4	5	6	7
c.	substance abuse	0	1	2	3	4	5	6	7
d.	hygiene	0	1	2	3	4	5	6	7
e.	interpersonal relationships	0	1	2	3	4	5	6	7
f.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (48)
Home and Careers									
a.	food (preparation, presentation)	0	1	2	3	4	5	6	7 (49)
b.	textiles	0	1	2	3	4	5	6	7
c.	child care	0	1	2	3	4	5	6	7
d.	technology impact	0	1	2	3	4	5	6	7
e.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (54)
Library									
a.	research skills	0	1	2	3	4	5	6	7 (55)
b.	record system (catalogue)	0	1	2	3	4	5	6	7
c.	genre identification	0	1	2	3	4	5	6	7
d.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7
Math									
a	problem solving skills	0	1	2	3	4	5	6	7
b.	graphing	0	1	2	3	4	5	6	7
c.	data analysis	0	1	2	3	4	5	6	7 (62)

Please continue ☞

		Not Applicable	How Challenging: Not at All			Somewhat			Very	
Math (continued)										
d.	math concepts	0	1	2	3	4	5	6	7	(63)
e.	thinking and reasoning skills	0	1	2	3	4	5	6	7	
f.	using equations	0	1	2	3	4	5	6	7	
g.	logic	0	1	2	3	4	5	6	7	
h.	statistics and probability	0	1	2	3	4	5	6	7	
i.	finite relationships	0	1	2	3	4	5	6	7	
j.	geometric relationships	0	1	2	3	4	5	6	7	
k.	number theory	0	1	2	3	4	5	6	7	
l.	operations on numbers	0	1	2	3	4	5	6	7	
m.	geometric transformations	0	1	2	3	4	5	6	7	
n.	measurement	0	1	2	3	4	5	6	7	
o.	trigonometric solutions	0	1	2	3	4	5	6	7	
p.	differentiation/integration	0	1	2	3	4	5	6	7	
q.	addition	0	1	2	3	4	5	6	7	
r.	subtraction	0	1	2	3	4	5	6	7	
s.	multiplication	0	1	2	3	4	5	6	7	
t	division	0	1	2	3	4	5	6	7	
u.	powers and roots	0	1	2	3	4	5	6	7	(80)
w.	fractions	0	1	2	3	4	5	6	7	(4)
x.	decimals	0	1	2	3	4	5	6	7	
y.	percents	0	1	2	3	4	5	6	7	
z.	interest	0	1	2	3	4	5	6	7	
aa.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____ _____		1	2	3	4	5	6	7	(9)
Music										
a.	theory	0	1	2	3	4	5	6	7	(10)
b.	rhythm.	0	1	2	3	4	5	6	7	
c.	melody	0	1	2	3	4	5	6	7	
d.	pitch	0	1	2	3	4	5	6	7	
e.	composition	0	1	2	3	4	5	6	7	
f.	appreciation	0	1	2	3	4	5	6	7	
g.	performance	0	1	2	3	4	5	6	7	
h.	instrument families	0	1	2	3	4	5	6	7	
i.	listening	0	1	2	3	4	5	6	7	(18)

Please continue ☞

		Not Applicable	Not at All	How Challenging: Somewhat				Very	
Music (continued)									
j.	vocabulary	0	1	2	3	4	5	6	7 (19)
k.	notation	0	1	2	3	4	5	6	7
l.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (22)
Physical Education									
a.	perceptual motor skills	0	1	2	3	4	5	6	7 (23)
b.	rhythm and dance	0	1	2	3	4	5	6	7
c.	games	0	1	2	3	4	5	6	7
d.	sports	0	1	2	3	4	5	6	7
e.	gymnastics	0	1	2	3	4	5	6	7
f.	physical conditioning	0	1	2	3	4	5	6	7
g.	outdoor living skills	0	1	2	3	4	5	6	7
h.	aquatics	0	1	2	3	4	5	6	7
i.	cardio-vascular fitness	0	1	2	3	4	5	6	7
j.	physical fitness	0	1	2	3	4	5	6	7
k.	safety	0	1	2	3	4	5	6	7
l.	sportsmanship	0	1	2	3	4	5	6	7
m.	cooperation	0	1	2	3	4	5	6	7
n.	Other areas (please identify)								
	_____		1	2	3	4	5	6	7
	_____		1	2	3	4	5	6	7 (37)
Science									
a.	understanding the scientific method	0	1	2	3	4	5	6	7 (38)
b.	access to information and resources	0	1	2	3	4	5	6	7
c.	data collection	0	1	2	3	4	5	6	7
d.	conducting experiments	0	1	2	3	4	5	6	7
e.	data analysis	0	1	2	3	4	5	6	7
f.	planetary relationships	0	1	2	3	4	5	6	7
g.	energy	0	1	2	3	4	5	6	7
h.	gravity	0	1	2	3	4	5	6	7
i.	genetics	0	1	2	3	4	5	6	7
j.	anatomy and physiology	0	1	2	3	4	5	6	7
k.	reproduction	0	1	2	3	4	5	6	7
l.	atomic structure	0	1	2	3	4	5	6	7
m.	chemical structures	0	1	2	3	4	5	6	7 (50)

Please continue

		Not Applicable	How Challenging: Not at All			Somewhat			Very	
Science (continued)										
n.	heat	0	1	2	3	4	5	6	7	(51)
o.	light	0	1	2	3	4	5	6	7	
p.	matter	0	1	2	3	4	5	6	7	
q.	vectors	0	1	2	3	4	5	6	7	
r.	motion	0	1	2	3	4	5	6	7	
s.	speed/velocity	0	1	2	3	4	5	6	7	
t.	geological formations	0	1	2	3	4	5	6	7	
u.	time	0	1	2	3	4	5	6	7	
v.	ecosystems	0	1	2	3	4	5	6	7	
w.	map reading	0	1	2	3	4	5	6	7	
x.	technology	0	1	2	3	4	5	6	7	
y.	plant kingdom	0	1	2	3	4	5	6	7	
z.	animal kingdom	0	1	2	3	4	5	6	7	
aa.	evolution	0	1	2	3	4	5	6	7	
bb.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(66)
Social Studies										
a.	staying updated with current events	0	1	2	3	4	5	6	7	(67)
b.	access to information and resources	0	1	2	3	4	5	6	7	
c.	problem solving	0	1	2	3	4	5	6	7	
d.	critical thinking	0	1	2	3	4	5	6	7	
e.	world cultures	0	1	2	3	4	5	6	7	
f.	world religions	0	1	2	3	4	5	6	7	
g.	political systems	0	1	2	3	4	5	6	7	
h.	nationalism	0	1	2	3	4	5	6	7	
i.	geography	0	1	2	3	4	5	6	7	
j.	map and globe skills	0	1	2	3	4	5	6	7	
k.	industrial revolution	0	1	2	3	4	5	6	7	
l.	citizenship	0	1	2	3	4	5	6	7	
m.	environment	0	1	2	3	4	5	6	7	
n.	technology	0	1	2	3	4	5	6	7	(80)
o.	ancient civilizations	0	1	2	3	4	5	6	7	(4)
p.	feudalism	0	1	2	3	4	5	6	7	
q.	population trends	0	1	2	3	4	5	6	7	
r.	identifying countries and states	0	1	2	3	4	5	6	7	(7)

		Not Applicable	How Challenging: Not at All			Somewhat			Very	
Social Studies (continued)										
s.	markets (role, formation, etc.)	0	1	2	3	4	5	6	7	(8)
t.	economic systems	0	1	2	3	4	5	6	7	
u.	checks and balances	0	1	2	3	4	5	6	7	
v.	judicial review	0	1	2	3	4	5	6	7	
w.	sovereignty	0	1	2	3	4	5	6	7	
x.	multinationalism	0	1	2	3	4	5	6	7	
y.	Cold War	0	1	2	3	4	5	6	7	
z.	inflation	0	1	2	3	4	5	6	7	
aa.	labor (unemployment, labor force, etc.)	0	1	2	3	4	5	6	7	
bb.	domestic product	0	1	2	3	4	5	6	7	
cc.	supply and demand	0	1	2	3	4	5	6	7	
dd.	New Deal	0	1	2	3	4	5	6	7	
ee.	business cycle	0	1	2	3	4	5	6	7	
ff.	Civil War	0	1	2	3	4	5	6	7	
gg.	scarcity	0	1	2	3	4	5	6	7	
hh.	chronological sequence	0	1	2	3	4	5	6	7	
ii.	World Wars	0	1	2	3	4	5	6	7	
jj.	political leaders	0	1	2	3	4	5	6	7	
kk.	legal codes	0	1	2	3	4	5	6	7	
ll.	constitutional principles	0	1	2	3	4	5	6	7	
mm.	money	0	1	2	3	4	5	6	7	
nn.	role of government	0	1	2	3	4	5	6	7	
oo.	economic institutions	0	1	2	3	4	5	6	7	
pp.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(32)
Technology Education										
a.	communication systems	0	1	2	3	4	5	6	7	(33)
b.	graphics	0	1	2	3	4	5	6	7	
c.	photography	0	1	2	3	4	5	6	7	
d.	radio and TV	0	1	2	3	4	5	6	7	
e.	technical drawing	0	1	2	3	4	5	6	7	
f.	manufacturing systems	0	1	2	3	4	5	6	7	
g.	systems theory	0	1	2	3	4	5	6	7	(39)

		Not Applicable	Not at All	How Challenging					Very	
					Somewhat					
Technology Education (continued)										
h.	tool use	0	1	2	3	4	5	6	7	(40)
i.	industrial safety	0	1	2	3	4	5	6	7	
j.	Other areas (please identify)									
	_____		1	2	3	4	5	6	7	
	_____		1	2	3	4	5	6	7	(43)

Additional Comments

12. Please provide comments on any topics related to this survey.

Thank you for taking the time to complete this survey. (October 3, 1995)

Please return this completed survey to your building office by the end of the day on March 24.