SCHOOL MEDIA SPECIALIST AND SCHOOL TECHNOLOGY SPECIALIST: PARTNERS IN INFORMATION TECHNOLOGY?

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Public schools in North Carolina are experiencing a dramatic increase in the availability of technology. This phenomenon has changed the role of the media specialist and, for some school systems, created a new specialty, the technology specialist. This study examines the role of the school media specialist and technology specialist in supporting information technology within North Carolina public schools and identifies areas of overlap. One area of strong overlap identified within this study is support for students using technology.

Factors that enhance or inhibit collaboration between these two "information educators" (Pappas & Tepe, 1995) are also identified. Three factors identified as enhancements to collaboration include available planning time, previous experience collaborating, and professional development as a team. It is hoped that continued research on the emerging roles of these two information specialists will foster greater recognition of their shared goals and the beginnings of a strong collaborative relationship.

Headings:

School Librarians—North Carolina

School Librarians—Technology

School Technology Specialists—North Carolina

Surveys—School Librarians

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1. Introduction

Collaboration between teaching professionals is a critical factor in supplying the information needs of today's students. School library media specialists have a documented history of working in collaborative relationships with teachers, guidance counselors, and administrators (Dorrell and Lawson, 1995; Partridge, 1994; Williams, 1996). Traditionally, most school library media specialists were the only information specialists within the school building. The increased presence of technology within the public school system, however, has created a need for a new specialty, the technology specialist. Both technology specialists and media specialists look for ways to incorporate information technology into the curriculum of the school and provide support and resources for the entire school community. Due to the potentially overlapping nature of their functions, it is useful to consider how these specialists define their roles and where they overlap. This can be a first step to understanding how these specialists are collaborating or can collaborate and what factors impact their partnership.

A statewide survey done by the School Technology Commission found that only 6% of North Carolina schools were networked in 1995. Recently, however, school districts and parent volunteers have worked to lay cable and network schools, thereby increasing access to the Internet. Many districts have taken part in "Net Days," a volunteer effort to

wire schools. North Carolina's Technology Goal (1995-2000), stated within the Instructional Technology Plan (STC, 1995) is for every school to have high speed Internet access and 2-5 students per computer. This requires an increase in the personnel with the skills necessary to support this technology.

Historically, librarians have taken on many of the roles associated with technology (Truett, 1997, Pappas & Tepe, 1995). In many school districts this is still the case. However, North Carolina school districts are now hiring district-wide technology support people and many school districts have begun hiring technology specialists for individual schools. Technology specialists should not be confused with "computer teachers" who have the responsibility of teaching a technology curriculum. Technology specialists, like media specialists, provide support to an entire school. The role of both the school and district level technology specialist is in the process of being defined by the state, the local school district, and the specialists themselves. The presence of a technology person in schools will impact the technology support role of the school media specialist.

In recognition of the increased emphasis on technology and the role of school media specialists and technology specialists in supporting information technology, the School of Information and Library Science at UNC-Chapel Hill conducted a year long Internet Training Institute for media and technology specialists. Fifteen teams, made up of a media specialist and a technology specialist, were selected from across the state. Nine of the teams had a technology specialist who worked at the district level and six of the teams had technology specialists who worked in only one school. This is probably consistent

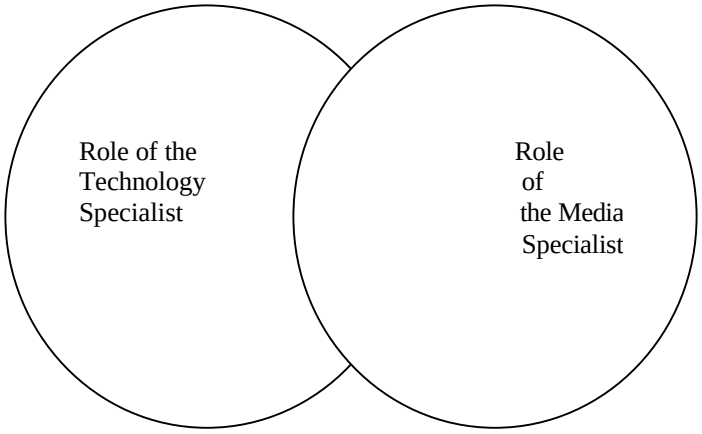
with current practice in schools across the state. Participants in the Training Institute completed evaluations at the end of the final workshop (Hughes, 1998). These evaluations contained comments that confirmed the importance of this research proposal. Comments on possible future topics included a request for discussion on the roles of media specialists and technology specialists, emphasizing the need for defining roles and areas of overlap. Participants overwhelmingly supported the value of cooperation between technology and library media specialists as seen in the following comment (Hughes, 1998; p.8).

> "Coming as a team increased awareness of other job areas and created more collaboration. Having partners was wonderful so we could go back and collaborate."

Participants in the Institute showed a strong interest in the questions proposed in this study:

1. What are the roles of the technology specialist and the media specialist in supporting information technology within the public school system?
2. In what areas do the roles of these two specialists overlap?
3. What are some of the conditions that hinder or facilitate the ability of technology and media specialists to collaborate within these roles?

Proposed Model of Overlapping Roles of School Media Specialists and Technology Specialists



The increased presence of technology and the availability of Internet access have changed the role of the school library media specialist (Truett, 1997, McKenzie, 1996, Pappas & Tepe, 1995) and defined a new role within the school system, the technology specialist. In order to collaborate, it is important for these professionals to develop an understanding of their roles and in what areas they overlap. The Internet Institute has proved that an increased understanding of these issues may foster the development of a powerful information technology team within our schools. In the process of examining these roles, it may be possible to identify factors that act as barriers to collaboration or as enhancements to collaboration.

2. Previous Research

An examination of the literature relating to the roles of school media specialists and technology specialists and the impact of these roles on collaboration provides a stark contrast between the two in the availability of information. The role of the librarian has been well-documented (DeGroff, 1997, AASL, 1998) and includes research on the changing nature of that role as access to technology within the public school system has increased (Truett, 1997, Pappas & Tepes, 1995). Collaboration by media specialists and other professionals, such as teachers and guidance counselors has also been well-documented (DeGroff, 1997, Tallman, 1994, Partridge, 1994). However, little research has been done on the role of the technology specialist within the school system or on the degree of collaboration between the library media specialist and the technology specialist. The fact that "technology specialist" is a new position within the North Carolina public school system provides a ready answer for the lack of research. However, the cited literature on librarians includes some compelling reasons for correcting this deficiency.

An examination of two pieces of relevant literature provides an excellent foundation for this discussion. A conference paper presented by Barbara Yates in 1997 deals with the question of roles. Recognizing the great impact of technology on education, Yates states that the role of the school media specialist is beginning to overlap and blur with the role of "informational technology professionals" (Yates, 1997, p. 171). She calls on librarians to define their role and provides her own opinion on the main functions of a school librarian and a computer specialist. Yates believes that the use of generic job titles

(i.e. technology librarian, information services coordinator) for both professions illustrates the need for role clarification.

The undisputed standard for defining the role of the school media specialist in the United States is *Information Power: Building Partnerships for Learnin*g (AASL, 1998). Responsibilities of the school media specialist are divided into four areas: teacher, instructional partner, information specialist, and program administrator. The effect of technology on these responsibilities is reflected in the following statements (AASL, 1998):

> "Especially in recent years, the profession has pioneered in identifying and meeting learning needs brought about by the rapid and continuing expansion of information delivered through a variety of new technologies" (p.3).
>
> "Collaboration, leadership, and technology are integral to every aspect of the library media program and every component of the library media specialist's role" (p.49).

Labeling the school media specialist an "information educator," Pappas and Tepe (1995) provide a second model for the job responsibilities of the school media specialist. In a model similar to that found in *Information Power*, the authors divide the responsibilities of the information educator into three main categories: curriculum consultant, information manager, and manager of an information center. The model illustrates the interlinking nature of the activities contained within these larger categories. This model and the model in *Information Power* provide a viable framework for studying the roles of school media and technology specialists.

The driving force behind the hiring of technology specialists in North Carolina is the increasing presence of technology in schools. In two studies conducted between 1994 and 1996, Truett reported increased availability and use of technology within North Carolina schools (1997). Identified technologies included computers, VCRs, CD-ROMs, videodisc players, modems, and satellite/distance learning. She did not report on the presence of networks or Internet access. Her studies also examined the role of the school library media specialist and how it has changed as it relates to the use of technology. A compilation of these two studies was published in *North Carolina Libraries* in 1997. Two of Dr. Truett's research questions that are particularly applicable to our study are: "Who is conducting professional development for technology and how is the media specialist involved?" (p.32). The answers to these questions confirm the historical importance of the library media specialist in the use of technology and add credence to the possibility that the addition of a technology specialist to a school system faculty is likely to change the future of the media specialist. It also brings up the possibility that the roles of the media specialist and the technology specialist may actually overlap within a school, increasing the importance of collaboration. Questions within the study relating to the instructional role played by media specialists provide background for framing questions relating to current roles of media and technology specialists.

Truett's study confirms the perception by teachers and librarians that technology has changed the school librarian's role (Truett, 1997, p. 35). Some of the reported changes listed in order of ranking include:

- shows individuals how to use technology (87%)
- provides technology in library (80%)

- provides teacher in-service (52%)
- models curriculum use (38%)
- team teaches (35%)

The low ranking for team teaching implies a small degree of collaboration between media specialists and teachers working to include technology in the curriculum. Truett did not attempt to determine the reasons behind the rankings.

Over half of the teachers and the students stated that the media specialist played the largest role instructing them in the use of two identified technologies: CD-ROM and laserdisc. Only one-quarter of the teachers were taught by other teachers or technology specialists (Truett, 1997, p.34). The data on technology specialists is hard to interpret since we do not know the number of schools that actually had technology specialists at the time of Truett's study.

The two studies carried out by Dr. Truett (1997) confirm the perception by teachers and librarians that technology has changed the school librarian's role. The studies also provide some examples of the ways in which this role has changed. In the first study, the use of an initial survey to identify "high" technology schools increased the relevance of the data collection survey on technology use within the schools. However, criteria used to identify high tech schools would not be applicable today because they did not include questions about networking and Internet access. The use of surveys allowed Dr. Truett to sample a large random population across the state of North Carolina. The number of respondents and the balance across school levels and geographic factors add

weight to her study. The second study also, increases the validity of her findings. The lack of open-ended questions raises the possibility that areas of change remain unidentified.

A study done by Linda DeGroff in 1997, as part of a *Reading Research Report*, provides a unique perspective on the role of the media specialist and on some of the factors that increase the ability of the librarian to collaborate with teachers. Using *Information Power: Guidelines for School Library Media Programs*, compiled by the American Association of School Librarians and the Association for Educational Communications and Technology (1988), to define the ideal role of today's school librarian, DeGroff measured the relationship of peoples' perceptions of the ideal role to the actual role played by a librarian. She then went one step further and asked how librarians and teachers formed the working relationship necessary to fulfill their roles as educational partners. This study helped clarify the need to look at both the ideal and actual roles of media and technology specialists and also provided a framework for examining this working relationship.

DeGroff's study used an exploratory approach and surveys for data collection. The survey contained 161 items in a forced choice format. Questions dealt with demographics, literacy attitudes, perceived importance of "ideal" role, actual role, information on how teachers and librarians communicate, and factors which increase or decrease communication (p. 5). The major findings of relevance to this study were the perception that librarians were least likely to perform the collaborative functions

associated with the role of instructional consultant. The majority of communication surrounding this role happened in casual ways (i.e. walking in the halls) and the identified factors that increased this collaboration were mostly of a personal nature (i.e. knowledge, personality, and attitude) (p.26). In DeGroff's study teachers and librarians that interacted within a school were not identified. It would have been interesting to see a comparison of results between a teacher and a librarian who attempted collaboration. This study provides an opportunity to identify the technology/media teams.

In comparison to DeGroff's study, a study prepared under a 1993-94 AASL/Highsmith Research Award presents a relationship between collaboration and such factors as scheduling time, planning sessions, and team models (Tallman & Van Deusen, 1994). In fact, Tallman & Van Deusen would probably attribute the low ranking on instructional consultant functions in the DeGroff study to a lack of organized communication. The Tallman study also raises the question of whether or not participants in a study concerned with collaboration need to be identified as having experience with collaboration before they are asked to identify factors that increase collaboration. Participants in this study will be asked to verify first hand their experience working or attempting to work collaboratively.

The studies cited in this section justify an examination of the role of the school technology specialist and the impact of this new specialty on school media specialists supporting technology. They also provide a framework for the questions on roles and collaboration that are included in the survey.

3. Research Approach

The currency of this research topic and the lack of substantial previous research justified an exploratory approach to this study. Methods used included a survey and follow-up email.

The sample population included 13 intact teams from the Internet Institute and eight pairs selected from local school districts for a total of 21 teams from 21 different schools. The schools are located in 15 counties across the state of North Carolina. All three levels of public education are represented, including five high schools, two combination middle-high schools, three middle schools, and 11 elementary schools. In eight out the 21 teams the technology specialist held a district-wide technology support position. The remaining thirteen schools had in-school technology specialists.

Because the 13 teams from the Internet Institute all indicated a fairly high level of technology within their buildings on their application forms and because, in addition, all participants in the Internet Institute worked collaboratively with their media/technology partner to produce a web assignment, it is hypothesized that the teams will exhibit greater technological collaboration.

For the eight teams from local school districts previous collaboration between media/technology partners was unknown until surveys were returned, although the local districts were known to have a high level of technology within school buildings. The combination of these two populations provided a sample that is representative of the current configuration of personnel within the state, including both district-wide and school-level technology support positions.

Survey questions addressed the following topics (see Appendix A for survey):

- Level of technology within school, such as presence of Internet access (location and numbers), number of computers per student, and email access for staff and students.
- Personal demographics, including job title, full or part-time, educational background, work experience, level of responsibility (school vs. district).
- List of possible roles or job responsibilities within the information technology field subdivided into the following areas:
    1. Operations: network administration, repair and maintenance, and loading software
    2. Purchasing: classroom equipment, library equipment, and software
    3. Administration: inventory and checkout of computer equipment, inventory and checkout of software, establishing technology policies
    4. Staff Development: using computer equipment, software, Internet, and integration into curriculum
    5. Student development: using computer equipment, software, Internet, keyboarding skills, and supporting research

Participants were asked to determine whether job responsibility falls under the role of the media specialist, the technology specialist, or both. Space was provided to allow participants to include any job responsibilities not recognized by the author. Other elements addressed in the survey included:

- Collaboration, including experience working in a collaborative relationship with media/technology "partner," factors that have acted as barriers to relationship (i.e. distance, time), and factors that have facilitated collaboration.

- Open-ended questions that allow participants to reflect on their roles and on collaboration with a media/technology partner

Participants were asked in the survey if they were willing to answer follow up email or to take part in an interview. The majority of participants responded affirmatively to this request. Email requests were used for clarification of survey responses but no interviews were conducted.

Data was evaluated using both quantitative and qualitative methods. Media roles were examined in relationship to the presence or absence of a school technology person. Technology roles were examined for patterns relating to the district level appointment vs. the building level appointment. Areas of overlap between media and technology specialist were determined. Factors that influence collaboration were examined especially in light of making recommendations that allow school districts to provide the most supportive environment for this developing work relationship.

Because the attempt is to gain a snapshot picture of the emerging nature of this work relationship, conclusions drawn are general. Interest in pursuing further study at specific levels, i.e. high school or elementary, or with only school level teams or district level teams may be appropriate in the future.

4. Results

4.1 Participant Demographics

Thirty surveys were returned in all, out of 42 mailed. Media specialists returned twenty surveys and technology specialists returned 10 surveys. It is interesting to speculate on the reasons behind the higher return rate by media specialists. Do media specialists feel a greater stake in the discussion of roles and technology? Return rates by members of the Internet Institute (85%) were also substantially higher than that of non-members (50%). Discussion of roles and collaboration during the Institute may have raised participants' willingness to be involved in this study.

4.1.1 Job Titles

When asked to provide a job title, twenty "librarians" answered in one of two ways, media specialist or media coordinator. However, the ten technology participants offered seven different responses, including computer teacher, computer support specialist, technology specialist, computer/technology assistant, instructional technology specialist, K-12 Math and Technical Assisted Instruction Coordinator, and Media/Technology Instructional Specialist. The last three titles belong to district-wide technology support personnel and reflect the broader nature of their roles. Several reasons can be suggested for the variety of job titles applied to technology specialists. The lack of literature on the role of this specialty, the newness of the role, and the added confusion over school versus district-wide positions are all possible factors in the lack of job title consensus.

4.1.2 Educational Background

The majority of media specialists surveyed were certified teachers with Master's degrees in library science or certification in media. The majority of technology specialists

surveyed were teachers with Master's degrees in education. One of the technology specialists had a Master's degree in library science. Two of the specialists had certification in technology and two had backgrounds in computer science. One participant made the following point, "A technology specialist in our system can be a teacher who has been trained as a computer specialist or a computer expert who has no teaching background. It appears that many principals are looking for the teacher-technologist. The theory is that it is easier to train a teacher about computers than it is to teach the computer expert how to teach."

4.2 School Demographics

Surveys were returned from 19 of the 21 schools. All of the schools reported the presence of Internet access and 16 of the schools reported access available in all areas, including the library, offices, labs, and classrooms. Two of the schools reported that classrooms did not have access to the Internet and one school reported that access was limited by the availability of computers not connections. Within the sixteen schools reporting classroom access, fourteen of the schools reported one connected computer per classroom. The other two schools reported three connected computers per classroom. The average number of connections within a library was eight, with a reported high of 34 connections and a low of one connection. Email access is provided for staff at all 19 of the responding schools, but only three of the schools permitted students any form of email access. The three schools that reported email access for students indicated that students are allowed to open free email accounts, such as Hotmail or Yahoo. None of the respondents offered school email accounts to students. All of the schools reported the presence of a computer lab within the school. Only ten of the schools provided statistics

on the number of students per computer. Nine of the schools reported numbers between one computer per three students to one computer per eight students. One school reported one computer per 70 students. Twelve of the schools had a full time technology specialist on staff in the school. Seven of the schools had the support of a district wide technology specialist.

4.3 Technology Roles of In-School Media Specialist/Technology Specialists Pairs:

4.3.1 Introduction

This section is a compilation of the survey results obtained from 12 media specialists and 7 school technology specialists who work in buildings served by both a media specialist and a technology specialist. The roles supporting technology were divided into five areas: operations, purchasing, administration, staff development, and student development. Participants replied for each task whether it is their responsibility, a shared responsibility or the other person's responsibility. For each task it is, therefore, possible to compare the perceptions of media and technology specialists. In a few cases participants indicated someone other than the media or technology specialist carries out the role or the task is not performed at all. These answers are included as NA (not applicable). Participants also indicated that some of the job responsibilities are handled at the district level. These answers are labeled "

4.3.2 Operations

Media specialists and school technology specialists agree that the day-to-day responsibility of keeping the network running, repairing equipment, and making sure software is available falls primarily to the technology specialist (Table 1 Operations: In-School Pairs). The discrepancy in the responses of media specialists and technology

specialists for the task responsibilities of “repair and maintenance” and “load software” may be partially explained by the following comments contained on media specialists’ surveys.

> “I act as back-up.”
> “Responsible when the technology specialist is not available.”
> “Some of the time”

Who is handling Operations?	What Media Specialists Think:	What Technology Specialists Think:
Network Administration	75% Technology 25% Shared 0% Media	86% Technology 14% Shared 0% Media
Repair and Maintenance	42% Technology 58% Shared 0% Media	100% Technology 0% Shared 0% Media
Load Software	50% Technology 50% Shared 0% Media	86% Technology 14% Shared 0% Media

Table 1 Operations:In-School Pairs

Technology specialists may not be aware of the back-up role some media specialists play or may not have considered this back-up role as taking responsibility. None of the respondents considered these tasks to be the sole responsibility of the media specialist.

4.3.3 Purchasing

Responsibility for purchasing appears to be partially driven by domain (Table 2: Purchasing : In-School Pairs). The majority of respondents agree that technology specialists have responsibility for purchasing classroom equipment and that media specialists have responsibility for purchasing library equipment. The purchase of software, however, appears to be a shared role for many media and technology partners.

The fact that both groups had members who claim sole responsibility and neither group support the other's claim shows that this is an area of blurred responsibility. Several schools report that their district central office retains control over purchases.

Purchasing	**What Media Specialists Think**	**What Technology Specialists Think**
Classroom Equipment	50% Technology 17% Shared 8% Media 25% District	86% Technology 0% Shared 14% Media
Library Equipment	8% Technology 25% Shared 58% Media 8% District	29% Technology 0% Shared 71% Media
Software	0% Technology 75% Shared 17% Media 8% District	43% Technology 57% Shared 0% Media

Table 2: Purchasing : In-School Pairs

4.3.4 Administration

Little consensus is seen in the area of administration of technology within a school (Table 3: Administration : In-School Pairs). Some of the roles show no clear majority (i.e. inventory software) and there is no clear agreement between media and technology specialists.

Who is handling Administration?	What Media Specialists Think:	What Technology Specialists Think:
Inventory Equipment	33 % Technology 25% Shared 42% Media	71 % Technology 29% Shared 0% Media
Check Out Equipment	17% Technology 33% Shared 33% Media 17% NA	71% Technology 14% Shared 0% Media 14% NA
Inventory Software	17% Technology 17% Shared 67% Media	43% Technology 43% Shared 0% Media 14% NA
Check Out Software	0% Technology 17% Shared 67% Media 17% NA	14% Technology 29% Shared 29% Media 29% NA
Establish Technology Policies	8% Technology 83% Shared 0% Media 8% District	57% Technology 43% Shared 0% Media

Table 3: Administration : In-School Pairs

Technology specialists overwhelmingly report responsibility for the inventory and checkout of computer equipment. Media specialists report responsibility for the inventory and checking out of software. However, partners do not totally confirm their opposite's responsibility allocation. Several of the respondents indicate that their schools do not checkout equipment or software. These answers were reported as NA (not applicable). The majority of media specialists see the establishment of technology policy within the school as a shared responsibility. Some media specialists indicate this is actually a committee decision. While close to half of the technology specialists agree with the shared nature of this task, slightly more than half claim sole responsibility for establishing policy. One school reports that the district establishes technology policy.

4.3.5 Staff Development

While many of the respondents see staff development as a shared responsibility, two distinct patterns emerged (Table 7: Staff Development-In-School Pairs).

Who is handling Staff Development?	What Media Specialists Think:	What Technology Specialists Think:
Computer Equipment	33% Technology 58% Shared 0% Media 8% NA	71% Technology 29% Shared 0% Media
Software	8% Technology 92% Shared 0% Media	57% Technology 43% Shared 0% Media
Internet	8% Technology 75% Shared 17% Media	43% Technology 43% Shared 14% Media
Integrating Technology into Curriculum	25 % Technology 50% Shared 25% Media	43 % Technology 43% Shared 0% Media 14% NA

Table 4: Staff Development : In-School Pairs

Staff development on the use of computer equipment and software is seen either as the sole responsibility of the technology specialist or as a shared role. No media specialists claimed sole responsibility for these two areas. However, the role of the media specialist increased for staff development on the use of the Internet and integration of technology. Some media specialists report feeling solely responsible for these areas and more technology specialists report sharing these two roles..

4.3.6 Student Development

Technology specialists and media specialists are sharing the task of teaching students the use of technology with the exception of student keyboarding skills, which is the responsibility of technology specialists (Table 5: Student Development : In-School Pairs).

Who is handling Student Development?	What Media Specialists Think:	What Technology Specialists Think:
Computer Equipment	8% Technology 75% Shared 17% Media	43% Technology 57% Shared 0% Media
Software	25% Technology 58% Shared 17% Media	29% Technology 57% Shared 0% Media 14% NA
Internet	8% Technology 75% Shared 17% Media	29% Technology 71% Shared 0% Media
Support using technology in Research	0% Technology 67% Shared 33% Media	14% Technology 43% Shared 29% Media 9% NA
Keyboarding Skills	67% Technology 0% Shared 8% Media 25% NA	57% Technology 14% Shared 0% Media 29% NA

Table 5: Student Development : In-School Pairs

A few participants report that neither the media specialist nor the technology specialist has responsibility for keyboarding skills (labeled NA). Both groups report a larger responsibility for media specialists supporting students using technology for research with close to one-third of both groups saying this is the main responsibility of the media specialist. Technology specialists report a greater sharing of responsibility in student development on computer equipment and software than that seen in staff development.

4.3.7 Main Roles of In-School Pairs

When asked to identify the main role they play in supporting technology use in their school, media specialists answered with the following statements.

"Research"
"Resource person for classroom teachers and students"
"Facilitator for staff and students"
" Research with and for students"
"Instructing students and teachers on the use o
"Lesson plans and research."
"Selecting and making electronic resources available to staff and students"
"Make staff aware of what's available and encouraging use"
"Using computer as a teaching tool"
"Students and teachers view me as a computer whiz and use me to solve problems"
"Staff development"
"Teaching and utilizing programs for research, teaching use of OPAC"

These responses focus on providing resources and support for teachers and students using technology. This is in agreement with earlier answers to role responsibility where media specialists showed a strong sense of sharing the responsibility for staff and student development.

School technology specialists asked to identify the main role they play in supporting the use of technology in their buildings answered with the following comments.

"Maintain computer equipment, resource person for students and teachers"
"Teaching of staff and students"
"Keep computers and network maintained, teach computer literacy curriculum"
"Keep everything in my building up and running, available to staff members as needed"

"Network administrator and computer teacher"
"Keep network running smoothly, teaching students and staff"
"Troubleshooting, staff development, teaching students"

Technology specialists' comments reveal a dual nature to their role in supporting technology. Specialists work to keep everything up and running and also try to find time for staff and student development. This agrees well with previous answers to technology roles (i.e. operations, staff, and student development).

4.3.8 Satisfaction with roles supporting technology

The focus on teachers and students is further verified by answers to the question, "What changes would you like to see in your role?" Media specialists overwhelmingly indicate a desire for more time available to help teachers and students using technology. Answers include the following excerpts:

"More interaction with teachers"
"More time to work with students doing searching"
"More support for teachers"
"More group instruction on Internet"
"Make better use of Internet resources with teachers"

Several technology specialists echo the need for more time. One suggests the need to make the job a 12-month position rather than 10 month and one specialist feels that the job really required more than one position.

4.3.9 Unidentified Roles

When asked to identify any roles supporting technology that were not identified in the survey, respondents provided the following possibilities:

- controlling access to the Internet
- supervise AUP policy
- web master
- phone master
- chair technology committee
- computer competency skills
- oversee technology plan
- live broadcasts of announcements
- maintain copiers
- tape and weed TV programs
- preparation for Y2K

The rapid development of new technology will probably continue to add new responsibilities and redefine old ones requiring an on-going dialogue by these two specialists.

4.4 Collaboration of In-School Pairs

4.4.1 Introduction

Media specialists and school technology specialists were asked to comment on six factors that may have an impact on their ability to collaborate. The factors were: time, flexible scheduling, physical distance (i.e. offices in different buildings), educational backgrounds, previous experience collaborating, and professional development as a team. Respondents were then given an opportunity to identify any other factors that might play a role or to include any other comments. Results included in this section are based on the survey results of eleven school media specialists and six school technology specialists who work as partners in a school. One media specialist did not fill out the section on

collaboration and one technology specialist indicated that she does not collaborate with the media specialist.

4.4.2 Results on Collaboration between In-School Pairs

In-school pairs rated four factors as having an impact on their ability to collaborate. These factors included: available planning time, flexible scheduling, past experience collaborating, and professional development as a team.

What media specialists and school technology specialists think about collaboration:		**Negative Impact**	**Positive Impact**	**No Impact**
Do you have available planning time as a team?	yes		17% (3)	
	no	83% (15)		
Do you have a flexible schedule?	yes		39% (7)	
	no	55% (10)		5% (1)
Do you have similar education backgrounds?	yes		44% (8)	5% (1)
	no	17% (3)	5% (1)	28% (5)
Do you have past experience working in a collaborative relationship?	yes		95% (17)	
	no			5% (1)
Have you been given professional opportunities as a team?	yes		78% (14)	5% (1)
	no	17% (3)		
Is physical distance a problem? (i.e. offices in different buildings?)	yes	5% (1)		11% (2)
	no		22% (4)	61% (11)

Table 6: Collaboration: In-School Pairs

The majority of people surveyed (83%) indicate that they do not have enough time available to plan as a team and that this has a negative impact on their ability to collaborate. Fifty-five percent indicate that the lack of a flexible schedule has a negative impact on their ability to collaborate. However, two factors were reported as positive impacts on collaboration. Ninety-five percent of the respondents indicate that past experience working in a collaborative relationship increased their ability to work collaboratively with each other. The majority of participants (78%) also indicate that professional development opportunities as a team have a positive impact on collaboration. Two of the respondents mentioned the Internet Institute as an opportunity that impacted heavily on their ability to collaborate. One factor, physical distance, was rated as not being a problem and participants indicate that this has no impact on their ability to collaborate. Respondents present a mixed picture on similarity of educational backgrounds with 33% indicating it has no impact. Other participants (44%) indicate similar backgrounds have a positive impact and one respondent indicated that dissimilar backgrounds had a positive impact. This participant commented that "we compliment each other."

4.4.3 Comments on Collaboration between In-School Pairs

Open-ended comments by media specialists and technology specialists emphasized the importance of time and schedules on collaboration. Technology specialists mention the importance of schedules most frequently as in the following comments:

> "Great rapport, but we are both constantly needed elsewhere."
>
> "I would like to work more with the media specialist but she doesn't have time

"Very successful-but even more so if we both had a flexible schedule."

"Schedules and priorities impact ability to work together."

Media specialists' comments echo technology specialists' views on schedules and also discuss the impact of too little time:

"Lack of time, different schedules."
"Fixed schedules so we have a hard time getting together."
"We are not free at the same time."
"Lack of time for teachers to plan with us."
"We are both too busy."
"We are not treated as a working team, so we must make time together."
"Moderately successful, but would be improved with better communication."

4.5 Technology Roles of District Technology Specialists and School Media Specialists

4.5.1 Introduction

Results in this section are based on surveys returned by six media specialists working in schools without an in-school technology specialist and from three district-wide technology specialists supporting more than one school. The small number of returns and the increased confusion over who is actually filling the role of the technology specialist allows for only tentative conclusions over roles of specialists working in this situation. One media specialist reports that more than one district-wide technology person services their building and several media specialists indicate that they or someone else in their building have taken on many of the technology tasks. Technology tasks assumed by media personnel are included as part of the role of media specialists. Questionable

results were clarified through email. As seen in the previous section, a few participants indicate someone other than the media or technology specialist carries out the role or the role is not performed at all. These answers are included as NA (not applicable).

4.5.2 Operations:

Media specialists play a major role in keeping computers and networks up and running in schools without a full-time technology person in the building (Table 7 : Operations : District/School Pairs).

Who is handling Operations?	What Media Specialists Think:	What District Technology Specialists Think:
Network Administration	29% Technology 14% Shared 57% Media	33% Technology 0% Shared 67% Media
Repair and Maintenance	0% Technology 57% Shared 43% Media	0% Technology 33% Shared 67% Media
Load Software	14% Technology 71% Shared 14% Media	0% Technology 67% Shared 33% Media

Table 7 : Operations : District/School Pairs

The following comment indicates that this role may not be defined or recognized by the school system, “I guess I will become the network administrator by default.” This is in direct contrast to schools with full-time technology specialists where no media specialist reports being solely responsible for operations and comments indicate that shared roles may be one of backing up the school technology specialist.

4.5.3 Purchasing

As seen in the results with in-school pairs, purchasing appears to be determined by domain. The only area in which a majority of the media specialists reported sole responsibility for purchasing was library equipment (Table 2: Purchasing : In-School Pairs). The majority of district-wide technology personnel report sharing responsibility for purchasing with media specialists even for the purchase of library equipment. One area of purchasing that seems to fall naturally to district-wide personnel is software obtained with a district license.

Who is handling Purchasing?	What Media Specialists Think	What District Technology Specialists Think
Classroom Equipment	43% District Tech 43% Shared 14% Media	33% District Tech. 67% Shared 0% Media
Library Equipment	0% District Tech 29% Shared 71% Media	33% District Tech 0% Shared 67% Media
Software	0% District Tech 71% Shared 29% Media	0% District Tech 100% Shared 0% Media

Table 8 : Purchasing - District/School Pairs

4.5.4 Administration

In schools without technology specialists, the majority of media specialists are responsible for the inventory and circulation of equipment and software. However, most respondents agree that establishment of technology policies is a shared decision with district personnel (see Table 9). Agreement between district technology specialists and

media specialists is fairly strong for all areas of administration, in comparison to in-school pairs where responsibility for these tasks appears to be blurred.

Who is handling Administration?	Media Specialists Think	District Technology Specialists Think
Inventory Equipment	0% Technology 0% Shared 86% Media 14% NA	0% Technology 33% Shared 67% Media
Check Out Equipment	0% Technology 0% Shared 86% Media 14% NA	0% Technology 33% Shared 67% Media
Inventory Software	0% Technology 14% Shared 86% Media	0% Technology 33% Shared 67% Media
Check Out Software	0% Technology 0% Shared 100% Media	0% Technology 33% Shared 67% Media
Establish Technology Policies	0% Technology 43% Shared 43% Media 14% NA	0% Technology 67% Shared 33% Media

Table 9 : Administration - District/School Pairs

4.5.5 Staff Development

All three of the district-wide technology specialists report sharing responsibility with the media specialists for staff development. Media specialists' responses were mixed with about half believing this to be a shared responsibility and about half believing it to be their own responsibility. One comment reflects the shared nature of this role, "She oversees the county staff development committee for technology and teaches classes across the county. I teach classes in staff development just at my school." It is not

surprising to see the discrepancy between media and technology specialist results due to the low number of district-wide technology specialists' results.

Who is handling Staff Development?	What Media Specialists Think	What District Technology Specialists Think
Computer Equipment	14% Technology 29% Shared 43% Media 14% NA	0% Technology 100% Shared 0% Media
Software	14 % Technology 29% Shared 57% Media	0% Technology 100% Shared 0% Media
Internet	29 % Technology 29% Shared 43% Media	0% Technology 100% Shared 0% Media
Integrating Technology into Curriculum	0% Technology 29% Shared 71% Media	0% Technology 100% Shared 0% Media

Table 10 : Staff Development - District/School Pairs

4.5.6 Student Development

Responsibility for student development in the use of computer equipment, the Internet, and support for research appears to fall to the media specialist (Table 11 : Student Development - District/School Pairs). This is probably a direct reflection of the number of schools (and therefore, students) that district-wide personnel support. Interestingly, media specialists presented a very blurred picture of who teaches students to use software programs with the majority indicating neither they or the district-wide technology person is assuming this task. Perhaps teachers are working with students learning new software. Media specialists and district-wide technology specialists also do not claim responsibility

for student-keyboarding skills. Some of the schools list a "vocational education" teacher as having responsibility.

Who is handling Student Development?	What Media Specialists Think:	What District Technology Specialists Think:
Computer Equipment	0% Technology 14% Shared 43% Media 29% NA	0% Technology 33% Shared 67% Media
Software	0% Technology 14% Shared 29% Media 57%NA	0% Technology 33% Shared 67% Media
Internet	0% Technology 14% Shared 86% Media	0% Technology 33% Shared 67% Media
Support using technology in Research	0% Technology 0% Shared 100% Media	0% Technology 33% Shared 67% Media
Keyboarding Skills	14% Technology 0% Shared 0% Media 86% NA	0% Technology 0% Shared 33% Media 67% NA

Table 11 : Student Development - District/School Pairs

4.5.7 Main Roles of Media Specialists and District-wide Technology Specialists

Media specialists use very general terms to describe the main role they play in supporting technology. This is probably a reflection of the great range of responsibilities they assume. Unlike media specialists working with a school technology specialist, three of the librarians appear to be unable to focus on one aspect of technology support. Many of the following comments express the broad nature of their role.

"Facilitator and educator"
"Facilitator and consultant"
"Having resources available and accessible"
"Keeping equipment in running order for teachers and students"
"Troubleshooting, planning, and obtaining"
"As an imitator and cheerleader"
"Facilitator-having technology available for use by both students and teachers and trying to show ways and encouraging integration"

Two out of the three district-wide technology specialists states that staff development is the main role they play in supporting technology use in their district. The third specialist echoed the broad term used by many of the media specialists.

"Making sure teachers see technology as a tool for student instruction"
"Staff developer and resource to over 1000 employees"
"Facilitator"

4.5.8 Satisfaction with roles supporting technology

When asked to suggest any changes they would like to see in their role, media specialists agree that the they do in supporting technology impacts the role they play as a librarian. Media specialists indicate that they are taking a large role in the operation of technology within their schools and they also support a larger share of the administrative duties than their in-school pair counterparts. The following comments indicate that this larger role may have a price.

"Too involved. Love technology, hate the price the overall library program is

"I would like to be the media specialist **or** technology specialist. Being both is about to work me to death."

"We are overwhelmed. Would like to see a staff person added."
"Would like to see classroom teachers accept more responsibility for computer competency skills."
"I would love a technology person at our school."
"I need more training and the ability to do more with the network. More support

"I enjoy computers tremendously, but sometimes I neglect other areas of my job."

District-wide technology specialists confirm their focus on staff development with their comments on possible changes. All of the specialists agree that more time is needed to provide adequate support to an entire district learning technology.

"Teachers need more support but I have no more time."
"My hats cover math, science, and technology. I need a staff development

"I would like to have time to staff develop "myself" so as to help staff more."

4.5.9 Unidentified Roles

Participants in this group provide four additional roles for personnel supporting technology. One of those roles, contact person for media coordinators in district, reflects the district-wide nature of this technology role. Other roles are:

"Computer competency training and tracking"
"Keeping database of students trained and allowed to use Internet"
"Supervise computer lab assistant"
"Contact person for media coordinators in district"

4.6 Collaboration of District-School Pairs

4.6.1 Introduction

This section examines the results of three district-wide technology specialists and five media specialists working in schools supported by district-wide technology people on factors affecting their ability to collaborate with each other. Respondents answered questions on the same factors as the in-school pairs and also provided additional comments.

4.6.2 Results on Collaboration between District/School Pairs

Media specialists and district-wide technology specialists agree with in-school teams that lack of available planning time has a negative impact on collaboration; previous experience collaborating has a positive impact on collaboration; and that professional development as a team has a positive impact on collaboration. They also agreed with the in-school pairs that the presence of flexible scheduling has a positive impact on collaboration. However, in contrast to the in-school pairs that contained a substantial number of respondents who worked in fixed schedules, this group all reported having flexible schedules (Table 12 : Collaboration - District/School Pairs).

What media specialists and district technology specialists think about collaboration:		Negative Impact	Positive Impact	No Impact
Do you have available planning time as a team?	yes		14% (1)	
	no	88% (7)		
Do you have a flexible schedule?	yes		75% (6)	25% (2)
	no			
Do you have similar education backgrounds?	yes		63% (5)	
	no	25% (2)		13% (1)
Do you have past experience working in a collaborative relationship?	yes		88% (7)	
	no			14% (1)
Have you been given professional opportunities as a team?	yes		50% (4)	
	no	25% (2)		25% (2)
Is physical distance a problem? (i.e. offices in different buildings?)	yes	88% (7)		
	no			13%(1)

Table 12 : Collaboration - District/School Pairs

Another major difference between the groups is seen in the area of physical difference. District-wide technology specialists support an entire school system and are often based in an administrative building. All of the respondents indicate that working out of a different building has a negative impact on their ability to collaborate. This raises the interesting question of why in-school pairs do not recognize that being in the same building as having a positive impact. They often viewed it as no impact. It probably

illustrates how easy it is to take some things for granted that would have a negative impact it they were not present.

4.6.3 Comments on Collaboration Between District/School Pairs

The comments of district technology specialists on collaboration focused on how little time their positions leave for collaboration with media specialists.

> "Role is consumed by technical support with little time left for collaboration."
> "Assignment to entire school system lessens time for collaboration."
> "Not enough time."

Media specialists also emphasize the fact that time is a critical factor in trying to collaborate.

> "Workload is highly demanding, at certain times of year can be extremely
>
> "Personnel is spread so thinly with everyone wearing many hats."
> "Time is the greatest barrier for all involved."

5. Discussion

Recognizing that great individual differences exist between how media specialists and technology specialists approach the job of supporting technology within a school, the results of this survey allow some broad generalizations in answer to the research questions proposed in this study.

1. What are the roles of the technology specialist and the media specialist in supporting information technology within the public school system?

Media specialists report a strong contribution to the support of technology within their schools. The actual role of the media specialist, however, is dependent on the presence or absence of a technology specialist within the school. Media specialists working with school technology specialists often report sharing a job with the technology specialist. Media specialists working with the support of a district technology specialist often report feeling solely responsible. One example of this difference is seen in the Operations job category (see Tables 1 and 7). At least half of the media specialists working with school technology specialists reported sharing two of the three operations jobs. In comparison, a majority of the media specialists without a school technology specialist classify themselves as solely responsible for two out of the three tasks. Both groups, however, show strong support for staff and student development with the strongest sense of personal responsibility seen in student development on the Internet and support for students using technology to do research.

District-wide technology specialists and school technology specialists showed a complementary pattern to the media specialists. School technology specialists claimed

primary responsibility for the majority of tasks contained in the survey. The only exceptions were purchasing library equipment, purchasing software, and student development on computers, software, the Internet and research. District-wide technology specialists more often see themselves as sharing the role of supporting technology within the school. The three areas showing the most involvement by district-wide technology specialists are operations, purchasing, and staff development. Administrative job roles show little consensus between media and technology partners leaving a blurred picture of who is responsible.

2.In what areas do the roles of these two specialists overlap?

Due to the large differences seen in the roles of in-school pairs and district-school pairs it is necessary to look at areas of overlap separately. In-school pairs show some degree of overlap in almost all of the defined roles. However, the only areas recognized by the majority of both media specialists and technology specialists as shared roles are four tasks in student development (computers, software, Internet, and support in research) and in purchasing software. Many of the school technology specialists do not recognize the shared role that media specialists claim in the areas of staff development, operations, purchasing, and administration. Some of this discrepancy may be explained by different perceptions of the definition of a shared role. For example, as described earlier in this paper, some of the media specialists use terminology that indicates they act as a backup to the technology specialists. The technology specialists may not recognize this as a shared role. This is an important area for discussion between technology and media professionals. If media specialists are willing to share or provide back-up support for

more of these tasks, technology specialists need to not overlook this valuable resource. The current emphasis on technology in university library science programs will continue to increase the value of school media specialists supporting technology. Another possibility exists, however, to explain this discrepancy. Media and technology specialists may still be trying to define "who does what" as they adjust to their new roles. Mixed results, such as those seen in administration, may fall in this category. One participant commented that the overlapping of roles is "mostly positive, except for areas that invade control factors." One area of administration, the establishment of technology policies, provides strong justification for clarity. Over half of the technology specialists surveyed did not recognize the role of the media specialist in establishing technology policy. They do recognize, however, the large role media specialists assume working with students on the Internet. Media specialists who take responsibility for working with students using the Internet should be a part of the discussion on the acceptable use of the Internet.

District-wide technology specialists and media specialists recognize areas of overlap in operations, purchasing, and establishment of policy. However, many of the media specialists do not confirm the strong sense of sharing responsibility on staff development reported by district-wide technology specialists. Due to the low number of returns within this group it is probably unwise to guess at the reasons behind this discrepancy. This is an area that needs to be clarified through discussions within districts or future research.

3. What are some of the conditions that hinder or facilitate the ability of technology and media specialists to collaborate within these roles?

Available planning time, previous experience collaborating, and professional development as a team were identified as factors that could enhance collaboration. Participants recognized that these factors improve their ability to work with their partner supporting technology and that the absence of these factors has a negative impact on their ability to collaborate. Interestingly, distance and scheduling are only identified as factors in collaboration when they negatively impact a group. In-school pairs report a number of participants with fixed schedules. Fixed schedules are judged by participants as having a negative impact on their ability to work together. However, district-school pairs all report having flexible schedules and a large percentage of the participants do not recognize this as a positive impact or a negative impact. Conversely, district-school pairs report that distance is a factor in their ability to work together. In-school pairs who reported no problems with distance often rate this factor as having no impact. It is interesting to speculate on why the groups who reported no problems with distance or schedules do not recognize the positive impact of these answers. The last factor studied was similarity in educational backgrounds. No consensus was reached on how this factor affects collaboration with many of the participants rating it as having no impact. Open-ended comments on collaboration focused on the impact of time on participants' ability to collaborate. Many of the participants report feeling that they are not accomplishing all of the things that they would like to accomplish in supporting teachers and students using technology either as a member of a team or as an individual.

6. **Implications**

This study identified areas of overlapping and blurred job responsibility for school media and school technology specialists working to support the use of technology in North Carolina public schools. Although the roles are unique, school media specialists and school technology specialists share many job responsibilities and should be treated as a team. Survey results indicate that "teams" need an opportunity to discuss and clarify job responsibilities with the goal of increased support for staff and teachers and increased job satisfaction. Conditions within our schools should facilitate this collaborative discussion and should lead to professional guidelines for supporting technology within schools. Once these guidelines are established, school personnel need to ask the following questions.

- Are principals and teachers aware of the job responsibilities assumed by media and technology specialists?
- Do teachers and principals understand the overlapping nature of their roles?
- Are the conditions present within the school that will allow media and technology personnel to be successful at their jobs?

Support within the schools in the form of flexible scheduling, available planning time, and professional team development may provide an opportunity for school media and school technology specialists to better serve the needs of the students and teachers. Improved communication and decreased competition between school media and school technology specialists should be a priority. This will help to make these demanding jobs more tenable. Functioning as a team, media specialists and technology specialists may also have the opportunity to address those areas identified as blurred roles of responsibility. Purchasing software and administration tasks, such as inventory, check

out, and establishing policy, are some of the job responsibilities identified as “blurred.” Discussion of these control tasks appears to be a priority due to the lack of consensus shown in participant responses. If technology specialists and media specialists are viewed as “team players” and provided with optimum conditions for collaborating they may be able to define and execute these blurred areas in a more efficient manner and again decrease job stress.

Districts are hiring school technology specialists with teaching backgrounds in recognition of their importance to staff and student development. It is imperative that this aspect of the job is not overlooked. The burden of network administration has the potential to overwhelm the other roles of the technology specialist, especially that of teaching. Districts need to consider supporting individual schools with a district level network specialist to allow school technology specialists and media specialists time to work with teachers and students.

Districts that cannot place technology specialists in every building may need to find other ways to support media specialists who are trying to do two jobs. One way would be to enlist teachers and other personnel to assist in technology support. This would allow district technology specialists to focus on staff development and still improve services and decrease stress in individual schools. School media specialists working in districts without school technology specialists are overwhelmed and need to be supported. Teams formed by media specialists and district technology specialists will continue to deal with the negative burden of attempting to collaborate from different buildings but otherwise present a similar picture of needing to work together to meet the needs of teachers and students.

7. **Conclusions**

Division of job responsibilities will always be as unique as the team that defines them but team members, such as media and technology specialists, need to understand the roles being played by themselves and other school members. This knowledge allows them to function in a more productive manner and may provide the additional benefit of recognizing that they are not solely responsible for the gigantic and ever-expanding task of supporting technology.

What the future holds for technology in our public schools can only be imagined. If the transition from print to non-print materials continues to expand, the unique, but overlapping roles of the school media specialist and school technology specialist may even begin to merge. At the least, the fast changing nature of technology will not allow these roles to remain static. Personnel working in these jobs deserve an opportunity to periodically reexamine and redirect what they are doing. School districts need to support these discussions and provide conditions that allow personnel to succeed in their jobs.

It is important to understand how other personnel working within the schools view their responsibility for the use of technology. Study in this area would provide valuable insight for specialists working to support teachers and other personnel. How the schools adjust to these changes will be dependent on the understanding and cooperation of the entire school community.

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Appendices

0Media Specialist Survey

Background Information::

Job Title:_____

Educational Background:_____

Is this position full-time or part-time?_____

Does the library have a fixed schedule or a flexible schedule, or some variation?_____
(Flexible schedule indicates open access for students and classes taught by appointment,

fixed schedule indicates access to library and classes by established set schedule only)

School Information:

Does the school have a school technology specialist? yes ☐ no ☐

Does the school have Internet access? yes ☐ no ☐

If yes, where is Internet access available (i.e. classrooms, library, lab)?_____
_____

Approximately how many computers are connected to the Internet in the library?_____

Does the school offer email access to staff? yes ☐ no ☐

Does the school offer email access to students? yes ☐ no ☐

Does the school have a computer lab?_____

Are there computers in the classroom? yes ☐ no ☐

If yes, approximately how many computers per classroom are connected to the Internet?_____

Approximate number of computers/student?_____
(if this number is not available leave answer blank)
Under the title, Media Specialist, place an X in all the boxes which describe responsibilities you play a role in as a Media Specialist. Under the title, Technology Specialist, place an X in the boxes for the job responsibilities you have seen handled by your technology specialist.

	School Media Specialist	Technology Specialist
Network Administrator		
Select and Purchase Computer Equipment for Classrooms		
Select and Purchase Computer Equipment for Library		
Maintain Inventory of Computer Equipment		
Checking Out Computer Equipment		
Maintain and repair Computer Equipment		
Select and Purchase Software		
Maintain Inventory of Software		
Responsible for checking out software		
Maintain and load software		
Staff Development using computer equipment		
Staff Development using software		
Staff Development on the use of the Internet		
Work with teachers integrating technology into curriculum		
Student development using computer equipment		
Student Keyboarding Skills		
Student development using computer software		
Student development on the use of the Internet		
Support for students using technology in research and projects		

Establish school policies for the use of technology		

Please list any other job responsibilities related to technology that you are responsible for that were not included in the above list: _____
_____
_____
_____

How would you describe the **main** role you play in the use of technology:
_____
_____
_____

Are you satisfied with the role you currently play supporting technology use? If not, what changes would you like to see in your role?_____
_____
_____
_____

If the chart above reflected areas of overlap between your role and the role of the technology specialist, do you find the overlapping nature of these roles has a positive impact or a negative impact on your job?_____
_____
_____
_____

(The following questions are based on a broad definition for collaboration that would include such activities as planning, teaching, or working together as a team.)

Within your role as a media specialist have you worked in a collaborative way with the technology specialist? yes ☐ no ☐

If yes, describe a "typical" collaborative situation:_____
_____
_____
_____

Would you describe this collaborative relationship as successful or unsuccessful and why?_____
_____
_____

Please rate the impact of the following factors on your collaborative relationship by circling yes or no to the question and then putting an X under the heading that best describes the impact of this answer on your ability to collaborate with the technology specialist.

			How does this answer impact your ability to collaborate.			
			Negative Impact	No Impact	Positive Impact	Not Applicable
Do you have available planning time as a team?	yes	no				
Do you have a flexible schedule?	yes	no				
Is physical distance a problem? (ie offices in different buildings)	yes	no				
Do you and the technology specialist have similar educational or professional backgrounds?	yes	no				
Do you have past experience working in a collaborative relationship?	yes	no				
Have you been given opportunities for professional development as a team?	yes	no				

Please list any other factors that you feel impact your ability to work in a collaborative relationship with the technology specialist:_____
_____
_____

Do you have any other comments that you would like to share concerning your role in support of the use of technology or your collaborative experiences:_____
_____
_____
_____

Would you be willing to receive email to clarify any of your answers? yes ☐ no ☐

If so please include your email address_____

Would you be willing to take part in a short interview to clarify any of your answers?
yes ☐ no ☐

If yes please include a way to contact you_____

General comments_____

Technology Specialist Survey
Background Information:

Job Title:_____

Is this a district level or a school level position?_____

Educational Background:_____

Related Work Experience:_____

Is this position full-time or part-time?_____

If this is a school level position please fill out the information on the school.
If this is a district level position please fill out the information on the district.

School Information:

Does the school have Internet access? yes ☐ no ☐

If yes, where is Internet access available (i.e. classrooms, library, lab)?_____
_____

Approximately how many computers are connected to the Internet in the library?_____

Does the school offer email access to staff? yes ☐ no ☐

Does the school offer email access to students? yes ☐ no ☐

Does the school have a computer lab?_____

Are there computers in the classroom? yes ☐ no ☐

If yes, approximately how many computers per classroom are connected to the Internet?_____

Approximate number of computers/student?_____
(if this number is not available leave answer blank)

District Information:

Number and levels (elementary, middle, high) of schools in the district that you are responsible for:

_____

_____

Do the schools have Internet access and where is it available (i.e. classroom, library):

Under the title, Technology Specialist, place an X in all the boxes which describe responsibilities you play a role in as a Technology Specialist. Under the title, Media Specialist, place an X in the boxes for the job responsibilities you have seen handled by your school media specialist.

	School Media Specialist	Technology Specialist
Network Administrator		
Select and Purchase Computer Equipment for Classrooms		
Select and Purchase Computer Equipment for Library		
Maintain Inventory of Computer Equipment		
Checking Out Computer Equipment		
Maintain and repair Computer Equipment		
Select and Purchase Software		
Maintain Inventory of Software		
Responsible for checking out software		
Maintain and load software		
Staff Development on computer equipment		
Staff Development on software		
Staff Development on the use of the Internet		
Work with teachers integrating technology into curriculum		
Student development on computer equipment		
Student Keyboarding Skills		
Student development on computer software		
Student development on the Internet		
Support for students using technology in research and projects		

Establish school policy for the use of technology		

Please list any job responsibilities related to technology that you are responsible for and were not included in the above list:_____
_____
_____
_____

How would you describe the **main** role you play in the use of technology:
_____
_____
_____

Are you satisfied with the role you currently play supporting technology? If not, what changes would you like to see in your role?_____
_____
_____
_____

If the chart above reflected areas of overlap between your role and the role of the media specialist, do you find the overlapping nature of these roles has a positive impact or a negative impact on your job?_____
_____
_____
_____

(The following questions are based on a broad definition for collaboration that would include such activities as planning, teaching, or working together as a team.)

Within your role as a technology specialist have you worked in a collaborative way with the media specialist? yes ☐ no ☐

If yes, describe a "typical" collaborative situation:_____
_____
_____
_____

Would you describe this collaborative relationship as successful or unsuccessful and why?_____
_____
_____

Please rate the impact of the following factors on your collaborative relationship by circling yes or no to the question and then putting an X under the heading that best describes the impact of this answer on your ability to collaborate with the media specialist.

			How does this answer impact your ability to collaborate.			
			Negative Impact	No Impact	Positive Impact	Not Applicable
Do you have available planning time as a team?	yes	no				
Do you have a flexible schedule?	yes	no				
Is physical distance a problem? (ie offices in different buildings)	yes	no				
Do you and the media specialist have similar educational or professional backgrounds?	yes	no				
Do you have past experience working in a collaborative relationship?	yes	no				
Have you been given opportunities for professional development as a team?	yes	no				

Please list any other factors that you feel impact your ability to work in a collaborative relationship with the media specialist:_____
_____
_____

Do you have any other comments that you would like to share concerning your role in support of the use of technology or your collaborative experiences:_____
_____
_____
_____

Would you be willing to receive email to clarify any of your answers? yes no

If so please include your email address:_____

Would you be willing to take part in a short interview to clarify any of your answers?
yes ☐ no ☐

If yes please include a way to contact you:_____

General Comments_____
Dear ,

I am a graduate student in the School of Information and Library Science and I am conducting a study on the roles of the school media specialist and technology specialist for my masters paper. The objective of this research project is to attempt to understand what roles these information specialists are playing in regards to technology in our public schools and what factors influence their ability to work together.

Enclosed with this letter is a brief survey that asks a variety of questions concerning the role you play in integrating technology into your school. I am asking you to look over the survey and, if you choose to do so, complete the survey and return it to me. The results of this survey will be summarized and published as a Master's Paper in the Information and Library Science Department. I guarantee you that your responses will not be identified with you personally.

This survey is being sent to twenty-one paired teams of school media specialists and technology specialists. I hope you will take a few minutes to complete this survey and to return it in the enclosed self-addressed and stamped envelope. Regardless of whether you choose to participate, you can have a summary of the findings. To receive a summary of the findings, fill out and return the enclosed address form. This form may be sent separately to ensure privacy.

It is hoped that this study will begin a discussion of the emerging technology roles played by school media and technology specialists within our public schools. In the process of examining these roles it may be possible to identify factors that act as barriers or enhancements to collaboration.

Sincerely,

Elaine M. Cameron
SILS, UNC-Chapel Hill
(919) 968-1762

You may contact the UNC-CH Academic Affairs Institutional Review Board at the following address and telephone number at any time during this study if you have questions or concerns about your rights as a research subject.

Academic Affairs Institutional Review Board
David A. Eckerman, Chair
CB# 4100, 300 Bynum Hall
The University of North Carolina at Chapel Hill
Chapel Hill, North Carolina 27599-4100
(919) 966-562 or email aa-irb@unc.edu

You may also contact my faculty advisor, Dr, Evelyn Daniel, at 962-8062 with any questions.

Please return signed permission slip with completed survey.
Please return:

Title: Media and Technology Specialists: Partners in Informational Technology?

I agree to participate in this study. I understand that my responses will be kept confidential and I will not be identified in any way. Please return this signature of consent with any completed surveys.

Signature_____