2007

Perceptions of Florida school library media specialists relative to the saliency of collaboration, leadership, and technology tasks outlined in Information Power: Changes since 1996

Terrell M. Pace
University of South Florida

Perceptions of Florida School Library Media Specialists

Relative to the Saliency of Collaboration, Leadership, and Technology Tasks

Outlined in *Information Power*: Changes since 1996

by

Terrell M. Pace

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Secondary Education
College of Education
University of South Florida

Major Professor: Ann E. Barron, Ed.D.
Frank Breit, Ph.D.
James Carey, Ph.D.
Jeffrey Kromrey, Ph.D.

Date of Approval: March 8, 2007

Keywords: school library media specialist, school library media programs, national standards, scheduling model, information power: building partnerships for learning, perceptions, job tasks, administrative support

DEDICATION

This dissertation is dedicated to the two people who have inspired me most to earn this degree. First, my wife of 37 years, Joy who has encouraged and stood by me through seven years of work on this degree. Second, my father, George Pace who received his high school diploma at the age of 87 and was the first person to tell me that I could accomplish this goal if I wanted it bad enough.

ACKNOWLEDGEMENTS

I would like to acknowledge a number of people who have continued to encourage me in the completion of this journey. Of course, the members of my doctoral committee Dr. Ann Barron, Dr. Frank Breit, Dr. Jeffrey Kromrey and Dr. James Carey who have taught me the things that I needed to know in order to complete this degree. Special thanks go to Dr. Ann Barron, my committee Chair, who kept telling me "You can do this" and Dr. Jeffrey Kromrey for being so patient with me as a slow learner of statistics. Most especially I would like to thank Dr. Jim Carey, my mentor, colleague and friend for the past 10 years for his encouragement and support. His dedication to the profession of school librarianship helped me to become a better professional; furthermore, as a colleague he has encouraged and supported me, along with assisting me in the development of my study.

Also I would like to thank Dr. Vicki Gregory, Director of the School of Library and Information Science and my boss. She has been an inspiration and mentor as well as a cheerleader for me as I traveled this road.

Two others have been instrumental in assisting me with the statistical analysis and development of the Results chapter. Sherman Chow, who asked me lots of questions and helped me formulate the *t* test analyses and Jesse Coraggio from the College of Education's CORE group, who reviewed much of my material and made suggestions as to how to best analyze and represent the data.

To all of these people I owe an enduring debt of gratitude.

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Abstract

In 1988 *Information Power: Guidelines for School Library Media Programs* (*IP1)* *was* published. Ten years later an updated version, *Information Power: Building Partnerships for Learning (IP2)* was released. The purpose of this study was to determine if school library media specialists' perceptions had changed since 1996 and if respondents' familiarity with *IP2* was a factor in the development of those perceptions. Further, 37 items that were clustered based on the three primary threads of collaboration, leadership and technology developed in *IP2* were used to assess changes in perceptions.

An electronic survey was developed and disseminated to the population of school library media specialists in Florida. A total of 454 completed surveys were received; representing a 17% return rate. The results of the current survey were then compared to a 1996 job task analysis study.

Analysis of the results showed that 60% of the respondents had never attended an in-service on *IP2*. Statistically significant changes in perceptions about the importance of those 37 job tasks resurveyed were also identified. Changes were identified in 10 of the 14 collaboration items, 12 of the 13 leadership items and 9 of the 10 technology items.

Changes in perception were also found for tasks that the respondents considered *not a part of job*. For the 37 job tasks, there were 11 statistically significant positive changes and two statistically significant negative changes.

The environmental variable that correlated with the largest number of the 37 job tasks related to the principal making encouraging comments to classroom teachers about using the resources of the school library media center in the planning of their curriculum units. This variable correlated significantly with 24 of the 37 job tasks.

The study revealed a need for additional research in the leadership roles and traits of the school library media specialist. Further, additional research related to the effect of administrative support could inform the profession in its efforts to solidify the school library media program as an integral part of the instructional program.

Chapter One

Introduction

> How does the library media specialist effectively promote new and existing information and instructional resources and technologies and ensure that they are used effectively by teachers to prepare students to flourish in a dramatically changing world? (AASL & AECT 1988, p. 5).

In 1988, the American Association of School Librarians (AASL), in its continuing collaboration with the Association for Educational Communications and Technology (AECT), produced, and the American Library Association (ALA) published, the first edition of *Information Power: Guidelines for School Library Media Programs (IP1).* The publication of this new document brought about further refinement and broadening of national standards for school library media programs in the United States. It also provided the "…vision and guidance necessary for the school library media program to significantly expand the access to and use of information and ideas by students, teachers, and parents" (AASL & AECT, 1988, vii). This publication set forth three primary areas of focus for school media specialists. They were Information Specialist, Teacher, and Instructional Consultant.

In 1998, these same groups published a sequel publication, *Information Power: Building Partnerships for Learning (IP2).* The focus in this second publication was repurposed somewhat to include the three primary areas of collaboration, leadership and

technology as strands of emphasis within which the goals could be aligned. These three strands are the central foci of this study.

Background

IP1 set forth, and *IP2* retained the same set of Mission and Goals tenets. *IP2* did however refine some of the language to be more reflective of the times. New language reflecting the expansion of technology and information literacy skills was added. Those Mission and Goals tenets include:

1. *To provide intellectual access to information* – in *IP2,* there was a shift away from the word "systematic" and more of an emphasis on the development of the information literacy needed to become lifelong learners. The selecting, retrieving, analyzing, evaluating, synthesizing, and creating of information for all age levels and in all curriculum content areas remained the same in both documents.
2. *To provide physical access to information* **–** In *IP2* the emphasis became one of reaching beyond the physical walls of the media center and into the broader "learning community."
3. *To provide learning experiences that encourage users to become discriminating consumers and skilled creators of information* - *IP2* exchanged the word "users" for the phrase "students and others." By so doing the writers were attempting to expand the vision of users to those members of the learning community beyond the physical school facility.
4. *To provide leadership, instruction, and consulting assistance in the use of instructional and information technology and the use of sound instructional design principles* (AASL & AECT 1988) - In *IP2*, the interjection of the term

collaboration in place of "providing instruction and consulting assistance" signaled the movement toward a more thorough integration of the media program as an integral component of the school's instructional program.

5. *To provide resources and activities that contribute to lifelong learning* Although this tenet is the same in both editions, the "lifelong learning" concept had become a better understood and a more widely accepted concept by 1998 and, along with the conceptual changes imbedded in the 1998 edition, would become more of a reality.
6. *To provide a facility [a program] that functions as the information center of the school – IP2* extends this focus beyond the facility by interchanging the word "program" for facility, thus encouraging the idea that the media program be extended beyond the walls of the media center and even those of the school itself.
7. *To provide resources and learning activities that represent a diversity of experiences, opinions and social and cultural perspectives*. Again, though continued in its original state, this tenet takes on new meaning with the ever increasing understanding of the true meaning of diversity.

Although the primary tenets remained the same between *IP1* and *IP2*, it is clear by the several modifications that a change in focus was seen for school library media programs. The focus on leadership was continued and strengthened while the new focus on collaboration as a means of closer integration of the media program as an integral part of the school's instructional program added another dimension to the previous standards. The importance of technology was reinforced and extended as the discussion of a media program beyond the walls of the media center was developed.

The importance of the enhanced role of the school library media specialist as an integral member of the instructional team is apparent by the repeated references, such as "learning needs take precedence over class schedules, school hours, student categorizations and other logistical concerns" (AASL & AECT, 1998, p. 89).

Focus

Standards for school library media programs set forth in *IP2* have been shown to correlate significantly with student achievement, as identified in numerous statewide studies. These areas of correlation have been identified in 10 studies over the past 10 years (Colorado, 1993; Colorado, 2000; Alaska, 2000; Pennsylvania, 2000; Massachusetts, 2000; Texas, 2001; Oregon, 2001; Iowa, 2002; New Mexico, 2002 and Florida, 2003.).

In the above mentioned studies, three major sets of findings emerged as significant correlations with student achievement. These three sets of findings are:

1. the level of development of the school library – number of volumes, subscriptions, etc.;
2. the extent to which school librarians engage in leadership and collaboration activities that foster information literacy;
3. the extent to which instructional technology is utilized to extend the reach of the library program beyond the walls of the school library media center (Lance, et al. 2002a).

The most recent study published on this subject is *Making the Grade: The Status of School Library Media Centers in the Sunshine State and How They Contribute to Student Achievement* done by Dr. Donna Baumbach (Baumbach, 2003). This study,

commonly referred to as The Florida Study is the most comprehensive of all of the studies done thus far. There were 1,719 respondents to the survey used for this study. A total of 396 items were surveyed. One of the primary results of this study was the conclusion that a well developed collection in a well staffed media center, with at least one university trained media specialist, may improve student achievement by as much as 23%, as determined by comparing the test scores of "A" high schools that showed strength in all of the above mentioned areas to "F" high schools, which were not as well developed (Baumbach, 2003).

Although each of the studies previously mentioned attributes significant gains in student achievement to the presence of a strong school library media program, none have focused on determining whether or not media programs are being developed around the national standards, as defined by *IP2*. Therefore, this study was to determine if these national standards, as being implemented in Florida, have been an underlying force in the development of the state's school media programs, and as such have had a significant impact on student achievement in the state.

Problem

Currently there is a lack of knowledge and credible evidence as to the status of the implementation of national standards for school library media programs in Florida. Although the AASL spent considerable resources to develop a strategic marketing plan, coupled with extensive staff development efforts (Haycock and Cavill, 1999), most of those strategies were not utilized in Florida, at least at the state level (Ulm, 2004). Informal discussions with school media program supervisors from around the state have

shown that local efforts, in some cases, were considerable. These efforts have not been consistently applied in all districts, however.

Because certain standards for school library media programs, advocated in *IP2*, correlate positively with student achievement, investigation needs to be done to determine school library media specialists' level of awareness and implementation of those key standards. Further, there has been little investigation into environmental factors that may foster or inhibit the development of school library media programs that mirror the national standards. Such investigation could lead to the establishment or revision of professional development strategies and programs to assist in the understanding of the correlation of environmental factors to the success of the school library media program. Subsequently, programs to rectify environmental and other factors that may be inhibiting the process could be developed. Additionally, if school library media specialists do not view the goals in *Information Power: Building Partnerships for Learning* as important, then professional organizations need to convince school library media specialists as to why the goals espoused are important so that their perceptions may become aligned with those goals over time.

Purpose

The purpose of this study was to determine if school library media specialists' perceptions, and subsequently practices, in Florida have changed since 1996. This study determined the level of awareness of national standards by school library media specialists and the degree to which awareness may relate to the implementation of these standards. As described in the section titled *Baseline for the Study*, specifically identified items from a 1996 study, for which Personnel Decisions Research Institutes, Inc. (PDRI)

was contracted by the Florida Department of Education, were used. A secondary purpose of this study is to identify environmental factors that have influenced the implementation, or lack thereof, of national standards.

This study addressed findings 2 (The extent to which school library media specialists engage in leadership and collaborative activities that foster information literacy) and 3 (The extent to which instructional technology is utilized to extend the reach of the school library media program beyond the walls of the school library media center) from the previously mentioned statewide studies, since they specifically relate to the three primary areas of collaboration, leadership and technology discussed in the national standards (Lance, et al. 2002a).

Additionally, four environmental factors were assessed as to their potential relationship to the implementation of the *IP2* standards, including (1) the scheduling model used, (2) level of administrative support, (3) level of technology implementation in the school and (4) whether or not the school district has an administrative position(s) specifically responsible for the supervision of the district's school library media program.

Baseline for the Study

The baseline for this study was a 1996 Florida Department of Education contracted job task analysis. This study was conducted by Personnel Decisions Research Institutes, Inc. (PDRI) and involved a 250 job item task analysis in which school library media specialists were asked to indicate the *time spent* and *criticality* of completion of each of the 250 tasks. From these two scores PDRI used a formula to arrive at what was termed a "saliency score". The items to be resurveyed from this study were selected after the polling of a number of media supervisors and several National Board Certified school

library media specialists as to those items that, in their professional opinion, reflected the implementation of the national standards. From the list of 250 items, the subject matter experts were asked to select 50 that they thought most directly reflected the national standards. The data received from the SMEs as placed into an Excel spreadsheet and 37 common items were identified. Each item was categorized, based on input from the SMEs, as to whether it fell within the collaboration, leadership or technology strand of *IP2*.

Research Questions

1. Have school library media specialists' saliency ratings on items related to collaboration, leadership and technology changed since 1996?
2. Does the school library media specialist's level of familiarity with *Information Power: Building Partnerships for Learning* correlate with their practice as measured by a change in the saliency of selected items resurveyed from a 1996 job task analysis?
3. Do selected environmental factors in public school settings correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest in this study were:
    a. Scheduling patterns – flexible and fixed,
    b. Administrative support – outward statements of encouragement for teachers to make use of the services of the media program,
    c. Full time media program supervisor in the district – district-level coordination of the school media programs throughout the district, including staff development, which could impact the familiarity with and

perceptions of the importance of implementing national standards in the school media programs and,

d. Level of technology integration – networked status of the school, which could reflect in the ability to access resources offered in the media program; professional development in the use of technology, etc.

4. Do demographic variables, related to the school library media specialist, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest to this study were:
    a. Gender
    b. Age
    c. Ethnicity
    d. Highest degree earned
    e. Years in teaching
    f. Years as a school library media specialist
    g. Time in current position
    h. Method of earning certification
5. Do demographic variables, related to the school, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest in this study are:
    a. Level of the school: elementary, middle, high, other
    b. Number of students
    c. Geographic location: rural, rural/suburban, suburban, suburban/urban, urban

d. School district in which the school library media specialist works

Definition of Terms

Collaboration - working with another or others on a joint project; more specifically, working with a classroom teacher or team to develop a collaborative curriculum project, which usually would include information literacy instruction.

Criticality: the rating of a task based on how important its completion is to the effective accomplishment of the overall job.

Fixed scheduling: classes are scheduled into the media center at the same time each week. This model of scheduling is most often used as an administrative way to give teachers a planning period. Teachers generally "drop off" their students at the media center and come back in some predetermined amount of time to pick them up. This model of scheduling most often does not include opportunities for small groups or individuals to use the library media center for practical application of skills or for cooperative planning of lessons that integrate skills into the curriculum (Buchanan 1991, p. 3).

Flexible scheduling: teachers plan time with the media specialist at the time of need instead of at a specific time each week. Teachers accompany the students to the media center and, along with the media specialist, provide support for the development of information literacy skills integrated into a curriculum unit.

Leadership: the level of involvement in school based, district level and state level committees as well as participation in local and state professional organizations.

Saliency: a composite variable derived from the combination of the *time spent* and *criticality* scores as an indicator of the overall importance of that task to the job

School Library Media Specialist: the person responsible for the implementation and assessment of the school library media program at the building level.

Technology: the use of various technologies, but most predominantly the use of computers, as a delivery medium for instruction. As related to the school library media program, a delivery medium for electronic databases and other Internet-based resources from within the media center and throughout the school via Local Area Networks.

Time Spent: the rating of a task based on the amount of *time spent* by the school library media specialist on that task when compared to all other tasks performed by that person.

Chapter One Summary

Identification of changes in perceptions within a profession as new standards and initiatives are developed is a valid and necessary step in the development of a profession. This study endeavored to determine if changes had occurred in the perceptions of school library media specialists in Florida due to the directional changes made in the professional standards as contained in the publication of *IP2* in 1998.

Chapter Two

Related Literature

The purpose of this literature review was to identify (1) literature that establishes the characteristics of strong school library media programs, (2) identify those characteristics of school library media programs that research indicates may have a positive relationship to student achievement, and (3) establish the base of knowledge needed to be an effective school library media specialist. This review focuses on the three primary threads identified by *IP2* of collaboration, leadership and technology (AASL & AECT 1998).

Characteristics of a Strong School Library Media Program

In its Vision section, *IP2* states:

> Students must become skillful consumers and producers of information in a range of sources and formats to thrive personally and economically in the communications age. Library media programs must be dynamic, enthusiastic and student centered to help ensure that all students achieve this status. (AASL & AECT, 1998, p. 1)

As noted by Rodney, et al. (2002), a strong school library media program is one:

- That is adequately staffed, stocked and funded.
- Whose staff are actively involved leaders in their school's teaching and learning enterprise.

- Whose staff has collegial, collaborative relationships with classroom teachers.
- That embraces networked information technology (Rodney 2002, p. ix).

As mentioned previously, several of these characteristics have been studied relative to their fulfillment within the state of Florida. *Making the Grade: The Status of School Library Media Centers in the Sunshine State and How They Contribute to Student Achievement* (Baumbach, 2003) was thorough in gathering data about the "staffed, stocked and funded" criteria. Further, Baumbach touched somewhat on the "actively involved leaders in their school's teaching and learning enterprise," and somewhat on the level of technology available in the school settings; however, the study did not aggressively address the areas of collaboration, leadership and technology as they specifically related to the role of the school media specialist, in the way that this study addressed these characteristics. In addition, environmental factors such as scheduling patterns, administrative support, fulltime school media program supervisor in the district and level of technology integration are discussed in this chapter. There is additional discussion about the results of the Baumbach study throughout this review.

Role of the School Library Media Specialist

Perhaps no other "role" in the educational process has undergone so much scrutiny and revision as has that of the role of the school library media specialist. As early as 1983 the concept of the school library media specialist's role changing to one more of a leader and instructional team member had been envisioned. As noted by Cleaver and Taylor (1983), this shift could/would not be one made quickly or without considerable consternation. Since that time efforts have been made at all educational levels to bring about such a change in the perceptions and practices of the school library

media specialist. Yet there remains a feeling of incongruence between the stated national role expectations and those perceived by the school-based members of the profession (Seavers 2002). This can be seen most specifically in the school library media specialists' perceptions of their roles as leaders both in the instructional program and the integration of technology. According to Craver (1986) there is at least a 10-year lag in the instructional role being espoused and what is being practiced.

Most of the research following the 1988 publication of the first *Information Power* was focused on the instructional role of the school library media specialist. Both the 1993 Colorado Study and the 1998 follow up study in the same state, found that students in schools where the school library media specialist played an instructional role, either by identifying materials for teacher planned units, or collaboratively planning such units with the teachers, generally attained higher reading scores on standardized tests. The 1998 study also found that students earned higher reading scores in schools where the school library media specialist played a vital instructional role, including planning instruction with teachers, providing information literacy instruction, providing in-service training for teachers, and evaluating students' work (Lance, et al., 1993 & 1998). Other recent statewide studies have offered additional validation on the importance of the school library media specialist's instructional role.

The underpinnings of *IP2* are nine information literacy standards, which are grouped into three major areas:

- Learning and teaching
- Information access
- Program administration

The primary strands used to support these information literacy efforts are collaboration, leadership and technology (p. ix). Not only are these strands important in the in-school media program, they are even more important to the development of a media program that extends beyond the walls of the school outwards to the entire learning community. Development of true lifelong learners is the overriding consideration in *IP2*. The following sections review much of the available literature that references the importance of each of the *IP2* strands.

Collaboration

"The concept of cooperative planning for curriculum by school library media specialists and teachers has been implicit in the history of our professional literature" (Cleaver & Taylor, 1983).

Many school library media specialist seem to be having trouble understanding and implementing this strategy. In this section, an attempt is made to demonstrate, through the literature, support for the imperative that school library media specialists must engage in collaborative planning as well as collaborative teaching in order to establish themselves as vital members of the instructional team of their school and larger learning community.

Evolution of the Standards and the Roles

The 1969 *Standards for School Media Programs* suggested several ways for school library media specialists to implement the media program (ALA & NEA, 1969):

1. Serving as instructional resource consultants and materials specialists to teachers and students.

2. Working with teachers in curriculum planning.
3. Working with teachers to design instructional experiences.
4. Serving on teaching teams.

The 1988 standards (*IP1*), (AASL & AECT, 1988) refined this concept into the instructional consultant role, and then in 1998 through the publication of *IP2* (AASL & AECT, 1998), it was further extended under the heading of collaboration, now encompassing all of the previous role components and adding the serving of members of the entire learning community with the extension of the media center program beyond the walls of the school library media center and the school.

The relationship between strong school library media programs and student achievement has been documented repeatedly (AASL & AECT, 1998, p. 88; Buchanan 1991; Lance & Loertscher 2002; Lance, et al. 2000; Lance, Welborn & Hamilton-Pennel 1993; Lance, Rodney & Hamilton-Pennell 2001; Lance, Rodney & Hamilton-Pennell 2002; Lance, Rodney & Hamilton-Pennell 2000a, Baumbach 2003). Each of these studies looked at the school library media programs in an individual state and related the characteristics of the school library media programs to student achievement. In every case positive student achievement appeared to be directly related to the development of the school library media program. Several of these studies posited that this relationship to student achievement was as a direct result of the collaborative efforts between the school library media specialists and the other members of the instructional staff.

Further, U.S.D.O.E.'s publication *What Works* (cited in Buchanan, 1991) counsels that, "students benefit academically when their teachers share ideas, cooperate in activities, and assist one another's intellectual growth." However, in stark contrast to the

proponents of collaboration, Craver (1994) suggests that any future information literacy movement would probably still be executed by classroom teachers who would continue to attempt to develop information literate students "by never using the school library" (p. 121).

Traditionally, school library media specialists have not been their faculty's first choice for the fulfillment of information needs (Craver 1994, p. 125). If this is to change and if school library media specialists are to become integral members of the instructional team and key collaborators with their faculty, then they must become proactive in presenting their abilities and knowledge as information literacy specialists.

The following is a synopsis of recent research into the impact of collaboration between the school library media specialist and classroom teachers:

- Alaska: During the 1997-98 school year, 211 school library media centers were surveyed. The study does not reveal how many individual school library media specialists responded to the survey, just the number of schools surveyed. The survey focused on areas such as staffing levels, hours of operation, staff activities, and usage of technology, policies, and cooperation with public libraries. To this data was added information as to performance on Version 5 of the California Achievement Tests of students in grades four, eight, and eleven. Each school reported the percentage of students scoring below proficient, proficient and above proficient in reading, language arts and mathematics. The findings showed that students' test scores in these areas rose when library staff spent more time teaching information literacy skills to students and planning instructional units with teachers. This study was the first to investigate specific staff activities and

online access to information [extension of media services beyond the walls of the media center] (Lance, Hamilton-Pennell & Rodney, 2000).

A correlation of *time spent* "Planning with Teachers" showed a strong relationship between the amount of *time spent* and the subsequent Number of Visits to the media center by the teachers (elementary r=.30, p <.001; secondary r=.36, p <.001).

- Pennsylvania: In a survey of 500 school libraries, it was determined that factors such as level of library staffing were directly related to student's Reading scores on the PSSA (Pennsylvania System of School Assessment). Schools with higher staffing levels also reported higher reading test scores. The level of information technology availability and the integration of information literacy instruction through the school library media program were also found to be indicators of reading success. Higher test scores were directly correlated to schools where school library media specialists spent more time teaching cooperatively with classroom teachers and integrating information literacy skills into the school's approach to standards and curriculum (Lance, Rodney & Hamilton-Pennel, 2000a).
- Colorado: In a study of 124 elementary and 76 middle school media programs, CSAP (Colorado Student Assessment Program) reading scores (at the fourth and seventh grade level) tend to be higher when school library media specialists plan cooperatively with teachers, identify materials for teachers, and teach information literacy skills to students (Lance, Rodney, & Hamilton-Pennell, 2000b).

Test scores also are higher in both elementary and middle schools when the library media specialists and the teachers work together [collaborating]. And, school library media specialists serving as trainers for other teachers showed some correlation to higher CSAP reading scores.

- Oregon: This study included library media center staff from 218 (32%) schools serving fifth grade, 148 (36%) schools serving eighth grade, and 147 (63%) schools serving tenth grade. Each grade level was maintained as a separate sample. Students scored higher in Reading when their school library media specialist worked with classroom teachers to identify materials to support and enrich instructional units, taught essential information literacy skills to students, provided in-service training opportunities to classroom teachers and classrooms were linked by a computer network (Lance, Rodney, & Hamilton-Pennell, 2001)

Even with this amount of research to validate the efficacy of collaboration, many school library media specialists have not been able to develop the bridge to their faculty members that would facilitate a more comprehensive implementation of effective collaboration. The level of commitment required to achieve the maximum result from collaborative efforts must exceed a basic level of compliance. Participants in the collaborative process must expect to work through different points of view, to capitalize on various strengths and to compensate for various weaknesses (AASL & AECT, 1998, p.143; Rodney, Lance & Hamilton-Pennell, 2002).

The necessity to accommodate various points of view was evidenced in the Library Power project in which collaboration was a central focus. There the collaborative effort even extended into the community, creating the most conducive of learning

environments. In a summary of the Library Power outcomes, it was noted that the collaborative efforts had developed a "new culture" that had transformed these schools into "energizing communities that offer mutual support to teachers, students, and parents" (AASL & AECT, 1998, p. 142).

Primary barriers to collaboration have been found to be a lack of time, desire to maintain the status quo, lack of resources, program limitations such as fixed scheduling, and the attitudes of both the school library media specialist and the teachers (Lai 1995; Beaird 1999; McCracken 2000). Once again, role confusion plays a part in the school library media specialist's inability to incorporate the instructional component into their position (Seavers 2002; Beaird 1999).

The development of strong collaborative partnerships may be important to the development of a leadership role and to placing the school library media specialist in a position to be an integral part of the efforts to infuse technology throughout the curriculum. Through collaborative efforts, the school library media specialist demonstrates his or her ability as an instructional consultant, information specialist and teacher. The classroom teachers will then have a heightened level of respect for the school library media specialist and be more likely to incorporate their thoughts and suggestions into curriculum decisions.

"Collaboration makes a difference. Getting teachers to take ownership of their library is a key to getting them involved" (Rodney, Lance & Hamilton-Pennell, 2002, p. 44). The Florida Department of Education's *Library Media Specialists Responsibilities* supports this conclusion by placing three indicators in

its Instruction section under the subheading Collaborative Planning. According to that document, the school library media specialist:

- "Systematically collaboratively plans with grade levels/subject area teachers to support curriculum and assessments.
- Writes and implements policies, goals and objectives that ensure information literate students.
- Maintains portfolio/database of collaboratively developed, implemented and assessed instructional lessons and units" (FLDOE Responsibilities, n.d.).

Collaboration has been proven to positively correlate with improved student achievement. As such, it should be one of the primary goals of every school's school library media program. However, according to the results of the *Making the Grade* study (Baumbach, 2003) on items related to collaborative planning and teaching, it is apparent that school media specialist in Florida have not embraced this concept. When responding to items related to Planning with Teachers, elementary school library media specialists allocated approximately 2% of their time; middle school allocated slightly over 3% and high school allocated just over 3% of their time for this activity. On items related to Teaching Cooperatively with Teachers, elementary allocated less than 3%, middle school allocated slightly over 6% and high school allocated slightly over 7% of their time for this activity (p. 24).

Summary of Collaboration

Given the repeated validation of the importance of collaboration between the school library media specialist and classroom teachers and its subsequent relationship to higher student achievement, it would seem reasonable that likewise validation of the degree to which collaboration has been used by school library media specialists in Florida would be beneficial. Further, identifying environmental factors and their relationship to this level of implementation could be helpful in developing strategies for increasing the amount of collaboration used by school library media specialist in this state.

Leadership

According to Johnson and Lamb (2005), "Leaders do not come in one type or behave in a particular way. There is no set formula for leading or creating leaders. You do not have to stand before everyone and proclaim loudly in order to be a leader. Some leaders lead quietly and from the side." However, in order to become a leader, one must first be aware of their strengths and develop those strengths into whichever leadership style best suits them.

Leadership Types

The most common types of leaders are:

- Appointed: These leaders are hired or appointed. Although they are "in charge" of the group, this does not necessarily lead to them being respected.
- Expert: These leaders are chosen for their expertise in a particular area. In many cases this expertise does cause them to have the respect of the group, depending on the attitude with which they share their expertise.

- Interpersonal: These leaders use their strong interpersonal skills. They assist others in developing their own potential, which often causes them to be trusted by their constituents.
- Social/Informal: These are the leaders who get things done. Once the request/directive has been given by the "boss," this type of leader becomes the cheerleader for getting it done. They may also be the consoling person who helps others with their personal problems (Johnson & Lamb, 2005).

Leadership Styles

There are two attitudinal styles of leadership: the extremes of a task-oriented or a relationship-oriented leader (Blake & Mouton, 1985 as cited in Johnson & Lamb, 2005). The task-oriented leader works well when there is a task that needs the input from a number of participants, none of whom have the time to complete the entire task. This person will make assignments and coordinate the pulling together of the various parts of the project, such as a grant. They are not always the best liked type of leader because they are often seen as pushy and hypercritical.

The relationship-oriented leader may not be the most outwardly active person in the group. However, they are the fence mender, the ego smoothing person in the group that helps to keep the group together while gently nudging them towards completion of the project. This leader is the master of compromise.

Factors that Impact Leadership Style

Good leaders utilize a variety of leadership styles and techniques. Some of the factors that affect the leadership style chosen are:

- Amount of time available
- Amount of respect and trust between leader and workers
- Who has the information (leader, fellow workers)
- Knowledge and training of workers
- How well people know the task
- Level of internal conflicts
- Amount of stress on participants
- Type of task (structured/unstructured, complicated/simple)
- Established procedures (Clark 1997/2000, as cited in Johnson & Lamb, 2005).

Given the importance of the leadership role in the development and sustainment of the school library media program, it is incumbent on the school library media specialist to be familiar with the various leadership types and styles in order to make the best use of these types and styles in participating in the various projects and programs within the school environment, not just as they can relate to the school library media program.

Leadership and the School Library Media Specialist

The leadership role of the school library media specialist is clearly defined in *IP2*.

The library media specialist assumes a leadership role in gaining the administrative and financial support the program requires. Through

> collaborating with teachers and others to integrate the information literacy standards for student learning into the curriculum, the library media specialist establishes the program's central role in student learning and demonstrates the need for adequate support for the program's emphasis in teaching and learning in the acquisition and use of information technology. The library media specialist establishes and fosters relationships that lead to an understanding of the program and support of its goals (AASL & AECT, 1998, p. 106).

As noted by Haycock (1991) this role has been implicit in the school library media specialist's role since the early 1960s; however, due in large part to role confusion, this segment of the role has not become as well defined and developed as have others. Lumley (1994) cited the leadership abilities of the elementary school library media specialists in her study as being a key factor in the successful implementation of a flexible scheduling model in their media centers. Vansickle (2000) suggests that preparation programs for school library media specialists should specifically target this leadership characteristic in particular coursework as a means of ingraining the necessity of leadership to the successful implementation of any school library media program as a part of the total curriculum of the school.

In schools where the school library media specialist has a strong relationship with the administration and works closely with classroom teachers on committees, such as standards and curriculum, student achievement rises (Rodney, et al. 2002). Further when the school library media specialist is involved, along with the administration and classroom teachers, in making management decisions that encourage higher levels of

achievement, students tend to succeed. In many cases, it is very difficult to get school library media specialists to consider themselves as leaders. Many in this profession are, by nature, very service oriented in terms of helping others, but do not consider serving on committees as a significant role (PDRI, 1996; Craver, 1994).

As with collaboration, leadership should take the school library media specialist beyond the walls of the media center and the school. Collaborative efforts within the community strengthen the bonds between the school and community and ultimately reinforce the necessity of a strong media program (AASL & AECT, 1998, p. 125).

In a five year analysis of school library media specialists who saw themselves as leaders, Zsiray (2003) found that these school library media specialists had the following characterics in common:

- Broad understanding of curriculum;
- Grasp of the big picture and tendency to think school mission;
- Ability to work with budgets;
- Ability to juggle multiple activities;
- Service to various clientele, including students, teachers, parents, classified staff;
- Planning skills; and
- Understanding of the importance of a learning community. (Zsiray, 2003).

In addition, Zsiray identified the following ways in which school library media specialists exercise school leadership:

- Set direction;
- Build a vision for the school library media program that supports school and district direction;

- Get involved with school governance (site-based committee, school community council);
- Become active in local, state, and national education associations;
- Become active in local, state, and national professional associations;
- Demonstrate personal character;
- Create an inviting and optimal library media center environment;
- Work to extend the library media center environment throughout the school;
- Demonstrate personal commitment to professional development through reading, positive work habits, and commitment towards participation and leadership in the development of in-service activities;
- Work collaboratively with students, colleagues, parents, and community;
- Mobilize individual commitment;
- Offer instructional consultation advice;
- Establish a community advisory board;
- Engender organizational capability;
- Engage teachers in the process of integrating the library media core curriculum into their instructional practice;
- Provide evaluation opportunities for students, teachers, and parents;
- Actively seek to engage in opportunities that put you in the forefront of change and organizational improvement;
- Identify opportunities for teachers to gain training that would enhance the quality of their teaching credential (Zsiray, 2003).

The leadership role of the school library media specialist, when properly developed, may be the key factor in determining the level of support given to the school media program by both the administration and the rest of the instructional staff.

Morris (2004) includes the adjective assertive in front of leadership when discussing how the school library media specialist must behave in working with administration (p. 35). Further, Morris states that, in order to be seen as a leader, the school library media specialist must show a thorough grasp of the requirements of the curriculum. And, with students, the school library media specialist must be seen as an expert in the use of the media resources. Finally, Morris states that the school library media specialist must reach out to the entire learning community to promote the school library media program.

The FDOE's document *School Library Media Specialists Responsibilities* places most of the indicators that would be associated with leadership under the heading of Advocacy. There are three subheadings to this section: In school, parents/community and professionalism. These three subheadings combined generate seven indicators. The indicators are:

- Communicates regularly with administration concerning statistics and programming events;
- Communicates regularly with faculty and staff through planned personal interaction, a library media center web site, in-house newsletters/brochures, and email message reminders/announcements;
- Maintains the library media center website, which is aligned with curricular, informational, and recreational needs and school mission;

- Library media parent involvement activities collaboratively planned with teachers, administrators, and School Improvement Program initiatives (i.e., parent workshops and reading motivation activities and Internet resources for parents);
- Local public libraries work collaboratively with the school library media program to provide resources and services to students, teachers, and parents;
- Is involved with district, state and/or national level professional organizations;
- Enhances the profession through contributions to listservs, committees, publications, conference presentations, etc.

These indicators reinforce *IP2*'s goals for the total engagement of the school library media specialist in their program, school's curriculum and the profession at large. The leadership role of the school library media specialist, when properly developed, may be the key factor in determining the level of support given to the school library media program by both the administration and the rest of the instructional staff. However, many school library media specialists continue to see themselves in a role of support rather than leadership.

In responding to the survey for the *Making the Grade* study (Baumbach, 2003), school library media specialists at all levels responded that they spent less than 2% of their time providing staff development to teachers and other school staff. Likewise they responded that they spend less than 2% of their time participating on school, and/or district committees. These responses indicate further that school library media specialist in Florida do not view *time spent* in these activities as valuable. It will continue to be difficult to convince others of the importance of including school library media specialist

on such committees if they themselves do not actively pursue positions on such committees (p. 24).

Summary of Leadership

Despite the abundance of literature suggesting the need for the school library media specialist to be a proactive leader in their school many school library media specialists continue to see themselves in a role of support rather than leadership. The data, especially from Baumbach, would seem to indicate that a large percentage of Florida's school library media specialists do not take an active leadership role, at least not in areas that were targeted by Baumbach. This more recent data seems to support some of the attitudes shown on the PDRI study, in that many of the saliency ratings for those items related to those same tasks (participating on school, district, state and national committees) were somewhat low.

Technology

IP2, in its continuing emphasis on the building of connections, states that technology will be the primary tool used by school library media specialists to develop these connections with the on-campus and external learning communities (p. 128). It is in this area that the roles of instructional consultant and instructional designer, as defined in *IP1* and subsequently supported in *IP2*, flourish.

"The library media center of today is no longer a destination; it is a point of departure for accessing the information resources that are the essential raw materials of teaching and learning" (Rodney, et al. 2002). Ely (1992) posits that the library has changed from a "place" to a "function" (p. xi). "Technology is the

primary tool used by the library media specialist to forge connections between the program and the learning community (AASL & AECT, 1998, p. 128).

These observations exemplify the increased level of importance placed on technology as an integral component in the delivery of the school media program. The media program, as previously defined by a place, is no longer adequate.

The Role of Technology in the School Library Media Program

Technology, as defined in *IP2,* "refers to the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (p. 128). This definition squarely places the school library media specialist in the mainstream of the curriculum model used in most schools in the U.S. As a full fledged instructional partner, the school library media specialist, with their enhanced professional training in the use of the most current technologies should then be actively engaged in the full range of curriculum activities in their schools. As such, they will enhance their respective positions as leaders in the school while leading the integration of technologies into all aspects of the instructional program.

Writing in 1994, Kathleen Craver predicted that "In most schools, school library media specialists will become instructional technologists" (p. 113). She derived her conclusion from four assumptions:

1. The role of the school library media specialist will expand to include distance learning, spreadsheets, word processing programs, interactive video, online databases and virtual reality.
2. The pedagogical role of the school library media specialist will change to include extending instruction to faculty and parents as well as students.

3. Electronic learning will require that school library media specialists change their "parochial" teaching methods to include information literacy and retrieval that permit users to access information in any library regardless of its format.
4. Instruction will no longer be based solely upon textbooks and therefore, school library media specialists will become heavily involved in resource-based learning.

Craver (1994) predicted that future school library media specialists would be characterized by, "greater patience and understanding of various client fears, as they provide technology instruction" (p. 123).

As one extension of the school library media center program beyond the school's walls it may become practically and politically wise to offer instruction in the use of the various electronic resources to parents and other members of the learning community. This could be the best insurance available to the maintenance and continuing funding for the school library media program (Craver 1994, p. 124).

The concept of the need for an open access media program has most recently been confirmed by Rodney, Lance & Hamilton-Pennell (2002) in their finding that students succeed when the school library media program is an integral part of the overall education enterprise and reaches out to the students and teachers "where they are."

The most recent Colorado study found that where networked computers link the school library media center with the classrooms and other school instructional facilities, higher CASP Reading test scores are reported. There seems to be a direct correlation between these reading scores and the number of computers enabling teachers and

students to utilize school library media center resources, such as CDROMs, licensed databases and access to the Internet (Lance, Rodney, & Hamilton-Pennell, 2000b).

Morris (2004, p. 415) discusses the concept of "technology-rich learning environments." Some of the characteristics of such environments are:

- Workstations available throughout the school
- Individual computers for teacher or learner use
- *Flexible access to computers in labs
- An array of information tools and resources in all formats , which reflect curriculum needs
- *Internet access throughout the school
- Visual and audio hardware that enables large group use of technology throughout the school
- *Professionals who staff the school library media center and computer labs who work collaboratively with learners and teachers to integrate technology across the curriculum
- Technicians to maintain the hardware and software
- *Required individual profession technology staff development for all staff
- *Technology mini-courses offered throughout the year
- *Selection policies reflective of all curricular needs
- *A technology planning process that is both on-going and inclusive (Pappas, 1999 as cited in Morris 2004, p. 418).

The items with an asterisk are directly addressed in this study while others may be addressed in some indirect way. Those items that were directly assessed could serve to

give additional information as to the state of such “technology-rich environments” in Florida.

Technology and Student Achievement

The part of technology in the development of student achievement has been argued for the better part of the last 25 years. There has even been a website named “No Significant Difference” that has been set up to retain all of the research done that shows that the media is not what make the difference, instead it is the planning and implementation of the instruction that makes the difference. Recently that website has been expanded to include studies that purport to show the use of technology does indeed make a difference. Harvey (2003) reviewed several long term technology/computer based projects that seemed to indicate that technology, when properly implemented, may have some long term effects on student achievement.

Harvey (2003) separates the use of computers into two types. The first type is when students learn *from* computers and the second is when students learn *with* computers. Students learn *from* computers when they use software programs for the more basic drill and practice types of activities. Students learn *with* computers when they use the computers to gather, analyze and infer from the information gathered. They also use more sophisticated types of data analysis and present their findings with more creative types of activities using the computer technology as a vehicle for the delivery of their presentations (Harvey, 2003).

In the West Virginia project (Harvey, 2003) the state placed computers in the classrooms beginning with first grade. Each year another grade was added thus insuring the students had the opportunity to continue to develop their use of technology through

their elementary school experience. The students were followed from grade one through grade six and then on to junior high and high school. This study found the following:

- On statewide tests, students who learned *from* computers showed consistently higher gains. The study was able to determine that 11% of the gain was due to the use of the technology.
- Students did better when the computers were in the classroom rather than a lab.
- The advantages of computer use extended through high school, where students learning *from* computers had better grades, took more advanced placement courses, and were more likely to graduate than those who did not use computers.

A study related to the Project CHILD program in Florida (Butzin, 2000) in which computers were placed in classrooms and teachers received extensive training and students used software aligned with state standards investigators found the following results when students used computers as tutors to receive information:

- Computers contributed to higher scores for students in both low and high-achieving schools
- Students demonstrated better discipline
- The boost that technology gave students was sustained over time

Both studies (Harvey, 2003; Butzin, 2000) showed improvements in students were sustained over time.

When focusing on learning *with* computers, the results are even more impressive. In a study sponsored by Apple Computers, and performed by several university investigators (Fisher, Dwyer & Yocam, 1996; Sandholtz, Ringstaff & Dwyer, 1997) the study found:

- Students routinely used higher order thinking skills far beyond what was expected for their grade level.
- Students demonstrated enhanced ability to collaborate with peers to develop projects and reports.
- Students demonstrated increased initiative. They maintained time on task for longer periods and often continued their work during recess, before school, and after school;
- The use of technology coupled with teachers having time for reflection led, over a period of three to five years, to substantial changes in teacher beliefs about teaching and learning.

A noticeable difference in the Apple studies was that classroom technology was pervasive and available anytime a student needed to write, analyze data, develop presentations, and do research. As in the previously mentioned studies teachers received intensive training and were given time to examine their beliefs about teaching and learning.

The Apple studies' findings are reinforced by another study conducted by Penuel, Golan, Means and Korbak in 2000. In that study teachers were trained to develop multimedia projects with students. Once again there was an extensive training program for the teachers. This was a six year long project in which the final evaluation involved asking both experimental and control schools to develop an authentic assessment task. Those students from the experimental schools consistently out performed those in control schools when judged against a rubric that scored students in the areas of understanding

content, adapting their message to their intended audience, and applying principles of design in the format and layout of their brochures.

Regardless of the format, learning *with* or learning *from* computers, this research seems to indicate that the use of computers for enhancing student achievement has merit. However, as was noted in each of these studies, that extensive training and allowing teachers [or media specialists] time to reflect on the appropriate uses of these learning tools, is very important.

In addressing the use of technology, in the more general sense of the term, O'Neill (2003) concluded after a review of 30 years of research on technology and learning that "technology works best when used to meet a specific learning need." Although these studies are directly related to the infusion of technology into classroom instruction, they establish that there may be a relationship between the use of technology and student achievement. With regards to the school library media program, the development of information literacy skills would be such a specific need.

Extending the resources of the school library media program into classrooms is one way in which school library media specialists can impact student achievement. The teaching of information literacy skills, using all available technologies should be an integral component of any school's library media program and overall curriculum. Also, the development of strong ties to the entire learning community can be enhanced by developing programs that include technology training for all members of the learning community.

Technology Competencies as They Relate to School Library Media Specialists

Truett (2002, as cited in Moore, 2004 p. 402) surveyed students in a media management course as to what technology skills they felt a school library media specialist should develop. As a result, a list of 23 skills was compiled. Those items in the list below with an asterisk were directly addressed in this study. Others were somewhat more indirectly addressed. However, it is worth noting that all of the skills in the list have direct correlation to a variety of *IP2* principles, goals and objectives. They are:

- Use online journal sources
- Use automated library systems
- Use in-house video conferencing equipment and other TV/video production equipment
- *Have knowledge of types of CD-ROMS available
- Construct and use WebQuest
- Know how to work with teachers who are technophobic
- *Collaborate with teachers to integrate the subject curriculum with technology skills in a manner that fosters the development of higher order thinking skills
- *Be proactive in keeping up with technology
- Decide what needs to be on library computers and how many workstations are needed
- Advocate for a full-time technology teacher in their schools
- Speak knowledgeably about software and Internet copyright, as well as software licensure, and help teach about copyright, plagiarism evaluation of web sites, citing electronic sources, etc.

- *Conduct ongoing technology staff development training and in-service, and in particular, training that focuses on technology
- Participate in equipment and software selection and standards
- Consider networking options
- Understand, model, and promote ethical issues and uses of technology
- Use basic productivity software such as Microsoft Office, Front Page, PowerPoint, Hyperstudio, etc. (including the use of word processing, spreadsheet and database software)
- *Help teach basics of equipment operation to teachers and students
- Assist with basic equipment maintenance
- Assist with the design of media center computer placement, when possible
- Make suggestions for the school's technology plan, Internet access, acceptable use and Internet safety policies
- Locate sources for technology funding
- Provide helpful hints, such as quick reference sheets beside the computers, to answer frequently asked questions
- Keep abreast of future developments in technology

The Status of Technology as Related to School Media Programs in Florida

Baumbach (2003) reported that although 80% of Florida's public schools have a school website, only 42% of those websites linked to the school library media center's webpage. Further Baumbach reported that only 36% of schools have a school library media center webpage that is designed and maintained by the school library media specialist. Less than 50% of Florida's schools have an online catalog that is web

accessible. Baumbach also determined that Florida spends a small fraction of the national average on software, web-based resources and other non print materials.

Some of Baumbach's findings may be seen to contradict the indicators found on the FLDOE's matrix of *Library Media Specialists Responsibilities*. On that evaluation matrix, there are two sections related to technology. The first, headed Technology has four indicators. They are:

- Writes and implements LMC technology plan integrated into school's plan, with a refresh cycle of 3 years;
- Maintains computers for information retrieval (high-speed Internet access), student production, and special needs, including the following peripherals: scanners, printers, digital cameras, audio and visual recording devices, digital editing hardware and software, DVD burners;
- Provides and maintains current audiovisual equipment as needed by instructional program;
- Models uses of innovative technologies and provides staff development opportunities;
- Maintains television distribution system (e or more channels) and television studio.

The second technology section is headed Technology (management). The indicators in this section are:

- Maintains an automated circulation/catalog system that is available on the Intranet and Internet;

- Uses electronic sources for accessing reviews and purchasing, as well as using SUNLINK for cataloging and interlibrary loan;
- Uses E-mail to collaboratively plan with teachers and communicate with colleagues;
- Uses adaptive technologies to provide access to technological sources of information for students with special needs.

In a separate section titled LMC Internet site the indicator states:

- Maintain LMC website linked from school homepage and that provides access to information to meet student and faculty needs.

In the *Making the Grade* study (Baumbach, 2003) identified the following concerning technology in Florida's schools:

- A mean of 80% had a written technology plan;
- A mean of 63% of the schools with a written technology plan included the media center in the technology plan (p. 31);
- While the average number of computers in schools equaled 236, the average number of computers under the control of the media specialist was 26 and the average number of media center computers connected to the Internet was 23;
- The average number of computers in the media with accommodations for persons with disabilities was 1 while the average for the total school was 14;
- 90% of media specialists responding said that they had access to email in the media center;

- 90% of those responding said that their school had a Board adopted Internet usage policy and 86% said they used some type of filtering software;
- 80% of those responding said that their school had a website but only 42% had a media website linked from their school's homepage (p. 53);
- concerning electronic resources, 37% of elementary, 62% of middle and 82% of high schools said that they subscribed to some type of electronic resources;
- The percentages of these electronic resources that were accessible by both students and teachers from their home were similar. For elementary 58%, middle 75% and for high school 85% (p. 59);
- Schools with Online Catalogs that were Internet accessible were considerably less than those with Internet accessible electronic resources; elementary 46%, middle 36% and high school 36%;
- SUNLINK usage was found to be as shown in the following table (p. 43): Table 1.

SUNLINK Usage

Use SUNLINK for	Mean
Teaching Information Skills	19%
Finding Educational Websites	21%
Assisting with Challenges to Items in Collection	12%
Selection	28%

Use SUNLINK for	Mean
Weeding	36%
Online Access to Own School's Collection	36%
Locating Materials for Teachers' Units	42%
Creating bibliographies	31%
Interlibrary Loan	63%
Online Access to Collections in the District	62%
Locating Materials to Support Sunshine State Standards	20%
Locating Materials to Support Reading Initiatives	19%

Although significant strides have been made in the integration of computer-based technologies in the school media centers in Florida, the statistics reported in the Baumbach study clearly shows that there is much left to be done. This study endeavors to identify some of the factors that have encouraged and some that may have inadvertently discouraged the development of stronger technology integration accomplishments in schools in Florida.

Summary of Technology.

Given that technology has been shown to have some positive effects on student achievement and given that strong media programs have been shown to have a significant relationship to student achievement, it would seem that identifying the perceptions of Florida's school library media specialists with regards to the use of technology,

specifically those *IP2* goals and objectives related to technology, would be of value. An integral part of this study involves determining if school library media specialists in Florida have changed their perceptions about the value and importance of their role in the development, implementation and integration of technology in their schools and also their perception of their value as a technology leader in their schools since 1996.

Environmental Factors

Environmental factors, some of which are outside the direct control of the school library media specialist, may effect the development and implementation of the school library media program. Specific factors have been chosen for analysis in this study.

Scheduling Model

One of the environmental factors considered in this study was that of the scheduling model used in the schools surveyed. The use of a flexible scheduling model has been shown to be consistent with the development of collaborative activities between the school library media specialist and classroom teachers (Bishop & Larimer, 1999; Callison, 1999; Haycock, 1998; Tallman & van Deusen, 1994). In a study of 505 school library media specialists, McCracken (2001) found that the scheduling model used was the fourth item of most concern, behind Lack of Time, Lack of Funding and Lack of Support or Interest from Teachers, by the school library media specialists as it related to their ability to implement the various roles assigned to them in *IP1 and IP2*. The scheduling model used by those responding to this survey may be reflective of their ability to implement the collaboration, leadership and technology strands as defined in *IP2*.

Principle One in both editions of *Information Power* relates to "…intellectual access to information" (AASL & AECT 1998, p. 84). The use of a flexible access scheduling model for the school library media program is the most directly beneficial way of accomplishing this goal. Flexible access scheduling gives the school library media specialist the ability to work both in and out of the school library media center in order to accomplish their goals of collaboration, leadership and technology as described in *IP2*.

Principle Four follows up to reinforce the previous comments by stating, "The library media program requires flexible and equitable access to information, ideas, and resources for learning" (p. 89). In a student-centered school library media program, learning *should* take precedence over class schedules, school hours, student categorizations, and other logistical concerns.

One of the concerns that most often arise when discussing flexible access scheduling is the "coverage" for contractually required classroom teacher planning times. This concern is a primary rationale for the use of fixed scheduling. However, this use of such a highly trained professional to "give library time" to students and thus have little time for implementing the information literacy standards and other national goals for school media programs, is incongruous with the overall academic goals of schools seeking to achieve local, state and national standards.

In order to overcome the misconception that "having library" is an acceptable policy, principals must be given adequate staff development to allow them to develop a more conceptually sound understanding of the need for flexible scheduling of the school library media center (Buchanan, 1991, p. 29).

Although the concept of the school library media specialist as a teacher was introduced in the original edition of *Information Power* (AASL & AECT, 1988), this should not be seen as the only, or even the primary role of the school library media specialist. However, the use of fixed scheduling tends to reinforce this image. Therefore, students, teachers and other members of the learning community are unable to access the full range of professional knowledge and skills available through the school library media specialist. Ultimately, this results in the school library media specialist "teaching skills" to classes regardless of their relevance, or lack thereof, to the other components of the curriculum in which the student may currently be involved (Buchanan, 1991, p. 3).

For school library media specialists in Florida, the importance of flexible access scheduling for school media programs was reinforced by the following statement approved by the Florida Association for Media in Education (FAME) in 1988:

> The goal of the school library media program is to satisfy a student's natural curiosity for information, to provide opportunities for frequent learning and reading experiences, and to develop the habit of using library resources for recreation and lifelong learning. Inherent in this goal is the capacity of the program to provide teachers with opportunities to use the media center and its resources as an extension of the classroom at the time of need. Therefore, the media center program should allow flexible access to students and staff at all times, rather than operate on a schedule which preempts facilities and staff for fixed periods of time. Flexible access does not preclude an organized plan for information skills instruction, but rather

allows a curriculum integrated media skills instructional program which provides relevant learning experiences for students.

Flexible access library media programs are characterized by the following criteria:

1. A media center is accessible to individuals, small groups, and classes so that students and staff may browse, explore, use, and circulate print and nonprint materials at the time of need or interest.
2. Cooperative planning by the instructional staff and the library media specialist for the use of the materials and facilities in instruction.
3. Relevant information skills emanating from classroom activities, taught at the time of need or interest, and following a scope and sequence based on the curriculum needs of the school.
4. Flexible time for the library media specialist to deliver a comprehensive media program including, but not limited to, integrated information skills instruction; reference and information assistance; reading; listening and viewing motivational activities; media production; collection development and management.

In order to provide a full range of library media services and functions, which an instructional program of excellence requires, the Florida Association for Media in Education (FAME) supports a flexible access library media program philosophy. (As cited in Buchanan, 1991, p. 5).

An even more direct reflection of the importance of flexible access scheduling is shown by the inclusion, by the state of Georgia, of a specific section

of the Georgia School Code that addresses the use of flexible scheduling in media centers of that state. The code states that "a plan for flexibly scheduled media center access for students and teachers in groups or as individuals simultaneously throughout each instructional day. Accessibility shall refer to the facility, the staff, and the resources and shall be based on instructional need." (Georgia School Code as adopted May 14, 1998)

The greatest amount of collaboration occurs when the school library media specialist has a flexible schedule and team planning is encouraged by the principal (Tallman & van Deusen 1994). Buchanan (1991) summarizes the conceptual underpinnings of this model of school library access by stating that "if we are committed to teaching individual students rather than teaching subjects, we have no choice but to select a flexible access library media program" (p. 16).

Despite all of the research and discussion supporting the use of a flexible scheduling model in school media centers, the fact remains that the principal, if not properly trained as to the impact on student learning of the school library media program, may choose a fixed schedule as a matter of convenience. To do so may seriously hinder the school library media specialist's ability to meet the overall objectives of *IP2*. The study identifies the extent of use of the two scheduling models as an indicator of administrative support and also the potential limitations placed on individual school library media specialists in their endeavors to accomplish the *IP2* goals and objectives.

Administrative Support

"Principals should support school libraries because it is in both their students' and their own best interests to do so" (Hartzell, 2002).

As is true with all aspects of the school program, the principal has the single most influence over the direction that the media program will take (Haycock 1999; Oberg, 1995; Oberg, Hay & Henri, 2000). Such is the case with the flexible access media program concept. A principal who is committed to this concept will show their commitment in meetings, conversations, interviews for new faculty and staff, and in communications with all members of the learning community (Buchanan 1991, p. 82; Carletti, et al. 1991). Conversely, the principal who is not totally committed to the concept may not detract from its implementation intentionally; however, a lack of outward commitment and support may do so inadvertently. The *IP2* Principle 4 under Program Administration states that "an effective library media program requires ongoing administrative support" (AASL & AECT, 1998, p. 100). Bishop & Larimer (1999) found that administrators who ask how teachers are using the resources of the media center and the expertise of the school library media specialist created an atmosphere where collaboration was more likely to occur. They also found that the administration can support collaboration not only by verbal support, but also by scheduling common planning time for the school library media specialist and classroom teachers. Similarly, how often students use the library can be correlated to how well principals encourage collaboration between classroom teachers and the school library media specialist. In addition, as the primary curriculum leader in the school, the principal powerfully affects the extent to which information literacy instruction is embedded in the school's curriculum ((Hartzell, 2002).

Administrative support cannot be assumed unless the administration confirms that support with adequate and continuous funding of the school library media program. In the

Making the Grade study it was shown that 45% of all library media program funding came from book fairs and other such fund raisers (Baumbach, 2003). This form of funding is inappropriate when the effects of the school library media program on student achievement have been so fully supported by the research.

Summary of Environmental Factors

This review of the literature shows that the three areas identified by the investigator, collaboration, leadership and technology have been shown to have a correlation with student achievement. Further, the environmental factors of scheduling model and administrative support have been previously shown to be significant factors in the development of a strong school library media program. A third environmental factor, for which no direct research literature was found, that of the library media specialist's familiarity with the *IP2* standards and goals, is addressed in this study. Since the primary function of this research is to determine if school library media specialists' perceptions about certain job related job tasks have changed following the publication of *IP2*, then it would be reasonable to survey their level of familiarity with *IP2* as an indicator of the success with which the information therein has been disseminated.

Chapter Two Summary

In this chapter, the author brought together much of the research and literature that relates to the areas of collaboration, leadership and technology, as these areas relate to the development and implementation of their school library media program. From this review one could surmise that if a school library media specialist is a leader then it may follow that he/she will be engaged in successful collaborative efforts with faculty and, further, that these activities will be based in some form of technology. Or, if a school

library media specialist is collaborating, then he/she will, by the nature of the activity become a leader and focus much of their collaborative effort on the use of technology, for any of its various applications. Much of the significance of this study was determined by its ability to capture a snapshot of how well school library media specialists in Florida are doing at developing their programs around these three themes of *IP2*.

Chapter Three

Methods

In order to determine to what extent the implementation of *IP2* (AASL & AECT, 1998) may have changed the perceptions, and perhaps, practices of school library media specialists in the state of Florida, this study replicated a portion of the job task analysis survey developed and deployed by Personnel Decisions Research Institute (PDRI) as a part of the *Schoolyear 2000* study completed by that organization for the Florida Department of Education. That full survey instrument and the complete results of that study may be located in Technical Report # 277 published by PDRI in 1996.

This section discusses the points of the PDRI study used. It further delineates and justifies exceptions and additions that were made to this survey that differ from the original study. Further, it discusses the statistical analysis used in the PDRI study and how those were used for this study. Likewise, this section discusses additional statistical analysis procedures that were added for various purposes in this current study.

Background

The PDRI study was used to establish the baseline data for this study because it was undertaken in 1996, prior to the publication of *IP2* in 1998. Many of the items in the job task analysis that relate directly to the 1998 edition of *Information Power* goals were shown not to be critical to their job performance by many of the media specialists responding to that original survey. It was anticipates that, given the increased emphasis

on technology in the media centers and the situation in many schools in which the media specialists have become the primary technology support in the school, many of the tasks rated as "Not a Part of Job" in 1996 have significantly changed in their ratings. Further, given the eight years of in-service training provided to school library media specialists in the newer goals of *IP2*, the current perceptions of the importance of collaboration, leadership and technology in the school library media specialist's daily tasks should have changed.

Limitations of the Study

Due diligence was taken in replicating items from the PDRI 1996 study that were resurveyed. In addition, the demographic section of the survey was developed using many of the same demographic questions as asked on the PDRI 1996 study and the remaining questions on that part of the survey have been validated by a committee of Subject Matter Experts made up of school district school library media supervisors and National Board Certified school library media specialists from around the state of Florida and in consultation with several university professors who specialize in the area of school library media programs.

The following are potential limitations of the study.

1. The inability to obtain the original data set from the PDRI 1996 study. Obtaining this data set could have made the study more robust since it could have assisted in more closely aligning this study with the demographics of the original study. Available data were used to determine the school districts that participated, the number of responses from each of those school districts, ethnicity, gender, school level, highest level of education and geographic locations of the schools. Several

of the larger school districts either did not participate, or had minimal responses submitted. This could have a skewing effect on the original findings of the PDRI study.

2. This study is reflective of attitudes and perceptions of only a percentage of the total number of school library media specialists in the state of Florida. The response rate of 17% is somewhat small and therefore may reduce the external validity of the study.

Assumptions of the Study

The primary assumption of this study is that school library media specialists in the study are representative of the school library media specialists in the state of Florida.

Analysis of Items to be Resurveyed

Several Subject Matter Experts (SMEs) were used to assist in the determination of the items to be resurveyed. Subsequently, 16 directors/supervisors of school media services from across the state were asked to assist with this project. In turn, several of the supervisors requested that some of their National Board Certified school library media specialists also participate in this analysis. Six persons responded. The directions for this task are shown in Appendix I and the item analysis of the responses is shown in Appendix II

Upon the return of the item analysis from the SMEs (6), the results were compiled. Each item was listed in an Excel spreadsheet and each SMEs' selections were recorded by area (collaboration, leadership or technology) and relevancy. The area reflects the items correlation to an *IP2* goal or objective and the relevancy denotes the

respondent's opinion of how relevant that task is to the completion of the school library media specialist's job functions in the current school media program environment.

After recording the data, items that appeared on at least four of the six respondents' lists were selected for resurvey. Where there was a conflict as to the specific area of focus of the item, the the area selected by the majority of SMEs selecting that item was chosen. Ultimately, 37 items were selected for inclusion in the resurvey section of the study. The areas were represented by 14 items for collaboration, 10 items for technology, and 13 items for leadership.

Survey Part One-Demographic and Environmental Items

Part one of the survey was used to establish the demographics of the respondents and to gather data that may offer additional perspective on the saliency scores derived from the Job Task Analysis (see Appendix V). This component was used to determine if there are correlations between environmental variables, such as scheduling model, administrator support, and familiarity with *IP2*, and the saliency assigned to the 37 task analysis items in Part two of the survey. In addition, some of these responses were used to assess the goodness of fit between the sample and the current population of school library media specialists in Florida and the independence of the 1996 and 2006 samples.

Part one of the survey was composed of multiple choice and short answer type questions. Where appropriate, the multiple choice questions were asked first and the short answer types were used to gather qualitative information to assist in the explanation of the multiple choice answer(s) to the previous question.

The items for part one of the survey were primarily taken from those "Background" items used in the PDRI study. However, in order to gain broader insights it

seemed important to expand on those items. Therefore the environmental questions that relate to scheduling model, administrative support, exposure to and familiarity with *IP2* and level of technology accessibility (some of which were queried in the PDRI study), were added to this survey. These additional questions were developed with input received from various media program supervisors from across Florida and in discussions with individual media specialists and faculty in the school media concentration area of the USF School of Library and Information Science.

Survey Part Two-Resurveyed Job Task Analysis Items

Respondents were asked to determine and record both a *time spent* and a *criticality* score for each survey item. The time spent segment used a 5 point scale (1 = much less time to 5 = much more time). On the original survey, if the task was not a part of their job, respondents were asked to assign a relative *time spent* rating of zero. This procedure was continued in the current study. Next, for each activity that is a part of their job, respondents were asked to rate how critical it is to complete that activity successfully, using a 1 to 5 scale (1 = unimportant to 5 = crucial). Originally, Within-job-relative ratings were used because previous research suggest that job incumbents are more adept at making relative ratings than they are at making absolute ratings (Chirstal & Weissmuller, 1988 as cited in PDRI 1996). Appendix IV shows the 1996 responses to the 37 items chosen for resurveying while Appendix V shows the 2006 results. An additional column identifies the category (collaboration, leadership or technology) to which each item has been assigned. Upon receipt of the survey data showing the *time spent* and *criticality* ratings the formula used in the original study was used to derive a *saliency* score. The saliency score is the score used for data analysis and comparisons. For

analysis purposes, the 37 resurveyed job task items were divided into groups based on their respective areas of focus; collaboration, leadership or technology. Tables 17, 18 and 19 report the 1996 and 2006 values for each item in the respective categories.

The saliency score was computed following the formula used in the original study. This formula begins by multiplying the *criticality* rating by two, and then adding the Time Sent rating, and finally dividing the resulting number by three. This essentially gives the *criticality* rating twice as much weight as the *time spent* rating, and this index has been found useful in previous work as an overall summary of the information contained in these rating scales (Bosshardt, Rosse & Peterson, 1984 cited in PDRI 1996). When an activity was marked as *not a part of job*, then the *time spent* rating was set to zero. In reviewing the data it was noticed that when a respondent identified an item at Not Part of Job, they generally did not respond to the *criticality* portion of that question. Subsequently, if an item reflected a *time spent* value of zero that item was assigned a *criticality* value of zero; therefore resulting in the respondent's saliency on that item being reported as zero. The result of this process had the effect of reducing the saliency Mean of that item. This method seems to be in agreement with that used in the 1996 study.

The Survey Tool

The survey was developed and disseminated using a web-based survey authoring tool available from www.surveymonkey.com. This particular tool was chosen because of its unique ability to allow the specific multi-response format needed for the 37 item part two resurvey. There was a need to reduce the overall number of items on the survey to enhance response potential. This tool enabled the obtaining of two different responses

for each question/statement and thus reduced the overall number of individual items on that section of the survey by 50%. This tool also offered the widest variety of response types for the demographic and environmental items. Also, results could be downloaded to an Excel spreadsheet for ease of manipulation and later transport into a statistical analysis program, where necessary.

Population

The population for this study is school library media specialists in K–12 public schools in the state of Florida. The demographics of this population are described in the following set of tables.

Table 2.

School Library Media Specialists by Level and Status

Status		Regular Full-Time	Temporary Full-Time	Regular Part-Time	Temporary Part-Time	Total
Level						
	Elementary	1,498	1	14	9	1,522
	Middle/Jr.					
	High	508	1	5	3	517
	Secondary	609	1	2	5	617
	Other*	57		3	1	61
	Total	2,672	3	24	18	2,717

Table 3.

School Library Media Specialist by Age and Level

	Age Range					
Level	20-29	30-39	40-49	50-59	60 or more	Pop. Total
Elementary						
Female	33	197	378	655	153	1,416
Male	4	17	23	30	9	83
Total Elem	37	214	401	685	162	1,499
Middle						
Female	6	42	98	255	61	462
Male	1	8	14	18	61	143
Total Middle	7	50	112	273	122	605
High						
Female	5	45	116	299	62	527
Male	0	9	19	45	10	83
Total High	5	54	135	344	72	610
Other						
Female	0	5	14	29	7	55
Male	0	1	1	0	0	2
Total Other	0	6	15	29	7	57
Total All Levels	49	324	663	1389	363	2,771
	1.77%	11.69%	23.93%	50.13%	13.10%	
Total Female	2,460	87.05%				
Total Male	311	12.95%				
Total Pop.	2,771					

Table 4.

School Library Media Specialists by Ethnicity, Gender and Level

Level	Gender	White	Black	Hispanic	Asian/Pacific Islander	American Indian/ Alaskan Native	Total
Elementary							
	Female	1,209	107	91	5	4	1,416
	Male	70	4	9	0	0	83
	Total	1,279	111	100	5	4	1,499
Middle/Jr. High							
	Female	396	47	16	1	2	462
	Male	38	2	5	1	1	47
	Total	434	36	21	2	3	509
Secondary							
	Female	463	37	26	1	0	83
	Male	77	2	4	0	0	527
	Total	540	39	30	1	0	610
Other							
	Female	36	4	0	0	0	55
	Male	2	0	0	0	0	2
	Total	53	4	0	0	0	57
Total		2,306	133	151	8	7	2,676

The data from Tables 2, 3 and 4 does not always balance table to table. There is no explanation for the discrepancies since these data were directly transported from Florida Department of Education tables requested for the study.

Sample

Originally the investigator was told that the survey URL could be distributed to all public school library media specialists in Florida using the SUNLINK network. However, as time approached for the survey distribution the investigator contacted the SUNLINK director and was told that it wasn't actually within the purview of SUNLINK to distribute this information since it did not directly affect SUNLINK. However, the director did agree to post the announcement about the research and the URL on the SUNLINK Announcements page. Upon receiving this response several other means of distribution implemented.

The URL for the survey was distributed to all school district media supervisors and/or school media contact persons. They, in turn, were asked to disseminate the information and a request for support of the research to all of the school library media specialists in their district. This is the method that was used in the original PDRI study, with the exception that the contact persons were not necessarily the school library media supervisors. In many cases in the 1996 study, it appears that it may have been the Testing and Evaluation Department of the school districts that acted as the contact point. Close contact with the supervisors was maintained to ensure that the URL was distributed in order to avoid the situation that occurred with the original study in which some districts did not participate. Those larger districts with no or low response in the 1996 study were targeted in order to gather the feedback of this significantly large number of non-responding school library media specialists. In addition, the past president of the Florida Association for Media in Education (FAME) disseminated the survey information via the FAME electronic list to all current members of the organization. Also, the state DOE

coordinator for school media services encouraged district school media supervisors/contact persons to assist with gaining response from their local personnel for the survey. The combination of all of these strategies resulted in a satisfactory response rate to the survey.

The survey was opened and the URL distributed on March 10, 2006 and closed on April 19, 2006. At the time of the closure of the survey there was a total of 644 respondents. Although not all respondents completed all items, there were a total of 454 fully completed surveys, representing 16.3% of the population.

Data Collection

The survey was developed in a web-based format. Those who chose to participate were asked to fill out the online survey and submit it electronically. However, so as to not preclude anyone from responding, a paper copy of the survey was made available to anyone requesting such a format. In order to maintain anonymity, arrangements were made to have a non-interested third party administer the distribution of the paper form. No requests were received for a paper form of the survey.

The data were initially exported to an Excel spreadsheet. In Excel the data were reviewed and, where appropriate, recoded. This recoding was done because the sequencing of the responses, to meet survey development requirements/guidelines, did not conform in all situations to the coding that was necessary to analyze the data in Excel and statistical software. An example of this recoding would relate to all of the 37 resurveyed items. On those items the answer sequence on the survey was *not a part of job, much less time, less time, about the same amount of time, more time, and much more time*. This sequence gave the largest value (5) to *not a part of job* and the lowest value to

much more time. These responses were recoded to give *not a part of job* the value of zero and *much more time* a value of 5. Similar recoding occurred for the age variable and those items related to years in teaching, years as a school library media specialist, years in current position, scheduling model and administrative support.

Although the original data were not available to develop a demographic map of the original sample, an attempt was made to match the sample size, with the assumption that the demographic representations of elementary, middle, and high schools should be similar to those from 1996. As is shown in Chapter Four, a significant number of demographic variables were compared and indicated that the samples were somewhat closely comparable. Chi-square analyses were done on all demographic variables for which adequate data were available.

The information relative to the school districts that participated in the PDRI study and the number of media specialists in each district who responded was available. In addition, the population demographics supplied by the Florida Department of Education were used to establish the validity and reliability of the sample.

The 1996 sample included 513 respondents. For the current study, since a confidence interval of 95% is considered optimum, the sample size of 384 was determined to be appropriate. The actual completed response number of 472 should enhance the reliability of the study.

One limitation of the 1996 study was that several of the larger school districts in the state did not participate, or had very limited participation. This limitation might have caused the original results to be skewed on some of the items since some of these larger school districts, at the time, may have implemented a wider variety of technologies and

therefore their media specialists may have responded differently, especially to those technology-specific survey items.

This lack of participation on the part of some districts may have affected the external validity of the original study. The method of gaining participation in the 1996 study involved contacting each school district and requesting their participation in the study. Each district then appointed a contact person to whom the printed surveys were sent. In some cases this person may have not been as committed to disseminating and following up on the survey responses. The other consideration could be that some of the larger districts simply decided not to participate; hence, the lack or minimal responses from those districts. There was no narrative in the final PDRI report discussing internal or external validity.

Table 5 reflects the number of respondents by school district for the original PDRI survey (PDRI 1996, p. 19).

Table 5.

Number of Respondents to 1996 PDRI study by School District

District	# of Respondents
Baker	5
Bay	13
Charlotte	14
Collier	10
Columbia	10
Dade	55
Dixie	8
Duval	52
Escambia	34
Gadsen	11
Gulf	3

Table 5. (Continued)

District	# of Respondents
Hamilton	3
Hardee	20
Highlands	7
Indian River	15
Jackson	8
Lafayette	1
Lake	24
Leon	16
Levy	9
Liberty	2
Madison	2
Marion	6
Martin	8
Okeechobee	6
Orange	50
Pasco	27
Pinellas	19
Putnam	9
Santa Rosa	15
Seminole	15
Suwannee	2
Taylor	3
Volusia	8
Wakulla	6
Walton	7
Washington	4
Other	2
Total Respondents	509

Several of the large districts missing from Table 5 are Broward, Hillsborough, and Palm Beach, with Pinellas showing a relatively low number of respondents. The PDRI report further did not present demographic information by Level, Gender, Age or Ethnicity,

which this study reports. For a comparison of 1996 respondents by district to 2006 respondents by district, see Appendix VII.

Data Analysis

Part One

The data analysis for Part One replicates the analysis used in the original PDRI study and was extended to include several environmental factors not previously addressed in that study. In the 1996 study means and standard deviations were computed for those variables from Part One that are continuous (e.g., age) and frequencies were computed for those items containing qualitative data (e.g., highest level of education obtained) (PDRI, 1996, p. 18). Similar analyses were done in this study. If this study varies from the original study in the analysis of any particular item, such a variation is noted in the Chapter Four discussion of that item.

Ranked values were assigned to most demographic and environmental variables, such as scheduling model (fixed=1, combination=2, flexible=3). The rationale for the ranking within each item is discussed in more detail in conjunction with that item's analysis and discussion in both this chapter and Chapter Four.

Demographic and Environmental Data

Part One of the survey relates to a variety of demographic and environmental data. While much of this section reflects the same demographic data as gathered in the original study, additional data were gathered to allow for environmental factors analysis as these environmental factors may have some correlation with the perceptions and implementation of the *IP2* standards. In the PDRI study, the section referred to as Background Information included questions covering the following types:

- Job title (PDRI was surveying Guidance Counselors, Media Specialists, and Technology Specialist, thus the need for this item)*
- Time in current job title
- Name of school*
- Time in current school*
- Grade level of school
- Location of school: rural, rural/suburban, suburban, suburban/urban, urban, other
- Number of students in your school
- When was your school built*
- Name of school district
- Time in current school district*
- Highest level of education you have obtained
- Age
- Sex (Actual word used for 1996 response. This was changed to Gender on the 2006 survey.)
- Race (Actual word used for 1996 response. This was changed to Ethnicity on the 2006 survey.)
- Number of fulltime media specialist in your school*
- Do you have a media center clerk?*
- Do you have a Technical Specialist in your school? (2006 uses the word Technology)
- Amount of time spent on school-based activities as opposed to School Board or district level activities*

- Does your school media center have a computer network?
- Does your school have a school-wide computer network?
- Is your school part of a district-wide computer network?
- Do you have access to the internet or other telecommunication networks?
- To what extent has automation/computerization been incorporated into your cataloging/circulation system?*
- To what extent has automation/computerization been incorporated into your job as a whole?*
- Approximately how many personal computers does your school currently have?*

* These items were not replicated on the 2006 survey.

Several special interest items were included in the survey. One such item is number 8 which asks, "How did you earn your media certification?" The purpose of this question is to determine the means by which respondents earned their certification, subsequent to the 2001 legislative change in the requirements for school media certification in Florida. In 2001 the Florida Legislature changed the certification requirements for this position to allow already certified teachers to "add on" media certification by simply taking and passing the FTCE subject area exam for pK-12 school media (Florida Education Code 1012.56(4)(c)). It would seem reasonable to assume therefore that persons achieving certification by taking the previously required 30 hours of coursework, or earning a master's degree in Library and Information Science or Educational Media, would be more familiar with the *IP2* standards than those certified by simply taking the test. This information would be potentially meaningful in evaluating the perceptions of respondents to many of the questions on the survey. It could be

meaningful, if as some members of the profession propose, there is a need for a return to more stringent certification requirements in order to maintain the quality of school library media programs that have a positive relationship to student achievement, as reported in the *Making the Grade* study (Baumbach, 2003).

Data Analysis-Part Two

Activity Ratings

The means and standard deviations of the relative *time spent* ratings were computed for each activity. Actual ratings were converted to numeric values as previously described. The values used are as follows: *time spent* values ranged from zero for *not a part of job* to 5 for *much more time* and for *criticality* from 1 for *unimportant* to 5 for *critical*. Since respondents who indicate that an activity was not a part of their job were assigned a *time spent* rating of "zero," activities that many respondents rate as not a part of their job have a very low mean *time spent* rating.

Means and standard deviations of the *criticality* ratings were also computed for each activity. While reviewing data for completeness of responses it was noted that when a respondent used the *not a part of job* response for *time spent,* they generally did not give any response to the *criticality* portion of that item. Therefore, in computing the means for the *criticality* ratings, respondents who indicated that an activity is not part of their job were excluded. The rationale for this exclusion is that if an activity is not a part of a respondent's job, it should not affect the overall saliency of the activity when it does occur.

The third calculation used involved computing a composite variable that summarized the "saliency" or overall importance of each activity. This was done by first

multiplying the *criticality* rating by 2, and then adding the *time spent* rating, and finally dividing the resulting number by 3. This gives the *criticality* rating twice as much weight as the *time spent* rating, and this index has been found useful in previous work as an overall summary of the information contained in these rating scales (Bosshardt, Rosse & Peterson, 1984 as cited in PDRI, 1996, p. 18). As mentioned previously, because the saliency composite includes the *time spent* rating, it was set to zero when an activity was rated as not part of the job. Therefore, as with *time spent*, activities that respondents rate as not part of their job have relatively low saliency ratings.

Incomplete responses were treated as missing items. Of the 644 respondents, 172 were classified as having a large enough number of missing responses to render them inappropriate to remain in the analysis. Thus, 472 responses were used for this section of the analysis.

Comparison to Previous Study

An item analysis was done to compare the current mean saliency ratings on the 37 chosen items to the mean saliency ratings of the same items on the 1996 study. Since many of the items that were marked previously as *not part of job* were technology related, the investigator predicted that, due to the increased emphasis on technology since 1996, there should be a decrease in the number of items that were determined to be categorized *not part of job*.

Independent samples *t* tests and effect sizes were used to determine the significance of any difference between the means of the saliency ratings for each of the 37 job task analysis items from 1996 and this study. Although *z* tests are generally used for samples of this size, Gall and Borg (1996) recognize that most investigators use the *t*

test irrespective of their sample size. Cohen's *d* effect size was also calculated for each task analysis item to inform decisions as to the magnitude of differences, when found, from those 1996 responses.

Given that there are 37 items for which data was analyzed, the total number of *t* tests required was 37. The danger in doing this many *t* tests is the high probability of Type 1 errors occurring.

In this section of the study, bivariate correlational analysis was used for assessing the direction and strength of the relationship between two variables, such as *supportive principal* and *flexible scheduling*. This was done by using Spearman's rank-order correlation to compare a demographic or environmental variable with the saliency scores of the resurveyed items. Pearson's Product Moment Correlation *r* was used in the correlational analysis of *age* to the resurveyed items since age is a continuous variable. An ANOVA was used to determine the predictability of *ethnicity* when compared to the 37 job task analysis items. The investigator theorized that variables such as *supportive principal, hours of collaboration, and providing one-on-one instruction* when compared with others *flexible scheduling*, according to current research, should show a positive correlation.

Other Spearman *rho* correlations were used to study variable interactions between *familiarity with IP2, means of earning certification* along with other demographic and environmental variables such as *school level, number of students* and *geographic location*. Given the number of correlations performed in the study, there is a high probability of Type I error. However, the use of an inequality formula would have substantially reduced the potential for identifying any significant correlations.

Psychometric Issues of the Study

Internal Validity: There are nine sources of threat to internal validity. They are:

a. Selection
b. History
c. Maturation
d. Repeated testing
e. Instrumentation
f. Regression to the mean
g. Experimental mortality
h. Selection-maturation interaction
i. Experimenter bias

The study addressed selection, instrumentation, and experimenter bias since these are the threats that have the most potential for affecting the results of this study.

- *Selection:* Every effort was made to establish a selection process that would eliminate the potential for affecting the internal validity of the study. Originally the intent was to send the URL for the survey out via the SUNLINK network. Unfortunately, as the time drew closer to send out the URL for the survey, the SUNLINK director determined that it was not within the mission of that organization to send out such information to its members. However, SUNLINK did post the URL to the organization's announcements page. Finally, the URL was sent to each school library media supervisor/contact person in each school district and they in turn sent it out to the respective school library media

specialists. In addition, the URL was sent out via the Florida Association for Media in Education (FAME) electronic list.

The initial request for participation was followed up by a message to the school media supervisors and/or school media contact persons in every school district. This message requested that the supervisors/contact persons support the study by reinforcing to their colleagues the importance of responding to the survey. In addition, the past president of FAME sorted and e-mailed media specialists in selected counties where the level of response was not representative of that district's percentage of the school library media specialists in the state. In most cases, these were the larger metropolitan districts. Also, the state coordinator of media services made specific contact with those smaller districts where there was no fulltime school media supervisor in an effort to solicit additional responses.

- *Instrumentation:* The electronic format of the survey could affect the internal validity of the study should that format appear too difficult for some less technologically adept school library media specialists. To preclude this possibility, a paper copy was made available. However, no paper copies were requested.

Also, the length of the survey could affect the internal validity should the length preclude the respondents from having the patience and perseverance to complete the entire survey. Although the number of items on the final survey was significantly reduced after noticing a drop-off in the number of responses in the latter items of the pilot survey, this reduction of items did not lessen the drop-off

of completed items in the latter part of the survey. However, despite these phenomena, a total of 472 fully completed surveys were obtained.

- *Experimenter Bias:* The threat of experimenter bias is minimized in this study as a result of the tool used for development and dissemination of the survey. Since all data were collected in an anonymous method and were analyzed by use of a statistical program the results should be lacking in experimenter bias. Although some qualitative data were collected, there was no qualitative analysis used from which bias could be a factor. The only identifier information available the IP address recorded by the web survey tool and the school district from which the responses were received.

External Validity: The significance of the sample size can affect the external validity of any study. However, the actual sample size of this study exceeds the previously determined number of 384 needed to give strong external validity to the study. In addition, chi square comparisons combined with Cohen *w* effect sizes were calculated between sample and population demographic variables and suggested very small variances between the population and the 1996 and 2006 samples.

Chapter Three Summary

In this chapter the methods that were used to develop, execute, and analyze the data from this study were discussed. As noted, the processes and procedures were reflective of the original 1996 study. The next chapter delineates the results of this study.

Chapter Four

Results

This chapter provides a detailed analysis of the data collected. Included are the demographics of the sample, rate of response for each of the survey items, and correlations of the 2006 sample to the demographics of the population, where data are available, and the 1996 sample. Additional correlational statistics are described and results reported as guided by the research questions.

The research questions that guided this analysis are:

1. Have school library media specialists' saliency ratings on items related to collaboration, leadership and technology as defined in *Information Power: Building Partnerships for Learning* changed since 1996?
2. Does the school library media specialist's level of familiarity with *Information Power: Building Partnerships for Learning* correlate with their ratings of job tasks in collaboration, leadership and technology?
3. Do selected environmental factors in public school settings correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:
    a. Scheduling model – flexible, fixed or a combination
    b. Administrative support – outward statements of encouragement for teachers to make use of the services of the media program

c. Full time media program supervisor in the district – district-level coordination of the school media programs throughout the district, including staff development, which could impact the familiarity with, and perceptions of, the importance of implementing national standards in the school media programs.

d. Level of technology integration – networked status of the school, which could reflect in the ability to access resources offered in the media program; professional development in the use of technology, etc.

4. Do demographic variables, related to the school library media specialist, correlate with their ratings of job tasks in collaboration, leadership and technology? The specific factors of interest to are:

    a. Gender

    b. Age

    c. Ethnicity

    d. Highest degree earned

    e. Years in teaching

    f. Years as a school library media specialist

    g. Time in current position

    h. Method of earning certification

5. Do demographic variables, related to the school, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:

    a. Level of the school: elementary, middle, high, other

b. Number of students

c. Geographic location: rural, rural/suburban, suburban, suburban/urban, urban

The initial section of this chapter discusses the sample demographics and, where data were available, compares the sample demographics to the demographics of the 1996 PDRI study sample and the population. Following the demographic review, the analysis in this chapter addresses each research question in order.

The second section of this chapter reports the analysis of the resurveyed items. The differences in means of the saliency scores from the 1996 PDRI study and the current data on those items chosen for resurvey are reported.

The third section in this chapter discusses the level of awareness and experience that the respondents had with both *IP1* and *IP2.* Then data related to demographic and environmental variables are reported.

Data Collection and Manipulation

The data for this study were collected using an electronic survey developed with a web-based survey tool. The data collected were then exported to an Excel spreadsheet. Data were evaluated to ensure proper coding.

Sample

Demographics

The sample for this study was taken from public school library media specialists in the state of Florida. Of the 2676 school library media specialists who were notified about the survey 644 responded (454 of those completed all items on the survey; 509 answered at least 75% of the items). The 454 respondents who completed all items on

the survey represent 17% of the population. The following section presents the analysis of the current population to the 1996 and 2006 samples.

Several observations can be made with respect to the demographics of the 1996 and 2006 sample and, where data were available, those of the total population. With regards to gender, all three data sets are very similar. The 2006 sample and the total population percentages are separated by a few tenths of a percentage point. The statistical analysis reflected less than a small effect size, which indicates little variance between the sample and the population. Table 6 shows the comparison by gender of the 1996 and 2006 samples to the population.

Table 6.

Comparison by Gender 1996 and 2006 Samples to Population

Gender	2006	%	Population	%	1996	%
Female	563	92.6	2460	87.05	472	91.8
Male	45	7.4	366	12.95	32	6.2

The Chi-square goodness of fit for the *gender* comparison for population to 2006 sample in Table 6 = 16.605 (3) with a critical Chi-square value =7.8147, and a Cohen's *w* = 0.0695, reflecting a less than small variance between the population and 2006 sample on this variable. The Chi-square test of independence for the 2006 sample to 1996 sample resulted in a Chi-square = 0.0024 (3), critical Chi-square value = 7.8147 and effect size = 0.0008. For purposes of Chi-square analysis in this section, the effect size values used for Cohen's *w* are: small=.10, medium=.30 and large=.50 (Cohen, 1992).

Table 7 compares the population to the 2006 sample by *age*. The percentages in this comparison closely align with each other and reflect the aging of the profession with the largest percentage in both being in the 50-59 age range.

Table 7.

Population to Sample Comparison by Age

Age	Population		2006 Sample	
	n	%	n	%
20-29	49	1.79	25	4.12
30-39	324	11.87	70	11.53
40-49	663	24.29	133	21.91
50-59	1389	50.88	317	52.22
60 or older	363	13.30	62	10.21

For Table 7 the Chi-square = 24.456 (4) with a critical Chi-square value = 9.4877 and a Cohen's *w*=0.0849, which represents less than a small effect size and thus very little variance between the population and the 2006 sample.

Table 8 shows the level of response by *number of years as a teacher*. It is interesting to note the largest response level was in the m*ore than 30 year* category. This item was included since many assume that being a classroom teacher prior to becoming a school library media specialist is a valuable trait.

Table 8.

Number of Years as a Teacher 2006 Sample

# Years	Frequency	% of Sample
0-5	74	12.3%
5-10	57	11.1%
11-15	75	12.6%
16-20	96	15.9%
21-25	82	13.6%
26-30	89	14.8%
More than 30	119	19.7%

Table 9 reflects the response to *number of years in current position*. The high level of response in the 1-5 category is somewhat surprising and may have had an effect on level of familiarity with *IP2*.

Table 9.

Number of Years in Current Position 2006 Sample

# Years	Frequency	% of Sample
1-5	300	49.8%
6-10	150	24.9%
11-15	53	8.8%
16-20	40	6.6%
21-25	25	4.2%
More than 25	34	5.6%

The 2006 *ethnicity* response shows some variations from the 1996 and total population. The response rate for White/Caucasian is relatively higher, by percentage, for

the 2006 sample than the 1996 sample and the total population (1996=87.9%, 2006=93.2%, Pop=86.2%).

Table 10.

Comparison by Ethnicity

Ethnicity	Population		2006 Sample		1996 Sample	
	n	%	N	%	n	%
White	2306	86.2	562	93.2	452	87.9
Black	203	7.6	21	3.5	33	6.4
Hispanic	151	5.6	17	2	9	1.8
Native American	7	0.3	2	0.3	4	0.8
Other	8	0.3	6	1	6	1.2
Total	2676		608		504	

The Chi-square analysis for the population to 2006 sample resulted in a Chi-square = 40.906 (4), critical Chi-square value = 9.4877 and an effect size = 0.112; thus denoting small variances between the population and 2006 sample. The Chi-square analysis for the 2006 to 1996 sample resulted in a Chi-square = 0.0200 (4), critical Chi-square value = 9.4877 and an effect size = 0.00424, indicating very small variance between these two samples.

In the category for *highest degree earned*, a higher percentage of 2006 respondents had earned a Master's degree in either Library and Information Science or Educational Media than was the case in 1996 (1996=60.9%, 2006=71.9%). The 2006 respondent percentage is within a 1.5 percentage points of the percentage of the population who have earned a Master's degree (Pop.=72.56%).

Table 11.

Comparison of Highest Degree Earned

Degree	2006	%	Population	%	1996	%
Bachelor's	46	7.6	455	17.43	54	10.5
Some Grad. Work	81	13.4	--	--	91	17.7
Master's	436	71.9	1678	72.56	313	60.9
Ed. Specialist	34	5.6	201	5.9	17	3.3
Doctorate	9	1.5	29	4.1	12	2.3

Note. There was no population data for "Some Graduate Work" since the Florida DOE does not collect data on this variable. For the purposes of calculating the Chi-square for this variable, the Bachelor's degree totals were combined with the "Some Graduate Work" totals.

The population to 2006 sample Chi-square = 10.120 (3), critical Chi-square value = 7.8147 and a Cohen's $w = 0.0576$, which is lower than the value needed to be considered a small effect size; therefore indicating very small variances between the 2006 sample and the population on this variable. The Chi-square comparison between the 2006 and 1996 samples resulted in a Chi-square = 0.03868 (3), critical Chi-square value = 7.8147 and an effect size = 0.00594, indicating very small variances between these two samples.

As reflected in Table 12, 30% of respondents have served as a school library media specialist for five years or less.

Table 12.

Number of Years as a School Library Media Specialist 2006 Sample

# Years	Frequency	% of Sample
1-5	182	30.2
6-10	145	24.1
11-15	66	11
15-20	67	11.1
21-25	48	8
More than 25	94	15.6

The results for the question "How did you earn your media certification?" are reported in Table 13.

Table 13.

Method of Certification 2006 sample

Method	Frequency	% of Sample
Not certified	16	2.7%
30 hours coursework and FTCE	64	10.8%
Earned Masters in LIS or Ed. Media	276	46.5%
Passing FTCE, no coursework	39	6.6%
Prior to FTCE being required	142	23.9%

That 46.5% of the respondents hold a Master's degree could be a positive indication as to the level of commitment within this segment of the LIS profession. In addition, the 23.9% that earned their certification prior to the requirement of the FTCE is yet another indication of the aging of the profession.

The response level for *geographic location* of the schools is represented in Table 14. There was no state data available for this comparison; therefore comparisons were made between the 1996 sample and the 2006 sample.

Table 14.

Comparison by Geographic Location between 1996 and 2006 Samples

Location	1996	%	2006	%	Population
Rural	123	23.9	77	12.9	--
Rural/Suburban	99	16.8	85	16.5	--
Suburban	181	30.4	124	24.1	--
Suburban/Urban	60	11.7	128	21.5	--
Urban	84	16.3	111	18.6	--

Since no population data were available for this variable, a Chi-square test of independence analysis between the 1996 sample and the 2006 sample was performed. The Chi-square = 0.1544 (4), critical Chi-square value = 9.4877 and a Cohen's w = 0.0120; thus indicating very small variances between these two samples.

Despite a concerted effort through repeated e-mails to rural school districts and encouragement from the state school media coordinator, the response of rural counties to this study was not as strong as that of the 1996 study (1996=123, 2006=77). However, suburban and suburban/urban response was higher (1996=144, 2006=239).

Table 15 shows the respondents by *number of students* in their schools. The 1996 study did not break down schools by number of students and the state data does not match the clustering of the current study. State data are categorized in much larger increments than those used in this study.

Table 15.

Comparison by Number of Students in School

Number of students	Population		2006 sample		1996 sample	
	n	%	N	%	n	%
1-300			22	3.7		
301-800			244	40.9		
801-1300	Mean = 1100		180	30.2	Mean = 933	
1301-1800	SD = 384		53	8.9	SD = 579.87	
1801-2300			51	5.6		
More than 2300			45	7.7		

The level of response, by percentage, for elementary school library media specialist in 2006 was lower than the percentage of the population. The response rate for middle and high schools were more closely representative of the population, as reported in Table 16.

Table 16.

Comparison by Level of School

	1996	1996 %	2006	2006%	Population	Pop. %
Elementary	275	53.5	295	49.6	1498	57.3
Middle	103	20	111	18.7	507	19.4
High	99	19.3	135	22.7	609	23.3
Combination	29	5.6	54	9	55	2.1

A Chi-square goodness of fit analysis of the population to 2006 sample by *level of school* resulted in a Chi-square = 141.2939 (3), a critical Chi-square value =7.8147 and a Cohen's *w* = 0.208; thus indicating a medium amount of variance between the population and the 2006 sample on this variable. The Chi-square analysis on the 1996 and 2006

samples resulted in a Chi-square = 0.03032 (3), critical Chi-square value = 7.8147 and an effect size = 0.00524, thus indicating a very small amount of variance between the two samples.

Analysis of the 37 Resurveyed Job Task Analysis Items

Research question 1: Have school library media specialists' saliency ratings on items related to collaboration, leadership and technology changed since 1996?

Using the themes of collaboration, leadership and technology, this section presents the results for the comparison of the means from the 1996 saliency scores and those of the current study.

Independent samples *t* tests were used for comparing the saliency means from the 1996 PDRI study with those of this study. Certain assumptions are involved when using *t* tests. Those assumptions include:

- Independence: The sample for this study was not randomly selected; therefore one could question the independence of the sample. However, since this study is comparing data from a previous study, in which the sample was also not randomly selected, this violation of the assumption of independence should not measurably affect the outcome of the study. It is also commonly understood that the *t* test is acceptable for use in this type of situation.
- Normality: Skewness and kurtosis analyses were performed on the 2006 responses to the 37 resurveyed job task analysis items. The results of those analyses are reported in Appendix VII. This type of analysis was not referenced in the original PDRI report and since the original data could not be retrieved from that study this type of analysis could not be performed on the 1996 responses.

The skewness analysis reported in Appendix VII shows that all values are within the -1 to +1 range; thus representing approximately normal variances. All items, with the exception of item 56 reported negative values. The largest negative value was for item 53 (-.821) and the only positive value was that of item 56 (.058).

The kurtosis analysis reported in Appendix VII resulted in all values falling within the approximately normal range, with the exception of items 52 and 53. The values for these two items were 52=1.146 and 53=2.005; both denoting significant variance from the normal distribution. However, the *t* test is known to be relatively robust to these types of minor violations.

- Homogeneity of Variance: Since the sample sizes were not equal, an independent samples test for equality of variances was performed to identify variances between the means of the 37 job task analysis items. The results of that test are reported in Appendix VIII. Two of the 37 items were reported to have statistically significant variations ($p<.05$); item 62, $p=.031$ and item 65 $p=.005$.

In the following discussion, in addition to analyzing the 37 job task analysis items, references are made to those items (1-39) in part one of the survey and their relationship to the area under discussion. Accordingly Cronbach's Alpha was used to determine the internal consistency of those items (1-39). Table 18 shows those Alpha values. Since the PDRI study did not discuss measures taken to ensure the internal consistency of the 37 job task analysis items, Cronbach's Alpha was used to identify internal consistency of those items. That value is also shown in Table 17.

Table 17.

Cronbach's Alpha Values by Item Type and of the 37 Resurveyed Items

Item Type	Alpha
Collaboration	.787
Leadership	.598
Technology	.749
PDRI Resurveyed Items	.939

Collaboration

There were 14 items categorized as being related to *IP2* goals and objectives within the context of collaboration by the subject matter experts who selected the job task analysis items for resurvey in this study. This section reports the results from the saliency analysis of those items.

A graphical representation of the differences of the saliency means for the items related to collaboration is shown in Figure 1.

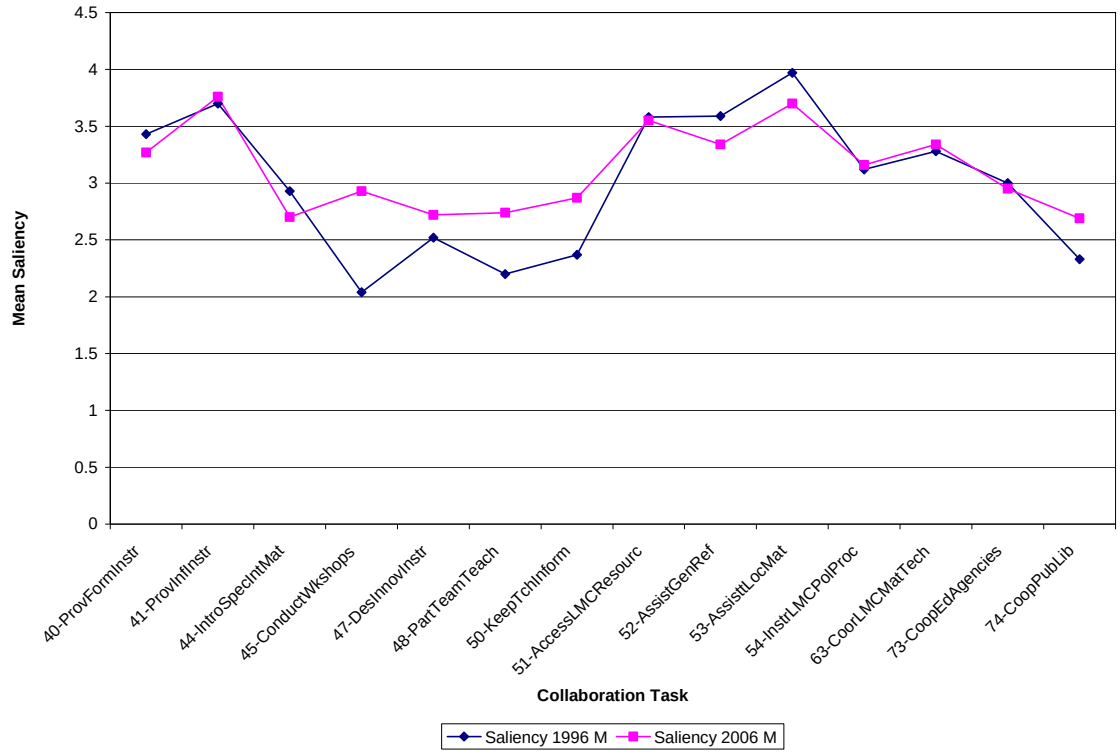

Figure 1. *Saliency Comparison for Collaboration Items*

Independent samples *t* tests were used to compare the means of these resurveyed items. For the collaboration items, the individual data, including *t* scores, are reported in Table 17.

Table 18

Means Comparisons and t Scores with Effect Size for Collaboration Items

2006 Item #	Task	N 1996	N 2006	1996 M	1996 SD	2006 M	2006 SD	T Score	df	ES
40	Provide formal instruction in information skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	513	498	3.43	1.06	3.27	1.23	2.22	1009	0.14*
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	513	496	3.7	0.85	3.76	0.94	1.06	1007	0.07
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	502	492	2.93	1.13	2.7	1.07	3.29	992	0.21**
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	509	493	2.04	1.54	2.93	0.93	11.03	1000	0.73****
47	Work with teachers to design innovative instructional approaches	508	474	2.52	1.2	2.72	1.04	2.78	980	0.18*
48	Participate in team teaching activities	512	477	2.2	1.29	2.74	1.11	7.03	987	0.45***
50	Keep teachers informed concerning students' information skills	512	476	2.37	1.05	2.87	1.01	7.62	986	0.49***
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	512	476	3.58	0.81	3.55	0.91	0.55	986	0.03

Table 18. (Continued)

2006 Item #	Task	N 1996	N 2006	1996 M	1996 SD	2006 M	2006 SD	T Score	df	ES
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	509	469	3.59	0.85	3.34	0.9	4.47	976	0.29**
53	Assist students and/or teachers in locating and selecting materials	511	469	3.97	0.73	3.7	0.88	5.24	978	0.34**
54	Instruct teachers and students in media center policies and procedures	511	469	3.12	1.13	3.16	0.9	0.61	978	0.04
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units,	511	462	3.28	0.97	3.34	1.03	0.94	971	0.06

Table 18. (Continued)

73	Work cooperatively with district and/or regional education and media center service units	508	476	3	0.89	2.95	1.09	0.83	982	0.05
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	507	476	2.33	1.04	2.69	1.03	5.45	981	0.35**

Note: Effect sizes for *t* test analysis are: small=.20, medium=.50, large=.80 (Cohen, 1992)

* *t* score exceeds critical *t* of 1.96, ES < small

** *t* score exceeds critical *t* of 1.96, ES = small.

*** *t* score exceeds critical *t* of 1.96, ES = medium

**** *t* score exceeds critical *t* of 1.96, ES = large

When comparing the means for saliency, it is interesting to note that 42.8% of the items have a saliency score lower in 2006 than in 1996. This may be cause for concern and is discussed in more detail in Chapter Five.

Item 53 showed the largest (-.27) negative change in actual saliency. The item states, "Assist students and/or teachers in locating and selecting materials." The effect size for this item (.34) falls between small (.20) and medium (.50). This reflects a statistically significant negative shift in the perceptions of school library media services to students and teachers.

The second largest of the negative changes in saliency was on item 52, which states, "Assist students and/or teachers with general reference services (e.g., answer reference questions." The saliency went from 3.59 in 1996 to 3.34 in 2006; the item had a *t* score of 4.47 with an effect size of .29, which indicates a small effect.

Item 45, which states, "Conduct workshops/in-service and other training for teachers – use of materials, equipment, technology and new production techniques" showed the highest positive change in terms of saliency and was found to be statistically significant with a medium effect (.73), which places it on the upper end of the medium range bordering on large (.80).

Leadership

There were 13 items categorized as being related to *IP2* goals and objectives within the context of leadership by the subject matter experts who selected the job task analysis items for resurvey in this study. This section reports the results from the saliency analysis of those items.

Figure 2 is a graphical representation of the comparison of leadership saliency scores from 1996 and 2006.

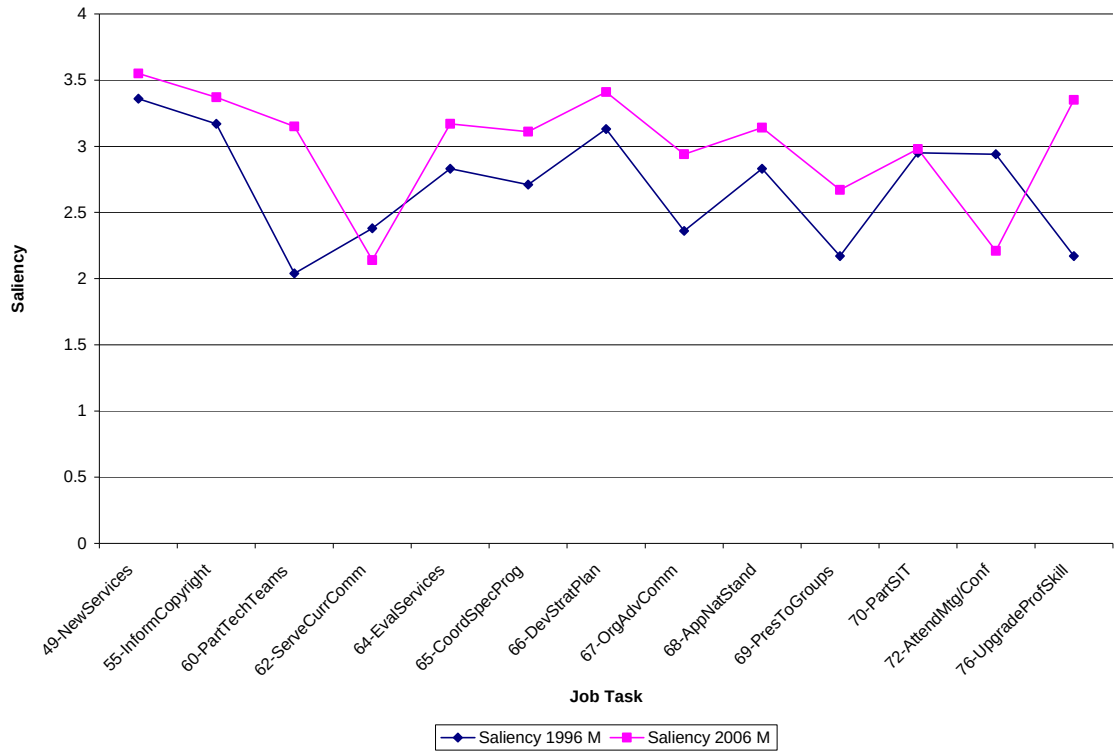

Figure 2. *Saliency Comparison for Leadership Items*

Table 18 reports the results of the analysis between the saliency means from the 1996 study and this study on those items related to leadership.

Table 19.

Means Comparison and t Scores with Effect Size for Leadership Items

2006 Item #	Task Description	Total N 1996	Total N 2006	Mean 1996	1996 SD	Mean 2006	2006 SD	t score	df	ES
49	Inform faculty of new media center services, materials, and technology	513	477	3.36	0.76	3.55	0.87	3.62	988	0.23**
55	Inform faculty and/or students of copyright laws and interpret as necessary	509	469	3.17	0.88	3.37	0.95	3.42	976	0.22**
60	Organize and/or participate in technology teams/technical committees	504	468	2.04	1.54	3.15	1.04	13.07	970	0.84****
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	507	461	2.38	1.4	2.14	0.79	3.24	966	0.21**
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	510	460	2.83	1.11	3.17	1	4.99	968	0.32**
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	507	464	2.71	1.18	3.11	1.15	5.34	969	0.34**
66	Develop a strategic plan for the media center, including mission, goals and objectives	512	465	3.13	0.99	3.41	1.01	4.37	975	0.28**
67	Organize and/or facilitate a school media advisory committee for short and long range planning	510	454	2.36	1.1	2.94	1.02	8.46	962	0.55***
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	513	456	2.83	0.98	3.14	1.02	4.82	967	0.31**

Table 19. (Continued)

2006 Item #	Task Description	Total N 1996	Total N 2006	Mean 1996	1996 SD	Mean 2006	2006 SD	t score	df	ES
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	511	456	2.17	1.19	2.67	1.03	6.95	965	0.45**
70	Lead or participate in School Improvement Teams	512	455	2.95	1.09	2.98	1.15	0.42	965	0.03
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	509	476	2.94	0.88	2.21	0.74	14.04	983	0.9****
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	511	478	2.17	1.19	3.35	1.03	16.62	987	1.06****

Note: Effect sizes for *t* test analysis are: small=.20, medium=.50, large=.80 (Cohen, 1992)

* *t* score exceeds critical *t* of 1.96, ES < small

** *t* score exceeds critical *t* of 1.96, ES = small.

*** *t* score exceeds critical *t* of 1.96, ES = medium

**** *t* score exceeds critical *t* of 1.96, ES = large

Table 19 shows that all of the items, with the exception of item 70, had a *t* score that exceeded the critical *t* of 1.96. In addition, each of these items reflected an effect size large enough to make them significant. All of the items, with the exception of items 62 (serve on curriculum committees) and 72 (participate in professional organizations and attend conferences), had a positive change in their saliency scores. Item 72's saliency dropped .73 with an effect size of .9, making this a strong statistically significant change.

Item 76 showed the highest saliency change (1.18) with an effect size of 1.06. This item, "Upgrade relevant professional skills (e.g., attend college courses and/or seminars" may reflect a strong commitment on the part of these professionals to keep abreast with changes in the profession.

Technology

There were 10 items categorized as being related to *IP2* goals and objectives within the context of technology by the subject matter experts who selected the job task analysis items for resurvey in this study. This section reports the results from the saliency analysis of those items. Figure 3 is a graphical representation of the variation in saliency between the 1996 and 2006 samples.

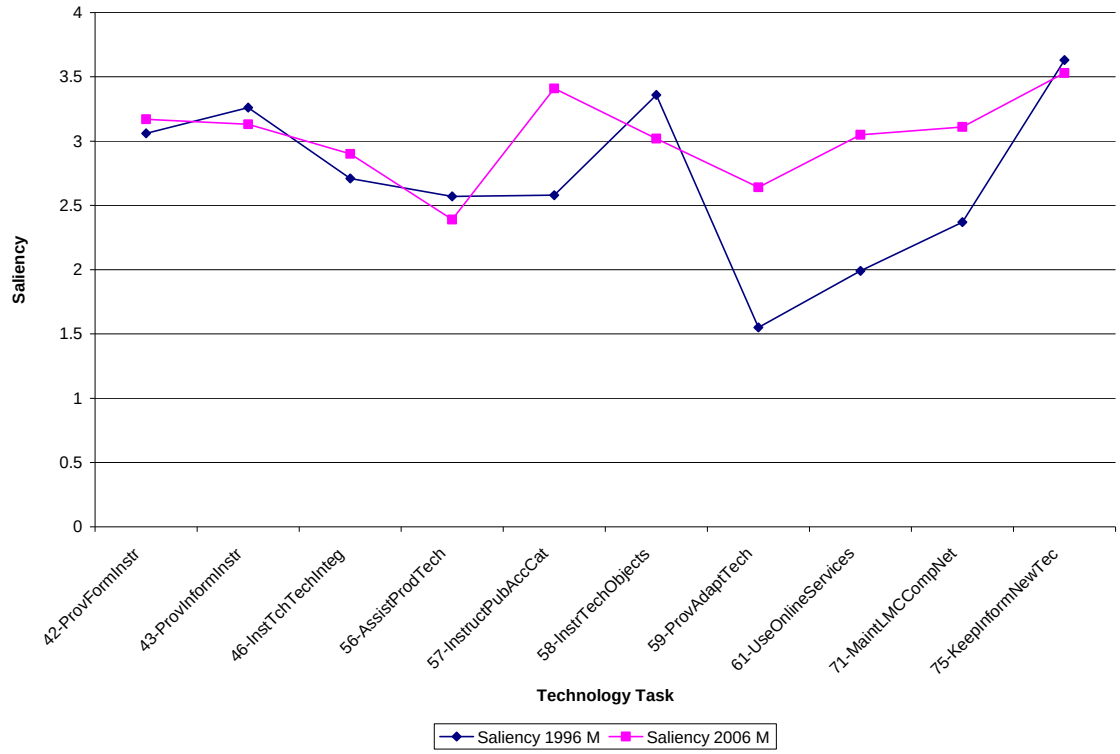

Figure 3. *Saliency Comparison for Technology Items*

Table 20 reports the results of the *t* test analysis.

Table 20.

Means Comparisons and t Scores with Effect Size for Technology Items

2006 Item #	Task	N 1996	N 2006	1996 M	1996 SD	2006 M	2006 SD	*t* Score	df	ES
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	511	492	3.06	1.1	3.17	1.17	1.53	1001	0.10
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	510	492	3.26	0.99	3.13	1.07	2.00	1000	0.13*
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	510	477	2.71	1.25	2.9	1.1	2.53	985	0.16*
56	Assist teacher and students in the use of production techniques	510	465	2.57	1.15	2.39	0.98	2.62	973	0.17*
57	Instruct students and/or teachers in the use of the public access catalog system	509	467	2.58	1.68	3.41	0.96	9.37	974	0.60***
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	513	468	3.36	1.13	3.02	1.11	4.75	979	0.30**

Table 20. (Continued)

2006 Item #	Task	N 1996	N 2006	1996 M	1996 SD	2006 M	2006 SD	*t* Score	df	ES
59	Provide adaptive technologies for students with special needs	512	465	1.55	1.4	2.64	1.17	13.13	975	0.84****
61	Use online services to retrieve information (e.g., in doing research)	505	464	1.99	1.56	3.05	1.25	11.50	967	0.75***
71	Maintain and support a computer network for the media center	501	459	2.37	1.94	3.11	1.46	6.63	958	0.43**
75	Keep informed about new technologies	507	475	3.63	0.8	3.53	1.02	1.72	980	0.11

Note: Effect sizes for *t* test analysis are: small=.20, medium=.50, large=.80 (Cohen, 1992)

* *t* score exceeds critical *t* of 1.96, ES < small

** *t* score exceeds critical *t* of 1.96, ES = small.

*** *t* score exceeds critical *t* of 1.96, ES = medium

**** *t* score exceeds critical *t* of 1.96, ES = large

The most noticeable positive saliency changes in technology occurred with items 59 (provide adaptive technologies) and 61 (use online services to retrieve information). Item 59's effect size = .84 making its statistical significance large. Item 61's effect size = .75, which places it within the medium effect size, just slightly less than the .80 value for a large effect. Item 71 (maintain computer network for media center) also showed a large change in salience (.74) with a medium effect size.

Four items showed a negative change in saliency. They were items 43, "Provide informal (e.g., on-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)"; (1996 saliency = 3.26, 2006 saliency = 3.13) *t=2.00, ES=0.13;* 56, "Assist teacher and students in the use of production techniques" (1996 saliency = 2.57, 2006 saliency = 2.39) *t=2.62, ES=.17;* 58 "Instruct students and teachers in the use of various technology objects" (1996 saliency = 3.36, 2006 saliency = 3.02) *t=4.75, ES=.30;* and 75, "Keep informed about new technologies" (1996 saliency = 3.63, 2006 saliency = 3.53) *t=1.72, ES = 0.11.*

Not a Part of Job

For each of the 37 resurveyed job task analysis items, the respondents were asked to give a ranked response to the relative amount of time spent on a task and to estimate how critical they thought it was that each task be completed. For the *time spent* response, the lowest ranked response was *not a part of job* (ranking = 0). A Chi-square goodness of fit analysis was performed between the 1996 and 2006 samples for Not a Part of Job. The Chi-square=205.19 (1), critical Chi-square value=3.84, *w*=.46 indicated a large effect size and significant variance between the two samples. Figure 4 is a graphical representation of the response rates for 1996 and 2006 for not part of job.

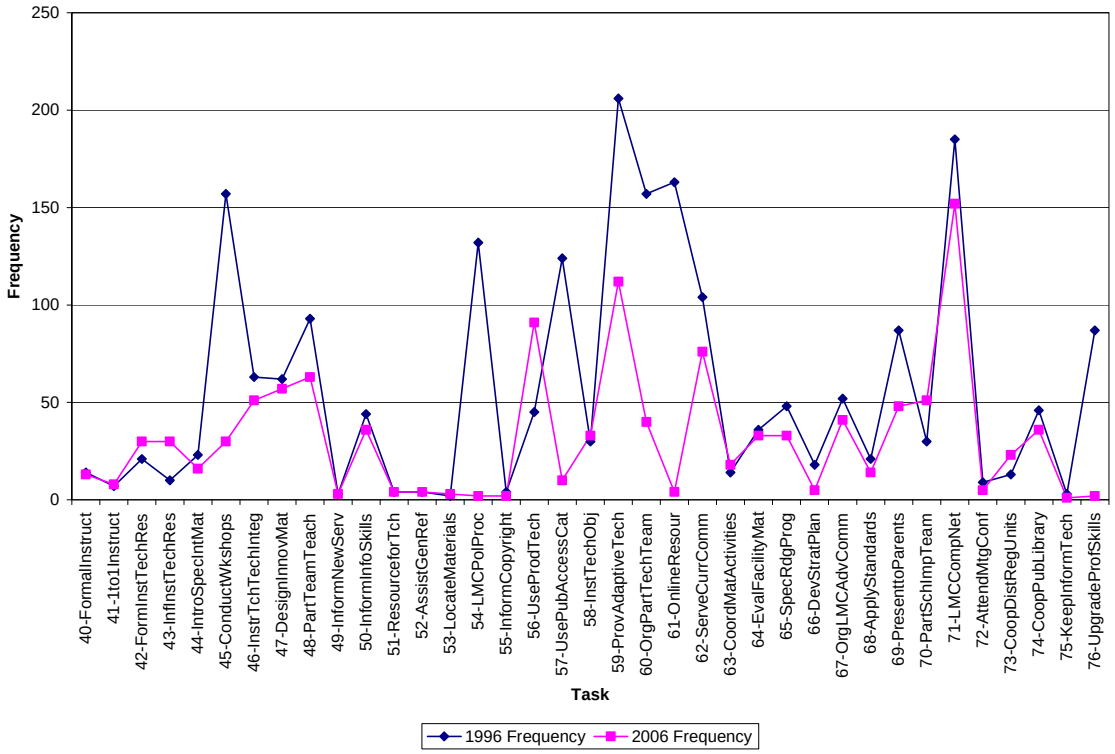

Figure 4. *Not a Part of Job Comparison 1996 and 2006 Samples*

Figure 4 shows that there was a positive change in the percentage of respondents considering the tasks *not a part of job* in 2006. A positive indicator in this case would be a decrease in the number of respondents considering the task not a part of their job. The following items had such a decrease: The Chi-square analysis matrix for *not a part of job* is shown in Table 21.

Table 21.

Chi-square Analysis for Not a Part of Job Task Items

2006 Item #	Task	1996 %	2006 %	Chi-square	Critical Chi value	ES
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	2.73	2.61	0.037	3.841	0.037
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	1.36	1.61	.067	3.841	.067
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	4.11	6.10	1.588	3.841	0.176
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	1.96	6.10	10	3.841	0.5*
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	4.58	3.25	1.256	3.841	0.179
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	30.84	6.09	86.251	3.841	0.679*
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	12.35	10.69	1.263	3.841	0.105

Table 21. (Continued)

2006 Item #	Task	1996 %	2006 %	Chi-square	Critical Chi value	ES
47	Work with teachers to design innovative instructional approaches	12.20	12.03	0.21	3.841	0.042
48	Participate in team teaching activities	18.24	13.35	5.769	3.841	0.192*
49	Inform faculty of new media center services, materials, and technology	0.58	0.63	0	3.841	0
50	Keep teachers informed concerning students' information skills	8.59	7.56	0.8	3.841	0.1
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.78	0.84	0	3.841	0
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.79	0.85	0	3.841	0
53	Assist students and/or teachers in locating and selecting materials	0.39	0.64	0.2	3.841	0.2
54	Instruct teachers and students in media center policies and procedures	25.83	0.43	126.129	3.841	0.97*
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.79	0.43	0.667	3.841	0.333
56	Assist teacher and students in the use of production techniques	8.82	19.57	15.559	3.841	0.338**
57	Instruct students and/or teachers in the use of the public access catalog system	24.36	2.14	96.985	3.841	0.85*

Table 21. (Continued)

2006 Item #	Task	1996 %	2006 %	Chi-square	Critical Chi value	ES
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	5.85	7.05	0.143	3.841	0.048
59	Provide adaptive technologies for students with special needs	40.23	24.09	27.786	3.841	0.295*
60	Organize and/or participate in technology teams/technical committees	31.15	8.55	69.487	3.841	0.593*
61	Use online services to retrieve information (e.g., in doing research)	32.28	0.86	151.384	3.841	0.952*
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	20.51	16.49	4.356	3.841	0.155*
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	2.74	3.90	0.5	3.841	0.125
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	7.06	7.17	0.13	3.841	0.043

Table 21. (Continued)

2006 Item #	Task	1996 %	2006 %	Chi-square	Critical Chi value	ES
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	9.47	7.11	2.778	3.841	0.185
66	Develop a strategic plan for the media center, including mission, goals and objectives	3.52	1.08	7.348	3.841	0.565*
67	Organize and/or facilitate a school media advisory committee for short and long range planning	10.20	9.03	1.301	3.841	0.118
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	4.09	3.07	1.4	3.841	0.2
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	17.03	10.53	11.267	3.841	0.288*
70	Lead or participate in School Improvement Teams	5.86	11.21	5.444	3.841	0.259**
71	Maintain and support a computer network for the media center	36.93	33.12	3.231	3.841	0.098
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	1.77	1.05	1.143	3.841	0.286

Table 21. (Continued)

2006 Item #	Task	1996 %	2006 %	Chi-square	Critical Chi value	ES
73	Work cooperatively with district and/or regional education and media center service units	2.56	4.83	2.778	3.841	0.077
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	9.07	7.56	1.22	3.841	0.122
75	Keep informed about new technologies	0.59	0.21	1	3.841	0.5
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	17.03	0.42	81.18	3.841	0.955*

Note: For purposes of Chi-square analysis the effect size values used for Cohen's *w* are: small=.10, medium=.30 and large=.50 (Cohen, 1992).

*Statistically significant positive change

**Statistically significant negative change

The following items showed a positive change in Not a Part of Job rating and were found to be statistically significant:

- Item 45, "Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques" (1996=30.84%, 2006=6.09%, Chi-square=86.251, ES=.679). This reflects a significant change in perception in the need for school library media specialists to be active participants in the training of teachers in the use of a wide variety of materials and technologies.
- Item 48, "Participate in team teaching activities" (1996=18.24%, 2006=13.35%, Chi-square=5.769, ES=.192). Since team teaching is a meaningful way in which

to engage classroom teachers in collaborative activities, despite the small effect size, this positive shift in the perception of the importance of team teaching is encouraging.

- Item 54, "Instruct students and teachers in media center policies and procedures" (1996=25.83%, 2006=0.43%, Chi-square=126.129, ES=.97). This item reflects the second strongest statistically significant change, with the largest effect size, for *not a part of job*. Since instructing students and teachers in the policies and procedures of the school library media center is paramount to the effective operation of a school library media program, this change in perception is a positive step in the strengthening of the school library media programs in Florida.
- Item 57, "Instruct students and/or teachers in the use of the public access catalog system" (1996=24.36%, 2006=2.14%, Chi-square=96.985, ES=.85). This significant change in perceptions was expected due to the implementation of many of the online public access catalogs in schools coming after 1996.
- Item 59, "Provide adaptive technologies for students with special needs" (1996=40.23%, 2006=24.09%, Chi-square=27.786, ES=.295). The medium effect size of this perceptual change also has a practical impact. The infusion of a wide variety of students with special needs into the general public school population has created the need for school library media specialists to not only be aware of various forms of adaptive technologies but to also be prepared to make them available for these students use within the school library media program.
- Item 60, "Organize and/or participate in technology teams/technical committees" (1996=30.15%, 2006=8.55%, Chi-square=69.487, ES=.593). The large effect size

of this item validates the significant change in perception on this item. This perceptual change may indicate an understanding on the part of the respondents as to the importance of the school library media program's interests being advocated through and to these types of committees.

- Item 61, "Use online services to retrieve information (e.g., in doing research" (1996=32.28%, 2006=0.86%, Chi-square=151.384, ES=.952). This item has the highest Chi-square value and the second highest effect size in this group. This change in perception was anticipated since the implementation of online resources in the public school environment occurred after 1996.
- Item 62, "Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides" (1996=20.51%, 2006=16.49%, Chi-square=4.356, ES=.155). Although this analysis reflects a small level of statistical significance, this is an important change of perception for practical application in the field. The selection of appropriate materials for resource units is an integral function of the school library media specialist and serving on curriculum committees places the school library media specialist squarely in position to use their specific expertise in this area.
- Item 69, "Plan and participate in meetings to present the functions and services of the media center to parent and community organizations" (1996=17.03%, 2006=10.53%, Chi-square=11.267, ES=.288). This change in perception reflects the respondents understanding of the importance of reaching out to the entire learning community as presented in *IP2*.

- Item 76, “Upgrade relevant professional skills (e.g., attend college courses and/or seminars” (1996=17.03%, 2006=0.42%, Chi-square=81.180, ES=.955). This large change may indicate an understanding of the importance of upgrading one’s professional skills by those responding to the 2006 survey.

Figure 4 shows that there was a negative change in the percentage of respondents considering the following items as not a part of their job.

- Item 56, “Assist teachers and students in the use of production techniques (1996=8.82%, 2006=19.57%, Chi-square=15.559, ES=.338). The negative change for this item was somewhat of a surprise and potential explanations are explored in the next chapter.
- Item 70, “Lead or participate in School Improvement Teams” (1996=5.86%, 2006=11.21%, Chi-square=5.444, ES=.259). This significant negative change is cause for concern in that School Improvement Teams have strong influence in funding decisions in many schools.

Analysis of Demographic and Environmental Items

School Library Media Specialists’ Familiarity with IP2-Correlations with the 37 Resurveyed Job Task Analysis Items

Research Question 2: Does the school library media specialist’s level of familiarity with *Information Power: Building Partnerships for Learning* correlate with their practice as measured by a change in the saliency of selected items resurveyed from a 1996 Job Task Analysis?

Two items were used to determine the respondents’ level of familiarity with *Information Power*. Each item used multiple responses to assist with the determination of

the respondent's level of familiarity with each edition of *Information Power.* The first item asked about familiarity with the 1988 version and the second asked about familiarity with the 1998 version. The rationale for including the question relating to *IP1* was two fold. First, the current version of the Florida Teacher Competency Exam for the subject area of School Media pK-12 is based on the principles and guidelines set forth in that edition. Second, that was the edition in use at the time of the 1996 PDRI survey, which is the basis of the original saliency ratings on the items being resurveyed in this study. Therefore, respondents who are familiar with *IP1* but not *IP2* may have different perceptions concerning collaboration, leadership and technology issues. Conversely, those school library media specialists who are relatively new to the profession may not have been exposed to *IP1* and therefore might have a different perception than someone familiar with both publications. Table 22 reports the results of the familiarity with *IP1* and *IP2* questions; while Table 23 reports the results of the "attended in-service" question.

Table 22.

Familiarity with Information Power 2006 Sample

Times read	*IP1*		*IP2*	
	n	%	n	%
More than once	155	31	158	32
One time	118	24	147	30
Scanned	111	22	130	26
Heard of-never read	61	12	30	6
Never heard of	50	10	30	6

Since this study focuses on *IP2*, it is interesting to note that 62% of the respondents had read it; while an additional 26% responded that they had scanned it.

Table 23.

Attended In-service on Information Power 2006 Sample

In-services attended	*IP1*		*IP2*	
	n	%	n	%
Several	81	16	77	16
One	93	19	120	24
None	321	65	298	60

Focusing on *IP2*, it is worthy of note that only 40% of the respondents had attended an in-service on the national standards for their profession.

Next, the respondents were asked about their attempts to implement the standards in the both editions. Table 24 shows the results for that question.

Table 24.

Attempts to Implement IP1 and IP2

Attempted to Implement	*IP1*		*IP2*	
	n	%	n	%
Made serious attempts	145	29	164	33
Made some attempts	213	43	247	50
Made no attempts	137	28	84	17

Many of these respondents may not have had the opportunity to attempt to implement the *IP1* (1988) standards given the fact that those who came into the school library media profession subsequent to 1998 might have only had the opportunity to become familiar with and attempt to implement those standards in *IP2*.

In an effort to determine if there is a correlation between a school district having at least one full time supervisor for the area of school library media and those respondents who stated that they had attended at least one in-service program about *IP1* or *IP2*, a Spearman rank correlation was performed on those two items. The results showed a significant (r=-*.100, p=.047)* correlation between those respondents in districts with a full time school library media supervisor and those who had attended an in-service on *IP1*. Similarly, a significant correlation was observed (*r=-.130, p=.009)* between respondents in school districts with a school library media supervisor and those who had attended an in-service on *IP2.*

Respondents were asked to what extent they agreed with the *IP2* goals to which 27.6% (n=148) strongly agreed, 47.6% (n=255) agreed, 14.4% (n=77) somewhat agreed, 0.6% (n=3) somewhat disagreed and zero responded as disagreeing; while 9.3% (n=50) were not sure. It was theorized that the level of familiarity with *IP2* might have a correlation with the level of "agreement with the goals of *IP2."* A Spearman rank correlation analysis did not prove this to be an accurate assumption (*r=-.061, p=.177).* Further, it was theorized that familiarity with *IP2* might be effected by "attended in-service on *IP2"*; however, no significant correlation could be found (*r=.012. p=.805).* Finally, it was theorized that familiarity with *IP2* might correlate with "attempted to implement"; however, there was no significant correlation found between these two variables (*r=-.019, p=.676).*

A Spearman rank correlation was performed to establish if there were statistically significant correlations between familiarity with *IP2* and the 37 job task analysis items. A correlation was found with item 42 "Provide formal

instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production)" (*r*=0.090, *p=.048).* The correlational matrix for this analysis is shown in Table 25.

Table 25.

Spearman Correlation Matrix-Familiarity with IP2 to the 37 Job Task Analysis Items

2006 Item #	Task	Correlation coefficient	p value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.052	0.246
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.004	0.929
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.09*	0.048
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.039	0.392
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.053	0.24
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.066	0.145
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.042	0.364
47	Work with teachers to design innovative instructional approaches	0.014	0.761
48	Participate in team teaching activities	-0.004	0.926
49	Inform faculty of new media center services, materials, and technology	0.023	0.621
50	Keep teachers informed concerning students' information skills	0.048	0.299

Table 25. (Continued)

2006 Item #	Task	Correlation coefficient	p value
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.032	0.482
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.054	0.245
53	Assist students and/or teachers in locating and selecting materials	0.034	0.459
54	Instruct teachers and students in media center policies and procedures	0.033	0.48
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.041	0.378
56	Assist teacher and students in the use of production techniques	0.037	0.428
57	Instruct students and/or teachers in the use of the public access catalog system	-0.041	0.382
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.039	0.39
59	Provide adaptive technologies for students with special needs	0.017	0.707
60	Organize and/or participate in technology teams/technical committees	0.013	0.768
61	Use online services to retrieve information (e.g., in doing research)	0	0.993
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.003	0.956
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.02	0.659
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.03	0.517
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.066	0.161

Table 25. (Continued)

2006 Item #	Task	Correlation coefficient	p value
66	Develop a strategic plan for the media center, including mission, goals and objectives	-0.04	0.395
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.017	0.725
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.001	0.985
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.037	0.433
70	Lead or participate in School Improvement Teams	0.056	0.243
71	Maintain and support a computer network for the media center	0.012	0.804
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.039	0.383
73	Work cooperatively with district and/or regional education and media center service units	0.009	0.835
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.026	0.566
75	Keep informed about new technologies	0.059	0.191
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.038	0.403

*Correlation is significant at the .05 level (2-tailed)

A Cramer's *V* analysis showed a no significant relationship between familiarity with *IP2* and the geographic location of the school (*V=0.093, p=0.431).* Table 26 represents specific information about the geographic location of the school and the level of familiarity with *IP2.*

Table 26.

Comparison of Familiarity with IP2 and Geographic Location of School

Times Read	Geographic Location											
	Rural		Rural/Suburban		Suburban		Suburban/Urban		Urban		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
More than one time	18	3.77	20	4.18	40	8.37	42	8.79	30	6.28	152	31.80
One time	20	4.18	22	4.60	41	8.58	31	6.49	27	5.65	141	29.50
Scanned	17	3.56	25	5.23	38	7.95	24	5.02	21	4.39	125	26.50
Heard of - never read	3	0.63	4	0.84	10	2.09	9	1.88	3	0.63	29	6.07
Never heard of	6	1.26	6	1.26	5	1.05	1	0.21	2	0.42	20	4.18

Table 26 indicates a higher number of school library media specialists from suburban and suburban/urban schools have read, or at least scanned, *IP2* compared to other geographic locations.

Environmental Factors that may Correlate with Job Task Analysis Responses

Research Question 3: Do selected environmental factors in public school settings correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:

a. Scheduling model – flexible, fixed or a combination
b. Administrative support – outward statements of encouragement for teachers to make use of the services of the media program
c. Full time media program supervisor in the district – district-level coordination of the school media programs throughout the district, including staff development, which could impact the familiarity with, and

perceptions of, the importance of implementing national standards in the school media programs.

d. Level of technology integration – networked status of the school, which could reflect in the ability to access resources offered in the media program; professional development in the use of technology, etc.

Scheduling Model

IP2 states, "The library media program requires flexible and equitable access to information, ideas and resources for learning" (AASL & AECT, 1998, p. 83), An item was placed in the survey to determine the type of scheduling model used in each respondent's school. To this item 18.1% (n=94) responded that they operated on a fixed schedule (a set schedule in which every class comes to the media center as a part of the teacher planning period rotation) while 53.4% (n=279) operated on a flexible schedule (time is scheduled in collaboration between the classroom teacher and the school library media specialist as needed) and 28.5% (n=149) operated on some combination of the two. Combination schedule most often refers to the media center having approximately 50% of its schedule fixed and 50% of its schedule flexible. This percentage for combination however is not always so evenly distributed. Depending on the specific school setting, "combination" could be interpreted in a variety of ways and may, in some cases, closely mirror a fixed schedule.

For purposes of the correlational analysis, the responses to this item were placed in a rank order. This ranking was done on the theoretical and research constructs of the profession. Since flexible scheduling is considered to be the preferred model, as stated in

IP2, the FAME resolution and the state of Georgia's Education Code, it was given the strongest ranked value. Thus the rankings were flexible=3, combination=2 and fixed=1. Spearman rank correlation was used to determine if there were correlations between the scheduling model and the 37 items on the task analysis portion of the survey. Table 27 reports the correlational matrix for the comparison of scheduling model and the 37 job task analysis items.

Table 27.

Spearman Correlation Matrix-Scheduling Model to the 37 Job Task Analysis Items

2006 Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	-0.11*	0.015
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	.097*	0.033
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	-0.002	0.971
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.152*	0.001
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	-0.113*	0.013
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.051	0.267
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.023	0.619
47	Work with teachers to design innovative instructional approaches	0.122*	0.008
48	Participate in team teaching activities	0.029	0.539

Table 27. (Continued)

2006 Item #	Task	Correlation coefficient	*p* value
49	Inform faculty of new media center services, materials, and technology	0.059	0.196
50	Keep teachers informed concerning students' information skills	-0.073	0.112
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.025	0.581
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	.092*	0.046
53	Assist students and/or teachers in locating and selecting materials	-0.021	0.65
54	Instruct teachers and students in media center policies and procedures	-0.029	0.534
55	Inform faculty and/or students of copyright laws and interpret as necessary	.094*	0.043
56	Assist teacher and students in the use of production techniques	0.004	0.929
57	Instruct students and/or teachers in the use of the public access catalog system	-0.073	0.107
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	-0.018	0.686
59	Provide adaptive technologies for students with special needs	0.014	0.75
60	Organize and/or participate in technology teams/technical committees	0.001	0.978
61	Use online services to retrieve information (e.g., in doing research)	0.075	0.096
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.03	0.523
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.032	0.474

Table 27. (Continued)

2006 Item #	Task	Correlation coefficient	*p* value
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	-0.042	0.368
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	-0.101*	0.031
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.068	0.143
67	Organize and/or facilitate a school media advisory committee for short and long range planning	-0.053	0.266
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	-0.039	0.412
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	-0.006	0.893
70	Lead or participate in School Improvement Teams	0.011	0.814
71	Maintain and support a computer network for the media center	-0.031	0.527
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.04	0.38
73	Work cooperatively with district and/or regional education and media center service units	0.056	0.217
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.001	0.976
75	Keep informed about new technologies	-0.006	0.902
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	-0.031	0.498

*Correlation is significant at the .05 level (2-tailed)

Table 28 shows the mean saliency of the correlated items by scheduling model.

Table 28.

Mean Saliency of Correlated Job Task Analysis Items with Scheduling Model

Item		Scheduling model								
#	Statement	Fixed			Combination			Flexible		
		Saliency	SD	n	Saliency	SD	n	Saliency	SD	n
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	3.43	1.11	87	3.27	1.09	139	3.35	1.09	253
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	3.51	0.88	86	3.75	0.83	136	3.61	0.83	252
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	2.87	1.03	87	3.3	1	134	3.2	0.97	251
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	3.22	0.9	82	3.14	0.87	136	3.06	0.95	251
47	Work with teachers to design innovative instructional approaches	2.52	1.13	97	2.94	0.96	132	2.74	0.62	238
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	3.39	0.88	84	3.34	0.78	132	3.37	0.83	236
55	Inform faculty and/or students of copyright laws and interpret as necessary	3.38	0.92	84	3.36	0.85	132	3.43	0.89	236

Table 28. (Continued)

Item #	Item Statement	Scheduling model: Fixed Saliency	Fixed SD	Fixed n	Combination Saliency	Combination SD	Combination n	Flexible Saliency	Flexible SD	Flexible n
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program Jim Harbin video awards, etc.)	3.13	1.08	79	3.29	0.96	127	3.16	1.07	233

Table 28 indicates that those school library media specialists operating either a combination or flexible schedule rated items 41, 43, 47 and 65 higher in saliency than did those operating with a fixed schedule. These tasks are related to more individualized types of instruction including the informal instruction of information literacy skills and instruction in technology-based learning.

Additionally, when reviewing the information contained in both tables 27 and 28 together, one can somewhat explain the negative correlations shown in table 27. Negative correlations occurred on items 40, 44 and 65. In each case more respondents were operating under a flexible schedule; thus indicating that as the type of scheduling model became more flexible, the perceived saliency of each of these items was less. This holds true for items 40 and 44; however, the highest saliency for item 65 appears in the group operating under a combination scheduling model, which is more flexible than the fixed model.

Administrative Support

The first question in this section asked if the principal encouraged teachers to make use of the resources of the school library media center in the development of their curriculum units. To this question 36.6% (n=179) responded that the principal frequently

did so while 35.4% (n=174) said that the principal did so occasionally, 18.9% (n=91) said their principal rarely did so and 9.1% (n=45) reported that the principal never encouraged teachers to make use of the resources of the school library media center in their curriculum planning. The Spearman rank correlation found 24 significant correlations between this variable and the 37 job task analysis items; thus making this the most significant variable in this study. The correlation matrix for this analysis is reported in Table 29.

Table 29.

Spearman Correlation Matrix-Principal Encourages LMC Use to the 37Job Tasks

2006 Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.009	0.850
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.098*	0.031
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.079	0.083
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.108*	0.017
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.112*	0.014
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.119*	0.009
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.178*	0.000
47	Work with teachers to design innovative instructional approaches	0.169*	0.000

Table 29. (Continued)

2006 Item #	Task	Correlation coefficient	*p* value
48	Participate in team teaching activities	0.201*	0.000
49	Inform faculty of new media center services, materials, and technology	0.160*	0.001
50	Keep teachers informed concerning students' information skills	0.140*	0.002
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.143*	0.002
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.133*	0.004
53	Assist students and/or teachers in locating and selecting materials	1.019	0.676
54	Instruct teachers and students in media center policies and procedures	0.052	0.266
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.076	0.103
56	Assist teacher and students in the use of production techniques	0.078	0.084
57	Instruct students and/or teachers in the use of the public access catalog system	0.035	0.447
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.185*	0.000
59	Provide adaptive technologies for students with special needs	0.110*	0.015
60	Organize and/or participate in technology teams/technical committees	0.211*	0.000
61	Use online services to retrieve information (e.g., in doing research)	0.100*	0.027
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.206*	0.000
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.173*	0.000

Table 29. (Continued)

2006 Item #	Task	Correlation coefficient	*p* value
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.073	0.122
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.152*	0.001
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.093*	0.047
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.132*	0.005
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.070	0.141
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.185*	0.000
70	Lead or participate in School Improvement Teams	0.119*	0.013
71	Maintain and support a computer network for the media center	0.138*	0.005
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.013	0.759
73	Work cooperatively with district and/or regional education and media center service units	0.092*	0.041
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.081	0.072
75	Keep informed about new technologies	0.080	0.075
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.070	0.118

*Correlation significant at the .05 level (2-tailed)

Table 29 shows 24 significant correlations to the variable "Principal encourages use of the school library media center resources." This is a considerably larger number of correlations than occur with any other variable in this study.

To the question, "In your opinion, is the principal supportive of the media program," 46.9% (n=229) said that the principal was very supportive, 25.1% (n=123) said somewhat supportive, 16.2% (n=79) said supportive, 7.2% (n=35) said somewhat unsupportive and 4.5% (n=22) felt that the principal was unsupportive. The Spearman rank correlation found significant correlations between this variable and items 44, 62, and 70. The correlation matrix for the Spearman rank correlation can be found in Table 30.

Table 30.

Spearman Correlational Matrix-Principal Supportive to the 37 Job Tasks

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.063	0.163
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.043	0.338
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.044	0.329
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.025	0.583
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.103*	0.023
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.071	0.115

Table 30. (Continued)

Item #	Task	Correlation coefficient	*p* value
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.061	0.188
47	Work with teachers to design innovative instructional approaches	-0.032	0.494
48	Participate in team teaching activities	0.004	0.936
49	Inform faculty of new media center services, materials, and technology	0.052	0.255
50	Keep teachers informed concerning students' information skills	0.017	0.716
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.081	0.077
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.05	0.276
53	Assist students and/or teachers in locating and selecting materials	0.024	0.605
54	Instruct teachers and students in media center policies and procedures	0.048	0.295
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.041	0.373
56	Assist teacher and students in the use of production techniques	0.068	0.151
57	Instruct students and/or teachers in the use of the public access catalog system	0.056	0.231
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.038	0.403
59	Provide adaptive technologies for students with special needs	0.047	0.299
60	Organize and/or participate in technology teams/technical committees	0.018	0.693
61	Use online services to retrieve information (e.g., in doing research)	0.078	0.083
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.097*	0.04

Table 30. (Continued)

Item #	Task	Correlation coefficient	*p* value
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	-0.035	0.442
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.035	0.461
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.015	0.749
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.072	0.122
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.028	0.55
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.016	0.742
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.051	0.282
70	Lead or participate in School Improvement Teams	0.108*	0.023
71	Maintain and support a computer network for the media center	0.001	0.979
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.066	0.143
73	Work cooperatively with district and/or regional education and media center service units	0.009	0.839
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.038	0.393
75	Keep informed about new technologies	0.044	0.332
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	1.083	0.065

*Correlation significant at the .05 level (2-tailed)

Note that items 44 and 70 in Table 30 were also correlated with the previous variable related to the principal encouraging use of the school library media center's resources by teachers for their curriculum planning.

District Level School Library Media Supervisor

Theoretically, having a specified school library media supervisor responsible for overseeing the implementation and quality of the school library media program in a school district should improve the level of familiarity with *IP2* and perhaps other responses to both part one and part two items in this study. Therefore, an item asked about the number of district level supervisory personnel assigned specifically to the school library media program. Table 31 reports the responses to that question.

Table 31.

School Library Media Supervisor in District

Item	Frequency	%
More than one media supervisor	109	18.4
One media supervisor	287	48.4
One split supervisor	133	22.4
No supervisor responsible	18	3
A media contact person	29	4.9
Other	13	2.2

A Spearman rank correlation was used to determine significant statistical correlations between having a school library media supervisor and the 37 job task analysis items. A statistically significant ($r=-.10$, $p=.03$) correlation was found to item 57, "Instruct students and/or teachers in the use of public access catalog system." This

relationship may have occurred since those districts with fulltime library media program supervisors may have automated more quickly than those without such supervisory support. Additionally, Spearman rank correlations were used to determine correlations between having a school library media program supervisor and the level of familiarity with *IP1* and *IP2*. No significant correlation was found at the 0.05 level. The correlation matrix for the analysis of having a school library media supervisor and the 37 job tasks can be found in Table 32.

Table 32.

Spearman Correlation Matrix-District-level Program Supervisor to the 37 Job Tasks

Item #	Task	*r*	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	-0.056	0.215
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.003	0.954
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	-0.016	0.726
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.039	0.392
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.038	0.397
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.085	0.062
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.001	0.982
47	Work with teachers to design innovative instructional approaches	0.056	0.224

Table 32. (Continued)

Item #	Task	*r*	*p* value
48	Participate in team teaching activities	0.027	0.556
49	Inform faculty of new media center services, materials, and technology	-0.056	0.222
50	Keep teachers informed concerning students' information skills	0.015	0.75
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.004	0.926
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	-0.01	0.821
53	Assist students and/or teachers in locating and selecting materials	0.041	0.379
54	Instruct teachers and students in media center policies and procedures	0.063	0.174
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.069	0.137
56	Assist teacher and students in the use of production techniques	-0.034	0.472
57	Instruct students and/or teachers in the use of the public access catalog system	-0.100*	0.031
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	-0.002	0.963
59	Provide adaptive technologies for students with special needs	0.01	0.817
60	Organize and/or participate in technology teams/technical committees	0.019	0.668
61	Use online services to retrieve information (e.g., in doing research)	0.072	0.109
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.007	0.876
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.061	0.176

Table 32. (Continued)

Item #	Task	*r*	*p* value
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.025	0.593
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	-0.02	0.675
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.059	0.204
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.042	0.377
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.053	0.262
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.051	0.28
70	Lead or participate in School Improvement Teams	0.003	0.957
71	Maintain and support a computer network for the media center	-0.024	0.629
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.005	0.909
73	Work cooperatively with district and/or regional education and media center service units	0.039	0.381
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.044	0.327
75	Keep informed about new technologies	0.014	0.75
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.035	0.442

Level of Technology Integration

The level to which a school has been able to develop technological capacity, especially as it relates to the use of computers, may have an effect on the school library media specialist's responses to the job task analysis items. Therefore, several questions were placed in the survey to determine the level of technology integration at the schools of the respondents. In addition, an attempt to ascertain the respondent's level of activity within the technological environment of their school was made. A summary of some of those responses can be seen in Table 33.

Table 33.

Partial Technology Item Comparison-Selected Demographic and Environmental Factors

Item statement	Yes		No	
	n	%	n	%
School-wide computer network	487	98.8	5	1
Media center integrated into school network	478	97.6	11	2.2
Primary Technology person	93	19	397	81
Have a fulltime Technology person	328	66.7	85	17.3
Have a part time Technology person	79	16.1	--	--

Note that 81% of the respondents were not the primary technology person in their schools. This data, along with the data from the item related to having a fulltime technology support person in their schools, seems to indicate that many schools/school districts have made a commitment to the technology focus by designating someone, other than the school library media specialist, as the person responsible for technology related issues.

Table 34 reflects the change in the number of schools with school-wide networks from 1996 to 2006.

Table 34.

Comparison for School-wide Computer Network 1996 to 2006

	1996		2006	
	Frequency	%	Frequency	%
Yes	164	31.9	487	98.8
No	339	66.0	5	1

The Spearman rank correlation for "school-wide computer network" and the job task analysis items found three statistically significant correlations. The first was item 60, "Organize and participate in technology teams/technical committees" (*r=.109, p=.015).* The second correlation was with item 61, "Use online services to retrieve information (e.g., in doing research)" (*r=.118, p=.008).* The third correlation was with item 72, "Attend meetings, conferences and participate in professional organizations (e.g., FAME, AASL, etc.) (*r=.095, p=.034).* The correlational matrix for this comparison is reported in Table 35.

Table 35.

Spearman Correlation Matrix-School-wide Computer Network to the 37 Job Tasks

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.058	0.2
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.012	0.796

Table 35. (Continued)

Item #	Task	Correlation coefficient	*p* value
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.065	0.155
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.048	0.292
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.011	0.814
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.037	0.42
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.072	0.12
47	Work with teachers to design innovative instructional approaches	0.042	0.364
48	Participate in team teaching activities	0.004	0.932
49	Inform faculty of new media center services, materials, and technology	0.032	0.485
50	Keep teachers informed concerning students' information skills	0.015	0.744
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.011	0.817
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.023	0.617
53	Assist students and/or teachers in locating and selecting materials	0.018	0.694
54	Instruct teachers and students in media center policies and procedures	0.052	0.259
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.04	0.388
56	Assist teacher and students in the use of production techniques	0.012	0.797
57	Instruct students and/or teachers in the use of the public access catalog system	0.072	0.121

Table 35. (Continued)

Item #	Task	Correlation coefficient	*p* value
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.064	0.157
59	Provide adaptive technologies for students with special needs	0.051	0.261
60	Organize and/or participate in technology teams/technical committees	0.109*	0.015
61	Use online services to retrieve information (e.g., in doing research)	0.118*	0.008
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.061	0.181
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.08	0.076
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.012	0.79
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.035	0.462
66	Develop a strategic plan for the media center, including mission, goals and objectives	-0.01	0.836
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.016	0.733
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	-0.02	0.679
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.041	0.387
70	Lead or participate in School Improvement Teams	0.027	0.575
71	Maintain and support a computer network for the media center	0.034	0.482

Table 35. (Continued)

Item #	Task	Correlation coefficient	*p* value
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.095*	0.034
73	Work cooperatively with district and/or regional education and media center service units	0.055	0.219
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.041	0.368
75	Keep informed about new technologies	0.077	0.086
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.039	0.387

*Correlation significant at the .05 level (2-tailed)

Another item asked, "Can students and/or teachers access electronic resources from their classrooms?" To this question 85.3% responded that all can access these resources from their classroom, while 11.9% responded that some can access and 2.8% responded that none could access these resources from their classrooms.

The Spearman correlation for "media center integrated into school-wide network" and the job task analysis items found two statistically significant correlations. The first was with item 48, "Participate in team teaching activities" (*r=.099, p=.033).* The second correlation was with item 68, "Interpret and apply national, regional, state, and local standards and guidelines to library media programs (*r=.120, p=.010).*

Whether or not the school library media center was integrated into the school wide network was determined by the answer to the question, "Can students and/or teacher access electronic resourced from their classrooms." The correlational matrix for this comparison can be seen in Table 36.

Table 36.

Spearman Correlation Matrix-Media Center Integrated into School-wide Network with the 37 Job Task Analysis Items

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.082	0.07
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.069	0.124
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.039	0.392
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.034	0.453
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.046	0.308
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	-0.02	0.66
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.05	0.283
47	Work with teachers to design innovative instructional approaches	0.076	0.098
48	Participate in team teaching activities	0.099*	0.033
49	Inform faculty of new media center services, materials, and technology	0.016	0.724
50	Keep teachers informed concerning students' information skills	0.036	0.431
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.008	0.868
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.027	0.554

Table 36. (Continued)

Item #	Task	Correlation coefficient	*p* value
53	Assist students and/or teachers in locating and selecting materials	0.057	0.22
54	Instruct teachers and students in media center policies and procedures	0.025	0.594
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.045	0.328
56	Assist teacher and students in the use of production techniques	0.04	0.396
57	Instruct students and/or teachers in the use of the public access catalog system	0.031	0.502
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.031	0.485
59	Provide adaptive technologies for students with special needs	0.003	0.953
60	Organize and/or participate in technology teams/technical committees	0.049	0.274
61	Use online services to retrieve information (e.g., in doing research)	0.01	0.817
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.033	0.477
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.016	0.714
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.072	0.125
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.012	0.802
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.061	0.192
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.007	0.883

Table 36. (Continued)

Item #	Task	Correlation coefficient	*p* value
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.120*	0.01
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.038	0.42
70	Lead or participate in School Improvement Teams	0.019	0.697
71	Maintain and support a computer network for the media center	0.026	0.595
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.019	0.675
73	Work cooperatively with district and/or regional education and media center service units	0.014	0.751
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.013	0.775
75	Keep informed about new technologies	0.021	0.635
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.059	0.188

*Correlation significant at the .05 level (2-tailed)

Table 37 shows the responses to whether or not the school library media specialist offered training in the use of computers to students and/or teachers.

Table 37.

Frequency of Computer Training Offered by the School Library Media Specialist

Frequency of Training	Teachers		Students	
	n	%	n	%
Frequently	116	23.6	264	53.4
Occasionally	250	50.8	164	33.2
Rarely	90	18.3	38	7.7
Never	36	7.3	28	5.7

. In addition to the previous variable, item 68, "Interpret and apply national, regional, state, and local standards and guidelines to library media programs," also correlated with the media specialist as the primary technology person (*r=.093, p=.048).* The second item to correlate with the media specialist as the primary technology person was item 76, "Upgrade relevant professional skills (e.g., attend college courses and/or seminars" (*r=.095, p=.035).* This comparison is reported in Table 37.

Table 38.

Spearman Correlation Matrix-SLMS as Primary Tech Support Person to 37 Job Tasks

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.026	0.562
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.009	0.845
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.078	0.087

Table 38. (Continued)

Item #	Task	Correlation coefficient	*p* value
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.055	0.226
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	-0.036	0.429
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.015	0.749
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.025	0.595
47	Work with teachers to design innovative instructional approaches	0.020	0.669
48	Participate in team teaching activities	0.020	0.665
49	Inform faculty of new media center services, materials, and technology	0.083	0.071
50	Keep teachers informed concerning students' information skills	0.026	0.567
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.000	0.992
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	-0.038	0.417
53	Assist students and/or teachers in locating and selecting materials	0.033	0.480
54	Instruct teachers and students in media center policies and procedures	0.004	0.939
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.035	0.452
56	Assist teacher and students in the use of production techniques	0.009	0.843
57	Instruct students and/or teachers in the use of the public access catalog system	0.011	0.818
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.046	0.311

Table 38. (Continued)

Item #	Task	Correlation coefficient	*p* value
59	Provide adaptive technologies for students with special needs	0.014	0.747
60	Organize and/or participate in technology teams/technical committees	0.012	0.794
61	Use online services to retrieve information (e.g., in doing research)	0.032	0.470
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.023	0.626
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.018	0.693
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.011	0.817
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.058	0.217
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.024	0.611
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.034	0.468
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.093*	0.048
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.012	0.800
70	Lead or participate in School Improvement Teams	0.032	0.497
71	Maintain and support a computer network for the media center	0.029	0.546
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.078	0.081

Table 38. (Continued)

Item #	Task	Correlation coefficient	*p* value
73	Work cooperatively with district and/or regional education and media center service units	0.036	0.426
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.015	0.731
75	Keep informed about new technologies	0.073	0.102
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.095*	0.035

*Correlation is significant at the .05 level (2-tailed)

The Spearman correlation for "fulltime technology person" to the 37 job task analysis items found no statistically significant correlations. The correlation matrix for that procedure can be found in Table 39.

Table 39.

Spearman Correlation Matrix-Fulltime Technology Person to the 37 Job Tasks

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.006	0.892
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.035	0.437
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.003	0.945
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.022	0.625
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.075	0.098

Table 39. (Continued)

Item #	Task	Correlation coefficient	*p* value
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.01	0.825
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.025	0.592
47	Work with teachers to design innovative instructional approaches	0.069	0.136
48	Participate in team teaching activities	0.05	0.282
49	Inform faculty of new media center services, materials, and technology	0.056	0.223
50	Keep teachers informed concerning students' information skills	0.058	0.208
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.042	0.36
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.016	0.725
53	Assist students and/or teachers in locating and selecting materials	0.012	0.804
54	Instruct teachers and students in media center policies and procedures	0.014	0.758
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.017	0.706
56	Assist teacher and students in the use of production techniques	0.054	0.249
57	Instruct students and/or teachers in the use of the public access catalog system	0.017	0.719
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.035	0.44
59	Provide adaptive technologies for students with special needs	0.049	0.275
60	Organize and/or participate in technology teams/technical committees	0.038	0.403
61	Use online services to retrieve information (e.g., in doing research)	0.011	0.8

Table 39. (Continued)

Item #	Task	Correlation coefficient	*p* value
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	-0.025	0.597
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.044	0.323
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.007	0.879
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.009	0.849
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.072	0.12
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.017	0.712
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.019	0.692
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	-0.01	0.83
70	Lead or participate in School Improvement Teams	-0.046	0.334
71	Maintain and support a computer network for the media center	-0.005	0.913
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.017	0.704
73	Work cooperatively with district and/or regional education and media center service units	0.02	0.65
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.024	0.592
75	Keep informed about new technologies	0.001	0.988

Table 39. (Continued)

Item #	Task	Correlation coefficient	*p* value
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.014	0.763

*Correlation is significant at the .05 level (2-tailed)

School Library Media Specialists' Demographic Variables that May Correlate with Job Task Analysis Responses

Research Question 4*:* Do demographic variables, related to the school library media specialist, correlate with their ratings of job tasks in collaboration, leadership and technology? The specific factors of interest to are:

a. Gender
b. Age
c. Ethnicity
d. Highest degree earned
e. Years in teaching
f. Years as a school library media specialist
g. Time in current position
h. Method of earning certification

Gender

Using the Pearson Product Moment Correlation, the gender of the respondents was compared to the 37 job task analysis items. One significant correlation was found at the .05 level between this variable and the saliency of the 37 job task analysis items. That correlation occurred with item 57, "Instruct students and/or teachers in the use of the public access catalog system" (*r=0.136, p=.004).* Table 40 shows the correlation matrix for that comparison.

Table 40.

Pearson Correlation Matrix-Gender to the 37 Job Tasks

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.024	0.588
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.040	0.379
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.002	0.961
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.009	0.839
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.029	0.524
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.015	0.748
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.002	0.961
47	Work with teachers to design innovative instructional approaches	0.054	0.241
48	Participate in team teaching activities	-0.037	0.420
49	Inform faculty of new media center services, materials, and technology	0.030	0.510
50	Keep teachers informed concerning students' information skills	0.034	0.457
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.002	0.959
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.015	0.743

Table 40. (Continued)

Item #	Task	Correlation coefficient	*p* value
53	Assist students and/or teachers in locating and selecting materials	0.078	0.091
54	Instruct teachers and students in media center policies and procedures	0.021	0.649
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.054	0.242
56	Assist teacher and students in the use of production techniques	0.025	0.596
57	Instruct students and/or teachers in the use of the public access catalog system	0.136*	0.004
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.016	0.716
59	Provide adaptive technologies for students with special needs	0.039	0.380
60	Organize and/or participate in technology teams/technical committees	0.044	0.326
61	Use online services to retrieve information (e.g., in doing research)	0.050	0.270
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.008	0.870
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	-0.024	0.600
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.035	0.456
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.045	0.335
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.007	0.875
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.006	0.893

Table 40. (Continued)

Item #	Task	Correlation coefficient	*p* value
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.009	0.850
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.046	0.327
70	Lead or participate in School Improvement Teams	0.009	0.844
71	Maintain and support a computer network for the media center	-0.013	0.790
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.033	0.460
73	Work cooperatively with district and/or regional education and media center service units	0.016	0.725
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.001	0.981
75	Keep informed about new technologies	0.037	0.407
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.027	0.543

*Correlation is significant at the .05 level (2-tailed)

Age

Analyses comparing this variable to the 37 job task analysis items, using the Pearson Product Moment Correlation, found no statistically significant correlations. The correlation matrix for this analysis is shown in Table 41.

Table 41.

Pearson Correlation Matrix-Age to 37 Job Tasks

Item #	Task	Correlation coefficient	*p* value
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.014	0.753
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.005	0.909
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.020	0.657
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.041	0.357
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.079	0.078
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.050	0.271
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.026	0.556
47	Work with teachers to design innovative instructional approaches	-0.051	0.256
48	Participate in team teaching activities	-.0037	0.417
49	Inform faculty of new media center services, materials, and technology	0.065	0.150
50	Keep teachers informed concerning students' information skills	0.003	0.948
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.027	0.548
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.022	0.619

Table 41. (Continued)

Item #	Task	Correlation coefficient	*p* value
53	Assist students and/or teachers in locating and selecting materials	0.025	0.583
54	Instruct teachers and students in media center policies and procedures	-0.001	0.977
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.005	0.910
56	Assist teacher and students in the use of production techniques	0.025	0.605
57	Instruct students and/or teachers in the use of the public access catalog system	0.040	0.404
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.016	0.737
59	Provide adaptive technologies for students with special needs	-0.018	0.706
60	Organize and/or participate in technology teams/technical committees	0.055	0.247
61	Use online services to retrieve information (e.g., in doing research)	0.001	0.977
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.053	0.272
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	-0.027	0.576
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	-0.052	0.279
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.040	0.408
66	Develop a strategic plan for the media center, including mission, goals and objectives	-0.048	0.321
67	Organize and/or facilitate a school media advisory committee for short and long range planning	-0.041	0.389

Table 41. (Continued)

Item #	Task	Correlation coefficient	*p* value
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	-0.040	0.398
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	-0.072	0.134
70	Lead or participate in School Improvement Teams	-0.025	0.605
71	Maintain and support a computer network for the media center	0.020	0.674
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.012	0.810
73	Work cooperatively with district and/or regional education and media center service units	-0.085	0.077
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.015	0.759
75	Keep informed about new technologies	-0.009	0.849
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.034	0.484

Ethnicity

An ANOVA was used to determine the measures of association for the variable ethnicity to the 37 job task analysis items. Table 42 reports the results of that analysis.

Table 42.

Measure of Association between Ethnicity and the 37 Job Tasks

		Measures of Association	
Item #	Item Statement	Eta	Eta Squared
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.0869	0.0076
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.1249	0.0156

Table 42. (Continued)

Item #	Item Statement	Measures of Association	
		Eta	Eta Squared
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.1103	0.0122
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.1493	0.0223
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.0426	0.0018
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	0.0745	0.0055
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.0259	0.0007
47	Work with teachers to design innovative instructional approaches	0.0423	0.0018
48	Participate in team teaching activities	0.0711	0.0051
49	Inform faculty of new media center services, materials, and technology	0.0915	0.0084
50	Keep teachers informed concerning students' information skills	0.1043	0.0109
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.0948	0.0090
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	0.1185	0.0140
53	Assist students and/or teachers in locating and selecting materials	0.0851	0.0072
54	Instruct teachers and students in media center policies and procedures	0.1704	0.0290
55	Inform faculty and/or students of copyright laws and interpret as necessary	0.0852	0.0073
56	Assist teacher and students in the use of production techniques	0.1347	0.0182
57	Instruct students and/or teachers in the use of the public access catalog system	0.0776	0.0060

Table 42. (Continued)

Item #	Item Statement	Measures of Association	
		Eta	Eta Squared
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.0598	0.0036
59	Provide adaptive technologies for students with special needs	0.0889	0.0079
60	Organize and/or participate in technology teams/technical committees	0.1446	0.0209
61	Use online services to retrieve information (e.g., in doing research)	0.0715	0.0051
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.1232	0.0152
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.0738	0.0054
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	0.1093	0.0119
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.1275	0.0163
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.0951	0.0090
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.0829	0.0069
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	0.1023	0.0105
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	0.0902	0.0081
70	Lead or participate in School Improvement Teams	0.0674	0.0045
71	Maintain and support a computer network for the media center	0.1440	0.0207
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.0897	0.0080

Table 42. (Continued)

Item #	Item Statement	Measures of Association Eta	Eta Squared
73	Work cooperatively with district and/or regional education and media center service units	0.0569	0.0032
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.0493	0.0024
75	Keep informed about new technologies	0.1301	0.0169
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.1029	0.0106

Since an eta squared value of 1 indicates the amount of variance that can be attributed to the independent variable; the eta squared values shown in Table 41 indicate that very small portions of the variance can be explained by the independent variable ethnicity.

Highest degree earned

One statistically significant correlation was found when comparing the saliency scores on the 37 job task analysis items with the highest degree earned. The correlation occurred with item 69, "Plan and participate in meetings to present the functions and services of the media center to parent and community organizations" (*r=-.100, p=.034).* Table 43 presents the correlational matrix for this variable and the next four demographic variables of school library media specialists to be discussed in this section.

Table 43.

Spearman Correlation Matrix-School Library Media Specialists' Demographics to the 37 Tasks

Item #	Item statement	Highest degree		Years as teacher		Years as SLMS		Time current position		Method of certification	
		r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	0.012	0.787	0.014	0.76	-0.018	0.698	-0.007	0.883	-0.038	0.406
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	0.061	0 175	0.025	0.596	0.089	0.056	0.043	0.345	-0.036	0.427
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0	0.991	0.072	0.126	0.031	0.514	0.048	0.302	-0.075	0.1
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	-0.019	0.677	-0.001	0.982	0.055	0.243	0.044	0.336	-0.058	0.201
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	-0.025	0.581	-0.016	0.726	-0.006	0.897	0.006	0.895	-0.089*	0.05
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	-0.048	0.295	0.042	0.364	0.081	0.084	0.074	0.107	-0.083	0.067
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.066	0.155	-0.001	0.989	0.055	0.254	0.042	0.377	-0.039	0.396
47	Work with teachers to design innovative instructional approaches	0.061	0.184	0.032	0.503	0.037	0.438	0.006	0.900	-0.003	0.951
48	Participate in team teaching activities	0.041	0.382	-0.009	0.845	0.066	0.171	-0.051	0.279	-0.011	0.81
49	Inform faculty of new media center services, materials, and technology	0.003	0.954	0.085	0.074	0.056	0.235	0.046	0.326	-0.022	0.626

Table 43. (Continued)

Item #	Item statement	Highest degree		Years as teacher		Years as SLMS		Time current position		Method of certification	
		r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
50	Keep teachers informed concerning students' information skills	0.031	0.503	-0.049	0.301	0.013	0.777	-0.014	0.960	-0.075	0.104
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	0.006	0.903	0.009	0.845	0.016	0.731	-0.035	0.460	-0.036	0.434
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	-0.036	0.433	0.038	0.425	0.087	0.07	0.002	0.960	0.02	0.663
53	Assist students and/or teachers in locating and selecting materials	0	0.995	0.009	0.857	0.086	0.073	0.039	0.405	-0.021	0.649
54	Instruct teachers and students in media center policies and procedures	-0.04	0.387	0.007	0.89	0.089	0.062	0.042	0.370	-0.036	0.44
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.065	0.157	0.027	0.577	0.039	0.409	-0.004	0.926	-0.042	0.368
56	Assist teacher and students in the use of production techniques	0.042	0.375	0.047	0.335	0.023	0.644	0.114*	0.017	0.007	0.876
57	Instruct students and/or teachers in the use of the public access catalog system	-0.005	0.923	0.024	0.614	0.035	0.473	0.036	0.452	-0.061	0.193
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	-0.006	0.89	0.04	0.385	0.086	0.064	0.029	0.532	-0.072	0.109
59	Provide adaptive technologies for students with special needs	0.032	0.482	-0.016	0.722	0.046	0.318	0.023	0.620	-0.075	0.096
60	Organize and/or participate in technology teams/technical committees	-0.015	0.74	0.058	0.21	0.012	0.8	-0.011	0.816	-0.035	0.43
61	Use online services to retrieve information (e.g., in doing research)	-0.055	0.223	0.033	0.481	0.011	0.813	0.046	0.310	-0.087	0.054
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	-0.054	0.255	0.044	0.365	0.048	0.32	0.086	0.070	-0.071	0.13
63	Work with faculty to coordinate media	-0.039	0.383	0.013	0.772	0.041	0.375	0.087	0.057	-0.051	0.256

Table 43. (Continued)

Item #	Item statement	Highest degree		Years as teacher		Years as SLMS		Time current position		Method of certification	
		r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
	center materials, activities, and technology in conjunction with curriculum programs, units, and text books										
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	-0.057	0.222	0.015	0.756	0.025	0.6	0.082	0.085	-0.082	0.079
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	-0.001	0.99	0.012	0.807	0.027	0.574	0.041	0.392	-0.067	0.153
66	Develop a strategic plan for the media center, including mission, goals and objectives	0.033	0.472	0.004	0.93	0.042	0.379	-0.013	0.791	-0.008	0.866
67	Organize and/or facilitate a school media advisory committee for short and long range planning	-0.077	0.103	0.01	0.834	-0.012	0.8	-0.013	0.784	-0.08	0.089
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	-0.004	0.928	-0.001	0.981	0.055	0.254	0.080	0.093	-0.046	0.33
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	-0.100*	0.034	0.013	0.783	0.037	0.448	0.000	0.993	-0.136*	0.004
70	Lead or participate in School Improvement Teams	-0.091	0.056	0.117*	0.018	0.087	0.077	0.077	0.111	-0.161*	0.001
71	Maintain and support a computer network for the media center	-0.061	0.211	0.13*	0.01	0.067	0.184	0.100*	0.042	-0.035	0.469
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	0.024	0.588	0.002	0.958	0.029	0.533	-0.019	0.671	0.016	0.722
73	Work cooperatively with district and/or regional education and media center service	0.003	0.941	-0.037	0.43	0.059	0.204	-0.033	0.467	-0.048	0.285

Table 43. (Continued)

Item #	Item statement	Highest degree		Years as teacher		Years as SLMS		Time current position		Method of certification	
		r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
	units										
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	-0.003	0.945	0.043	0.348	-0.008	0.865	0.014	0.760	-0.087	0.054
75	Keep informed about new technologies	-0.014	0.761	0.046	0.316	0.022	0.634	-0.008	0.869	-0.044	0.331
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.002	0.963	-0.014	0.767	0.066	0.157	0.019	0.684	0.013	0.767

*Correlation significant and the .05 level (2-tailed)

Table 44 shows the mean saliency comparison for highest degree earned with item 69.

Table 44.

Mean Saliency Comparison for Highest Degree Earned with Item 69

Degree	Saliency	SD	n
Bachelor	2.64	0.98	27
Some Graduate Work	2.57	1.17	62
Master's	2.73	0.94	323
Specialist	2.64	0.92	26
Ed.D.	3.50	0.24	2
Ph.D.	2.89	1.17	3

Based on the representation of the data in Table 44, it would appear that those respondents holding the Ed.D. Degree considered this item more salient than did the other respondents. However, this observation is somewhat misleading since there were only two respondents in this category. The same may be said for those holding the Ph.D. since there were only three respondents holding this degree. Therefore, the comparison between the other four degree categories may be more appropriate than are the last two.

Years as a Teacher

Statistically significant correlations were found between this variable and item 70, "Lead or participate in School Improvement Teams" (*r=.117, p=.018)* and with item 71, "Maintain and support a computer network for the media center" (*r=0.13, p=0.01).* A comparison of number of years as a teacher to the mean saliency for these items is reported in Table 45. The correlation matrix for this comparison can be seen in Table 42.

Table 45.

Comparison for Number of Years as a Teacher to Mean Saliency of Item 70

Number of Years as a Teacher	Item 70			Item 71		
	Saliency	SD	n	Saliency	SD	n
0-5	3.13	1.04	48	3.50	1.05	42
6-10	3.04	1.08	48	3.43	1.16	41
11-15	3.21	0.89	46	3.58	1.24	48
16-20	2.87	1.41	66	3.52	0.99	60
21-25	3.06	0.99	57	3.38	1.19	55
26-30	3.21	0.96	63	3.07	1.32	63
More than 30	2.99	0.89	86	3.33	1.20	83

Table 45 indicates that those respondents who had been a teacher for 26-30 years rated leading and/or participating in the School Improvement Team higher than did those respondents in other time as teacher categories. Table 45 further indicates that those respondents were teachers for 11-15 years rated maintaining the media center network higher than did respondents in the other categories.

Years as School Library Media Specialist

No significant correlations were found between the number of years a respondent had been a school library media specialist and their ratings on the 37 resurveyed job task analysis items. The correlation matrix for this comparison can be seen in Table 43.

Time in Current Position

A significant correlation was found with this variable and item 56, "Assist teachers and students in the use of production techniques" (*r=0.114, p=.017).* A correlation was also identified between this variable and item 71, "Maintain and support computer network for the media center" (*r=0.100, p=.048).* The mean saliency for each of these items by time in current position is shown in Table 46. The correlation matrix for this comparison can be seen in Table 42.

Table 46.

Mean Saliency by Time in Current Position for Items 56 and 71

Time in current position	Item 56			Item 71		
	Saliency	SD	n	Saliency	SD	n
1-5	2.32	0.99	219	3.44	1.17	207
6-10	2.49	0.95	107	3.47	1.16	104
11-15	2.57	0.98	37	3.28	1.07	33
16-20	2.39	0.99	31	3.33	1.03	30
21-25	2.26	0.95	17	3.28	1.33	17
More than 25	2.58	0.56	23	3.15	1.36	19

Note that in all groupings the mean saliency for item 71 was higher than for item 56. This may indicate that maintaining the computer network in the school library media center was perceived to be of more value than assisting students and teachers in the use of production techniques.

Method of Earning Certification

Three significant correlations were found between the respondents' method of earning certification as a school library media specialist and responses on the 37 job task analysis items. The first correlation was with item 44, ""Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)" (*r=-0.089, p=.05).* The second correlation was with item 69, "Plan and participate in meetings to present the functions and services of the media center to parent and community organizations" (*r=-0.136, p=0.004).* The third correlation was with item 70, "Lead or participate in School Improvement Teams" (*r=-0.161, p=0.001).*The mean saliency by method of earning certification for each item is shown in Table 47. The correlation matrix for this variable can be seen in Table 43.

Table 47.

Mean Saliency for Method of Certification of Items 44, 69 and 70

Method of Certification	Item 44			Item 69			Item70		
	Saliency	SD	n	Saliency	SD	n	Saliency	SD	n
Not currently certified	3.27	1.08	9	1.73	0.78	9	2.53	1.14	9
Passing the FTCE with no coursework	2.89	0.91	31	2.68	0.88	31	3.34	0.98	32
Passing FTCE with some coursework	3.20	0.89	47	2.75	0.83	45	2.89	0.81	44
Certified prior to the FTCE requirement	3.21	0.86	109	2.79	1.00	100	3.18	0.96	102
By taking 30 hours of DOE required coursework and FTCE	3.08	0.88	50	2.89	0.84	49	3.18	0.88	46

Table 47. (Continued)

Method of Certification	Item 44			Item 69			Item70		
	Saliency	SD	n	Saliency	SD	n	Saliency	SD	n
Earning a Master's degree and FTCE	3.08	0.97	222	2.71	0.94	197	3.01	1.02	191

Note that of the two largest responding groups, the respondents who earned their certification prior to the FTCE requirement rated all three of these items higher than did the respondents who earned a Master's degree.

School Demographic Variables that may Correlate to Perceptions about the 37 Job Task Analysis Items

Research Question 5: Do demographic variables, related to the school, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:

a. Level of the school: elementary, middle, high, other
b. Number of students
c. Geographic location: rural, rural/suburban, suburban, suburban/urban, urban

Level of School

Comparing information about school level using a Spearman rank correlation, seven significant correlations were identified. Those correlated items were:

- Item 42, "Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)" (*r=0.177, p=0).* When focusing on the three major school levels (elementary, middle and high), respondents at the high school level rated

this item higher than did the other two levels. See Table 49 for the mean saliency comparison of these correlated items by level of school.

- Item 44, “Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)” *(r=0.182, p=0.000).* When focusing on the three major school levels (elementary, middle and high), respondents at the high school level rated this item higher than did the other two levels.
- Item 45, “Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques” *(r=-0.137, p=0.003).* When focusing on the three major school levels (elementary, middle and high), respondents at the high school level rated this item higher than did the other two levels.
- Item 53, “Assist students and/or teachers in locating and selecting materials” *(r=0.137, p=0.003).* When focusing on the three major school levels (elementary, middle and high), respondents at the high school level rated this item higher than did the other two levels.
- Item 55, “Inform faculty and/or students of copyright laws and interpret as necessary” (*r=-.110, p=.017).* When focusing on the three major school levels (elementary, middle and high), respondents at the high school level rated this item higher than did the other two levels.
- Item 62, “Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides” *(r=0.138, p=0.003).* When focusing on the three major school levels (elementary, middle

and high), respondents at the middle school level rated this item higher than did the other two levels.

- Item 66, “Develop a strategic plan for the media center, including mission, goals and objectives” *(r=-0.149, p=0.001).* When focusing on the three major school levels (elementary, middle and high), respondents at the middle school level rated this item higher than did the other two levels.

The full correlational matrix is reported in Table 48. Table 48 also reports the correlational results for the other variables to be discussed in this section.

Table 48.

Spearman Correlation Matrix-School Demographics to the 37 Job Tasks

Item #	Item statement	School level		# students		Geog. location	
		r	*p*	*r*	*p*	*r*	*p*
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	1	--	1	--	1	--
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	-0.051	0.265	0.005	0.905	0.083	0.066
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.177*	0.000	0.088	0.052	0.013	0.779
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	0.076	0.098	0.114*	0.012	0.000	0.994
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	0.182*	0.000	0.145*	0.001	0.064	0.16
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	-0.137*	0.003	0.047	0.298	-0.01	0.824
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	0.061	0.185	0.034	0.452	0.044	0.338
47	Work with teachers to design innovative	0.038	0.418	0.057	0.224	0.021	0.658

Table 48. (Continued)

Item #	Item statement	School level		# students		Geog. location	
		r	*p*	*r*	*p*	*r*	*p*
	instructional approaches						
48	Participate in team teaching activities	0.073	0.116	-0.012	0.795	0.069	0.136
49	Inform faculty of new media center services, materials, and technology	-0.014	0.767	-0.009	0.839	-0.008	0.856
50	Keep teachers informed concerning students' information skills	0.022	0.629	0.034	0.467	-0.022	0.637
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	-0.068	0.142	0.026	0.578	0.022	0.640
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	-0.035	0.449	0.043	0.355	0.004	0.932
53	Assist students and/or teachers in locating and selecting materials	0.137*	0.003	0.039	0.396	0.049	0.290
54	Instruct teachers and students in media center policies and procedures	-0.027	0.566	0.026	0.576	0.022	0.638
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.110*	0.017	-0.065	0.162	0.014	0.763
56	Assist teacher and students in the use of production techniques	0.034	0.465	0.005	0.921	0.024	0.608
57	Instruct students and/or teachers in the use of the public access catalog system	-0.051	0.263	0.021	0.654	-0.036	0.441

Table 48. (Continued)

Item #	Item statement	School level		# students		Geog. location	
		r	*p*	*r*	*p*	*r*	*p*
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	0.045	0.322	0.023	0.624	-0.104*	0.026
59	Provide adaptive technologies for students with special needs	0.016	0.727	0.064	0.156	0.03	0.502
60	Organize and/or participate in technology teams/technical committees	0.086	0.06	0.047	0.298	0.041	0.360
61	Use online services to retrieve information (e.g., in doing research)	-0.025	0.583	0.098*	0.029	0.012	0.786
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	0.138*	0.003	0.031	0.489	-0.013	0.775
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	0.002	0.972	0.035	0.46	-0.034	0.470
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	-0.005	0.911	0.009	0.838	0.021	0.642
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	0.012	0.745	0.088	0.061	-0.041	0.384

Table 48. (Continued)

Item #	Item statement	School level		# students		Geog. location	
		r	*p*	*r*	*p*	*r*	*p*
66	Develop a strategic plan for the media center, including mission, goals and objectives	-0.149*	0.001	-0.187	0.063	-0.078	0.096
67	Organize and/or facilitate a school media advisory committee for short and long range planning	0.051	0.273	-0.030	0.520	-0.015	0.756
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	-0.047	0.320	-0.074	0.120	-0.132*	0.005
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	-0.054	0.255	0.034	0.476	0.024	0.612
70	Lead or participate in School Improvement Teams	-0.047	0.322	0.021	0.660	-0.045	0.342
71	Maintain and support a computer network for the media center	0.030	0.532	0.026	0.593	0.017	0.723
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.003	0.947	-0.015	0.760	0.023	0.632
73	Work cooperatively with district and/or regional education and media center service units	-0.009	0.840	0.081	0.070	-0.059	0.197
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	0.089	0.052	0.057	0.209	-0.041	0.363
75	Keep informed about new technologies	-0.01	0.831	0.044	0.329	-0.027	0.556

Table 48. (Continued)

Item #	Item statement	School level		# students		Geog. location	
		r	*p*	*r*	*p*	*r*	*p*
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	0.027	0.557	0.079	0.081	0.007	0.885

*Correlation is significant at the .05 level (2-tailed)

Table 49 shows the mean saliency comparisons for items 42, 44, 45, 53, 55, 62 and 66 by level of school.

Table 49

Mean Saliency of Items 42, 44, 45, 53, 55, 62 and 66 by Level of School

Level of School	Item 42			Item 44			Item 45			Item 53			Item 55			Item 62			Item 66		
	Sal	SD	n	Sal	SD	n	Sal	SD	n	Sal	SD	n	Sal	SD	n	Sal	SD	n	Sal	SD	n
Elementary	3.17	1.02	238	3.09	0.92	238	2.99	0.82	237	3.65	0.80	231	3.37	0.83	231	2.19	0.77	212	3.41	0.92	224
Middle	3.04	1.20	85	3.01	0.92	85	2.89	0.96	85	3.79	0.85	79	3.31	0.95	79	2.25	0.77	80	3.54	0.89	83
High	3.48	1.07	110	3.21	0.90	110	3.02	0.77	110	3.89	0.74	101	3.51	0.89	107	2.11	0.65	100	3.48	0.92	101
Combination	3.40	1.00	34	3.31	0.99	33	3.25	0.72	33	3.75	0.70	32	3.49	0.99	32	2.28	0.70	31	3.58	0.88	30
Other	3.00	0.85	9	2.97	0.95	9	3.16	0.77	9	3.48	0.71	8	3.80	1.09	9	2.22	0.33	8	3.37	0.81	9

Number of Students in School

Two correlations were found between the number of students in the school and the 37 job task analysis items. Those correlations occurred with items 43 and 44. Item 43 states, "Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)" *(r=0.114, p=0.012).* Item 44 states, "Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)" *p=0.145, p=0.001)* See the correlational matrix in Table 48. Table 50 reflects the mean saliency for item 42 by number of students in the school.

Table 50.

Mean Saliency of Items 43 and 44 by Number of Students in School

Number of Students	Item 43			Item 44		
	Saliency	SD	n	Saliency	SD	n
1-300	3.29	1.00	15	3.42	0.92	15
301-800	3.13	0.99	199	3.08	0.94	198
801-1300	3.13	0.94	145	3.02	0.94	146
1301-1800	3.25	0.98	36	3.41	0.98	37
1801-2300	3.54	0.97	40	3.12	1.07	39
Over 2300	3.28	0.94	40	3.33	0.85	40

Table 50 indicates that those respondents from the schools with 1801-2300 students rated providing one-to-one instruction in media center and/or school-wide technology resources higher than did those in other size schools. The respondents in schools with

1301-1800 students rated introducing materials of special interest to class groups higher than did the other groups.

Geographic Location of School

A Spearman rank correlation was used to determine if there were any statistically significant correlations between the geographic location of the school and the 37 job task analysis items. A correlation was found with item 58, "Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentation, multimedia presentations, etc.)" (*r=-.104, p=.026).* A correlation was also found with item 68, "Interpret and apply national, regional, state, and local standards and guidelines to library media programs" *(r—0.132, p=0.005).* The correlational matrix may be seen in Table 48. Table 51 represents the mean saliency of items 58 and 68 with geographic location of school.

Table 51.

Mean Saliency of Items 58 and 68 with Geographic Location of School

Geographic Location	Item 58			Item 68		
	Saliency	SD	n	Saliency	SD	n
Rural	2.98	0.91	57	3.19	0.96	56
Rural/Suburban	2.94	0.96	77	3.35	0.95	79
Suburban	3.00	1.03	127	3.08	0.98	126
Suburban/Urban	2.99	1.01	96	3.18	0.94	94
Urban	3.21	0.89	81	3.20	0.93	87

Table 50 indicates that respondents from urban schools rated the instruction of students in the use of various technology objects higher than did respondents from other geographical locations. Respondents from rural/suburban schools rated interpreting and

applying national, regional and local standards and guidelines to their school library media programs higher than did those respondents in other geographic locations.

Chapter Four Summary

The task analysis comparisons showed a number of statistically significant changes in the perceptions of the respondents on the 37 resurveyed job task analysis items. For the 14 job task analysis items determined by the subject matter experts to be related to collaboration nine showed statistically significant differences in the perceptions of the 2006 respondents when compared to the perceptions of the 1996 respondents. For the 13 items related to leadership twelve showed statistically significant differences in the perceptions of the 2006 respondents when compared to the perceptions of the 1996 respondents. For the 10 items related to technology eight showed statistically significant differences in the perceptions of the 2006 respondents when compared to the perceptions of the 1996 respondents. The evaluation of perceptual changes relating to an item not being a part of the respondents' job showed 10 items that had statistically significant positive changes (the percentage of respondents considering that item to not be a part of their job was less than in 1996) while two items showed a statistically significant negative change (the percentage of respondents considering that item to not be a part of their job was greater than in 1996).

In the section of the survey assessing the respondent's level of familiarity with *IP2* several interesting results were identified. First, 62% of the respondents had read this publication at least one time while 26% had scanned it and 12% had never read it. Of those respondents who had read *IP2* the largest percentage came from schools in suburban/urban locations. Second, 60% of the respondents had never attended an in-

service on this publication. In addition, 28% said that they had never made any attempts to try and implement the guidelines set forth in this publication.

Of the environmental factors surveyed the one that had the largest number of statistically significant correlations to the 37 resurveyed job task analysis items was the variable “Principal encourages use of the LMC resources in the planning of curriculum units.” This variable had a statistically significant correlation to twenty-four of the 37 resurveyed job task analysis items.

The most notable demographic change, which related to technology, was in the increase in the number of schools with school-wide computer networks from 1996 to 2006. In 1996 31.9% of the respondents said their school had a school-wide computer network while in 2006 98.8% of the respondents indicated that their school has a school-wide computer network. In addition 85% of the respondents indicated the teachers and students could access electronic resource from their classrooms.

Chapter Five

Conclusions

As noted by Cleaver and Taylor (1983), changes in thinking, especially with regard to the role of the school library media specialist, are not made quickly or without considerable consternation. The major purpose of this study was to determine if some of the perceptual changes that should have occurred as a result of the modifications in school library media national standards set forth in *IP2* have occurred. Based on the data analysis, this chapter presents the conclusions made from this study. These conclusions are based in large part on the 37 resurveyed job task analysis items and the changes, or lack thereof, in the perceptions of school library media specialists in Florida of the saliency of these job tasks. Conclusions are also presented based on the analysis of the various demographic and environmental variables studied.

Research Questions

1. Have school library media specialists' saliency ratings on items related to collaboration, leadership and technology changed since 1996?
2. Does the school library media specialist's level of familiarity with *Information Power: Building Partnerships for Learning* influence their practice as measured by a change in the saliency of selected items resurveyed from a 1996 Job Task Analysis?

3. Do selected environmental factors in public school settings correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest in this study are:
    a. Scheduling model – flexible, fixed or a combination
    b. Administrative support – outward statements of encouragement for teachers to make use of the services of the media program
    c. Full time media program supervisor in the district – district-level coordination of the school media programs throughout the district, including staff development, which could impact the familiarity with, and perceptions of, the importance of implementing national standards in the school media programs.
    d. Level of technology integration – networked status of the school, which could reflect in the ability to access resources offered in the media program; professional development in the use of technology, etc.
4. Do demographic variables, related to the school library media specialist, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest in this study are:
    a. Gender
    b. Age
    c. Ethnicity
    d. Highest degree earned
    e. Years in teaching
    f. Years as a school library media specialist

g. Time in current position

h. Method of earning certification

5. Do demographic variables, related to the school, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest in this study are:

   a. Level of the school: elementary, middle, high, other

   b. Number of students

   c. Geographic location: rural, rural/suburban, suburban, suburban/urban, urban

Major Findings

Demographics

Age

The median age of the sample was 50-59 years (52.2% n=317). While this percentage correlates closely with information reported by Baumbach (2003) it is interesting to note that the median number of years as a media specialist was 1-5 years (30.2% n=182). When combined with the second highest response to this question, 6-10 years (24.1% n=145), those two numbers account for 54.3% of the sample. This is interesting in that it shows that while many of the school library media specialists responding are aging they have not served in this segment of the school environment for very long.

Years in Current Position

The median response for years in current position was 1-5 (49.8% n=300). When one adds the second most frequent response 6-10 years (24.9% n=150) the total of the

two responses shows that 74.7% of the respondents have been in their current position for 10 years or less. These demographics of age and length of time as a school library media specialist, when taken together, may indicate that many of the current school library media specialists have been trained in the time since the publication of *IP2.* Given that *IP2* is used as a core textbook in the school library media programs at NCATE approved programs in Florida, it would seem reasonable to consider that many of these somewhat newly trained school library media specialists would have a current knowledge of *IP2* and their training should have prepared them to implement those goals and objectives. This may account for some of the somewhat significant increases in saliency on the resurveyed job task analysis items in this study.

However, while there may be some practical significance to this notion, the Spearman rank correlation analysis reported no statistical significance between the variables method of earning certification and familiarity with *IP2.* Neither was there any significant correlation between highest degree earned and familiarity with *IP2.* This result was somewhat surprising and will require additional consideration and/or research.

Analysis of the 37 Resurveyed Job Task Analysis Items

Research question 1: Have school library media specialists' saliency ratings on items related to collaboration, leadership and technology changed since 1996?

The task analysis comparisons showed a number of statistically significant changes in the perceptions of the respondents on the 37 resurveyed job task analysis items. For the 14 job task analysis items determined by the subject matter experts to be related to collaboration, 9 showed statistically significant differences in the perceptions of the 2006 respondents when compared to the perceptions of the 1996 respondents. For the

13 items related to leadership, 12 showed statistically significant differences in the perceptions of the 2006 respondents when compared to the perceptions of the 1996 respondents. For the 10 items related to technology, 8 showed statistically significant differences in the perceptions of the 2006 respondents when compared to the perceptions of the 1996 respondents. The evaluation of perceptual changes relating to an item not being a part of the respondents' job showed 10 items that had statistically significant positive changes (the percentage of respondents considering that item to not be a part of their job was less than in 1996) while 2 items showed a statistically significant negative change (the percentage of respondents considering that item to not be a part of their job was greater than in 1996). Additional details about the changes in perception on the 37 job task analysis items are discussed in the following sections.

Collaboration

While the majority of the items in this category had higher saliency scores than in 1996, 42.8% were lower. The statistically significant change in item 45, which showed the highest positive saliency change of .87 (t=11.03, ES=.73) reflects the constructs of *IP2* goals related to information access and delivery (p. 83); the item states, "Conduct workshops/in-service and other training for teachers – use of materials, equipment, technology, and new production techniques." As the means and methods of information access and delivery change, the type of training referenced in this item will remain a valuable component of the school library media program. It is important to document the professionals' commitment to this type of task within school library media programs since, as noted by Lance, et al., 1998, this type of training may be reflective of one

strategy that results in higher test scores for students in schools where the school library media specialist is engaged in such activities..

Item 53 showed the largest (-.27) negative change in actual saliency and was statistically significant (*t=5.24, ES=.34)*. The item states, "Assist students and/or teachers in locating and selecting materials." This may reflect a statistically significant negative shift in the perceptions of school library media services to students and teachers, which has traditionally been one of the bulwarks of the school library media program. This change is somewhat perplexing, since in the 1996 study this was one of the items that was nominated as a task that would benefit from the implementation of additional information technologies (PDRI, p. 51). To see such a statistically significant negative change in the school library media specialists' perception about this area of their program is pause for concern and should be researched in more depth.

Item 52, which had the second largest statistically significant negative change -.15 (*t*=4.47, ES=.29), states, "Assist students and/or teachers with general reference services (e.g., answer reference questions." Even though the effect size on this item was small, it is intriguing that these two items, which reflect the primary function of every librarian, not to mention the school library media specialist, would have decreased in their perceived importance over the last 10 years. Further, this result is incongruous with the investigator's personal observations while visiting school library media centers across the state. The predominate activity occurring during these visits is exactly what these items describe. In addition, as with the previous item, item 52 was the first item listed on the PDRI list of tasks that would most benefit from the implementation of additional

information technologies. This conflict between statistical analysis and personal observation is sufficient reason to pursue additional research in this area.

Leadership

Table 17 shows that all of the items (12 out of 13) related to leadership, with the exception of item 70, had a *t* score that exceeded the critical *t* value. In addition each of these items reflected an effect size large enough to make them somewhat significant. All of the items, with the exception of items 62 (serve on curriculum committees) and 72 (participate in professional organizations and attend conferences) showed a positive change in their saliency scores. Item 72 had a negative saliency change of .73 (*t=14.04, ES=.9),* making this a strong statistically significant change. This item states, "Attend meetings/conferences and participate in professional organization (e.g., FAME, AASL, etc.)." For this item to have such a significant negative shift is important, especially given the fact that FAME was one of the organizations that strongly supported the dissemination of the survey for this study. Given that 74.3% (*n=368)* of the respondents to the survey said that they were currently a member of FAME, this negative perceptual change seems incongruous with reality. However, it is possible to be a member of an organization and yet not attend conferences or in other ways "participate" in the organizations.

Zsiray (2003) identified membership in professional organizations as one of the ways in which school library media specialists who considered themselves leaders in their schools demonstrated that leadership. The operative word in Zsiray's statement was "active" when describing the level of participation in professional organization.

Attendance of professional conferences would seem to indicate an "active" participation in the professional organization.

This negative perception change, related to leadership, also relates to one of the items on the FLDOE's document *School Library Media Specialists Responsibilities*, "Is involved with district, state and/or national level professional organizations." However, this study did not attempt to identify the particular level (local, state or national) at which the respondents were involved in their professional organizations.

Item 76 showed the highest saliency change (1.18) with an effect size of 1.06. This item, "Upgrade relevant professional skills (e.g., attend college courses and/or seminars" appears to reflect a strong commitment on the part of these professionals to keep abreast with changes in the profession. This positive change supports one of Zsiray's characteristics of those school library media specialists who consider themselves to be leaders in their schools. Further, the overall positive shift in saliency means in this category may be a reflection of the respondents' understanding of the importance of the leadership role of the school library media specialist.

The results of this study in the area of leadership seem to indicate that school library media specialists in Florida have a somewhat stronger perception of the importance of their roles as leaders. The respondents' responses on items such as organizing and participating in technology teams, serving on curriculum committees, coordinating special reading programs, developing strategic plans, organizing and facilitating media advisory committees, and planning and participating in meetings to inform parents are indicators of this change.

Technology

The most noticeable positive saliency changes in this category occurred with items 59 (provide adaptive technologies) and 61 (use online services to retrieve information). It was interesting to note these changes in perception; although on item 59, 24% of the respondents did not consider providing adaptive technologies a part of their job; the fact that the saliency increased and was shown to be statistically significant (*t=9.37, ES=.84*) on this item is encouraging.

Theoretically, the use of online services to retrieve information should increase since these services were not available to most schools in 1996. Item 61's saliency increase, along with the medium effect size supports the assumption (*t=11.50, ES=.75*). In addition, this item was one of task listed on the original PDRI study (p. 51) as a task that would be enhanced by the implementation of additional information technologies. One might surmise that the enhancement of school-wide computer networks and the expansion of the availability of electronic resources may have contributed somewhat to this perceptual change.

Three items showed a negative change in saliency. They were items 56 "Assist teacher and students in the use of production techniques", 58 "Instruct students and teachers in the use of various technology objects", and 75 "Keep informed about new technologies". When looking at item 56, it is possible that this change related to level of school. As previously discussed, many high schools have another teacher committed to teaching technology related courses, including video and television production. The responses to item 58 may have been affected by the fact that CDROMS were used in the original example and thus in the example for this study. However, CDROMS have, in

many cases, been replaced by directly accessible electronic resources and therefore the 2006 respondents may not have responded as positively as they would have, had the example included the use of electronic resources rather than CDROMS.

As for item 73, it is difficult to explain why school library media specialists would not consider keeping informed about new technologies to be something that should rank high on their list of things to do. Discussions with several school library media program supervisors have revealed that having a technology specialist in the school sometimes gives the school library media specialist the feeling that they do not have to worry about the technology related issues. This perception is supported by Seavers (2002) who found that the perception of most instructional staff was that the technology specialist was responsible for hardware, software and network issues as well as being the person responsible for training teachers and students in the use of various technologies.

These results from the technology section of the study were compared to the FLDOE *List of Technology Competencies as They Relate to School Library Media Specialist.* Four of the job task analysis items directly related to that list. Item 42, "Provide formal instruction in media center or school-wide technology resources" showed a marginal increase in saliency (1996=3.06, 2006=3.17, *t*=.53, ES=1.67). Although this item, based on the effect size, shows some statistical significance there is more practical significance to be noted. Based on *IP2* the school library media specialist should be actively involved in this task. Since 81.3% of the respondents stated that they were not their schools' primary technology person, their responses to this item would reflect that they do not spend as much time in this area.

Another item on the FLDOE list of technology competencies that did reflect a significant change in saliency (1996=.99, 2006=3.13, *t*=2.00, ES=2.13) was item 43, "Provide informal instruction to students in media center and/or school-wide technology resources." It is interesting to note the significant difference between the provision of formal and informal instruction. The fact that informal instruction has increased dramatically while formal instruction has basically remained the same would, to some degree, be in keeping with the goals of *IP2*. This change also somewhat confirms Craver's (1994) assumption that school library media specialists of the future would have to change their "parochial" teaching methods in order to meet the learning needs of their students.

The third task analysis item that relates to the FLDOE list of technology competencies is item 58, "Instruct students and/or teachers in the use of various technology objects". The saliency for this item had a negative change (1996=3.36, 2006=3.02, *t*=2.15, ES=2.01). Statistically this is a significant change as well as being of practical significance. Given the increase in online resources, perhaps the respondents no longer consider "technology objects" such as CDROM as something in which they need to offer instruction.

The fourth item on the FLDOE list that had a direct correlation to this study was item 75, "Keep informed about new technologies". The saliency for this item had a negative change (1996=3.63, 2006=3.53, *t*=1.72, ES=1.02). Although this saliency score shows that school library media specialist consider this a relevant task, it is somewhat of a quandary as to why they would consider it less so in 2006 than in 1996, given the continuing influx of new technologies into the schools. This item also relates to FLDOE's

matrix of *Library Media Specialists' Responsibilities* item that states, "Models uses of innovative technologies and provides staff development opportunities." It would be difficult for a school library media specialist to model the uses of new innovative technologies if they do not consider keeping informed about new technologies important.

Baumbach (2003) noted that elementary school library media specialists spend "a great deal of time" managing media center technology; middle school library media specialists spend 50% more time and high school library media specialists spend 100% more time than do the elementary school library media specialists. This finding is specific to those technologies found in the school library media center and does not reflect the amount of time spent assisting with technologies in other parts of the school.

While having the school's media center connected to the school's network is a significant occurrence, the network is not fulfilling its instructional goal if the students and teachers cannot have full access to all of the resources available through the school library media center in their respective classrooms. The fact that 85.5% of those responding said this is possible in their schools is encouraging and supports Morris' (2004) concept of "technology-rich learning environments" throughout the school. However, the amount of actual access from the classroom to media center and other resources via the network was not explored in this study and should be considered for future research.

Further, Baumbach (2003) noted a negative correlation between the number of students in a school with disabilities and the number of computers in a school library media center with accommodations for students with special needs. This negative correlation means that, in many cases, students with disabilities are not able to access the

electronic resources of the school library media center without considerable individualized attention.

Baumbach's findings were somewhat supported by this study in that, on the task analysis item related to providing adaptive technologies for students with disabilities, 24% (n=112) responded that this was not a part of their job. However, the strongest response 29% (n=134) was that the respondent spend about the same amount of time on providing these technologies as they spent on other media center duties. The *not a part of job* response level could be related to the perception on the part of some school personnel, not just the school library media specialist, that other departments of the school district and/or state are responsible for delivering these types of services to students with disabilities. However, it is encouraging to note that many school library media specialists did spend at least an equal amount of time attempting to serve this segment of the student population.

Not a Part of Job

As shown by Figure 4 and Table 19 there were substantial changes in the response levels on the *not a part of job* variable for items related to:

- *Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques*. This item response changed from 30.84% in 1996 to 6.09% in 2006. This is a significant positive change since a reduction in the number of respondents considering this not a part of their job is what would reflect the intent of *IP2* goals. Further, with the continued infusion of new technologies, one would speculate that school library

media specialists would be more actively engaged in this infusion than they may have been in 1996.

- *Participate in team teaching activities*. The level of response changed on this item from 18.24% in 1996 to 13.35% in 2006. Although this is a credible decrease for this item, it remains one that needs to be continuously monitored. In order to further the *IP2* goals for teaching and learning, more in-service needs to be developed to assist school library media specialists with feeling more comfortable with working collaboratively with other members of the instructional staff.
- *Instruct teachers and students in media center policies and procedures*. The response rate change on this item was dramatic; going from 25.83% in 1996 to 43% in 2006. It is difficult to imagine why, even in 1996, any school library media specialist would not consider this a part of their job.
- *Instruct students and/or teachers in the use of the public access catalog system*. The rate of response on this item was considered significant since it changed from 1996 (24.36%) to 2006 (2.14%). This is a significant, albeit understandable, drop. When the 1996 survey was taken, there were still a large number of schools that had not been converted to an electronic public access catalog. The old style card catalog was still in the school library media center at the investigator's school when the investigator became the school library media specialist there in 1996, despite the fact that the electronic public access computer system was fully operational.
- *Provide adaptive technologies for students with special needs.* There was a change in response on this item from 1996 (40.23%) to 2006 (24.09%). Although

this reflects a substantial drop in the number of school library media specialists considering this task to not be a part of their job, the fact that 24% of the respondents do not consider this a part of their job is still cause for concern. In some cases this is understandable since many school library media specialists and classroom teachers see the provision of adaptive technologies as the responsibility of the Special Education Department of their school district. However, it becomes a part of the school library media specialist's job the first time a special needs student attempts to access information and cannot do so because of some hindrance due to lack of the appropriate adaptive technologies being readily available in the school library media center.

- *Organize and/or participate in technology teams/technical committees*. The response on this item dropped from 1996 (31.15%) to 2006 (8.55%). This is a significant reduction. It may reflect the training of the newer school library media specialists as reflected by the numbers of respondents who had been a school library media specialist for 10 years or less. Or, it could reflect the general feeling that if you don't participate, you get left behind; therefore, being a matter of survival.
- *Use online services to retrieve information (e.g., in doing research).* The change in this item's response rate was significant in that it dropped from 1996 (32.28%) to 2006 (0.86%). As with the electronic public access catalog, these types of resources were not very prevalent at the time of the 1996 survey. Since that time school districts have spent millions of dollars in order to offer their students access to high quality electronic resources. The state of Florida recently made

access to the Florida Electronic Library available to all school students for the first time.

- *Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides*. Although not as dramatic as some items, this item also showed substantial change in response from 1996 (20.51%) to 2006 (16.49%). This continues to be a source of needed additional training for school library media specialist. It is inconceivable that the person in the school with the most access to information would not be an active participant on committees discussing curriculum issues.
- *Develop a strategic plan for the media center, including mission, goals and objectives*. The change in the response rate was somewhat smaller than some of the other tasks in this list; however, it was shown to be significant. The change was from 3.52% in 1996 to 1.08% in 2006. Although the rate in 1996 was not very high, the fact that the percentage of school library media specialists placing emphasis on having such a plan in place is encouraging.
- *Plan and participate in meetings to present the functions and services of the media center to parent and community organizations*. This item showed some reduction in response rate from 1996 (17.03%) to 2006 (10.53%). Since the change in *IP2* to the concept of the learning community, it has become even more crucial for the school library media specialist to be actively engaged with the entire learning community, which includes participating in meetings and presentations of information to parents.

- *Upgrade relevant professional skills (e.g., attend college courses and/or seminars.* This item showed significant reduction in response level from 1996 (17.03%) to 2006 (0.42%). This dramatic reduction was somewhat of a surprise. Given that school library media specialists, like classroom teachers, get little or no support from school districts for the costs of additional coursework and seminars, even attending professional conferences, it was encouraging to see the level of commitment to professional development as indicated by the response on this item.

Figure 4 also shows some negative changes for *not a part of job* on the following items:

- *Provide informal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)*(1996 = 1.96%, 2006 = 6.10%). Although no further analysis was done to determine if there was a correlation between any particular school level and this response, it is possible that this relates to school level. The high schools, and occasionally the middle school level, have fulltime technology and/or video production teachers who take on this responsibility. However, it would seem unwise for any school library media specialist to completely remove themselves from involvement in this type of activity.
- *Assist teacher and students in the use of production techniques* (1996 = 8.82%, 2006 = 19.57%). As mentioned previously, this may be related to level of school.

Analysis of Demographic and Environmental Items

School Library Media Specialists' Familiarity with IP2-Correlations with 37 Resurveyed Job task analysis items

Research Question 2: Does the school library media specialist's level of familiarity with *Information Power: Building Partnerships for Learning* correlate to their practice as measured by a change in the saliency of selected items resurveyed from a 1996 Job Task Analysis?

The results of the survey showed that 62% of the respondents had read *IP2* at least one time, while an additional 26% had scanned it. Conversely, that means that 12% of the respondents have never read the publication that sets forth the national standards for school library media programs. In addition, 60% of the respondents had never attended an in-service at which this publication was discussed. These are points of considerable interest and concern. However, in a surprising revelation, 72% of the respondents stated that they had made at least some effort to implement the *IP2* standards. One would ask how, if you haven't read the text and/or haven't attended an in-service would you know whether or not you had made an attempt to implement the standards?

As shown in Table 27, when comparing familiarity with *IP2* to the 37 job task analysis saliency scores, there is only one task that reflects a significant statistical correlation to familiarity with *IP2.* That item, number 42 ($r = 0.09$, $p = 0.0148$), states, "Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)." There could be many factors contributing to this

situation; however, none of the other variables researched in this study seemed to have any statistically significant correlation. Therefore, this should be an area of further research.

While presenting some of the findings from this study at the 2006 FAME Conference, one participant in the session commented, "We often include many of the principles from *Information Power* in our professional development workshops, but presenters do not always reinforce that these principles are coming from *Information Power*." This is a valid point and somewhat of an explanation for the lack of direct correlation between familiarity with *IP2* and the 37 resurveyed job tasks. However, as was reiterated to this participant, it is extremely important that those persons performing training in the field continue to reinforce the importance that the school library media program operates from a set of national standards as do most other curriculum areas within the school environment. Operating from a set of national standards is one of the criteria for being known as a profession.

Environmental Factors that may Correlate with Job Task Analysis Responses

Research Question 3: Do selected environmental factors in public school settings correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:

a. Scheduling model – flexible, fixed or a combination
b. Administrative support – outward statements of encouragement for teachers to make use of the services of the media program

c. Full time media program supervisor in the district – district-level coordination of the school media programs throughout the district, including staff development, which could impact the familiarity with, and perceptions of, the importance of implementing national standards in the school media programs.

d. Level of technology integration – networked status of the school, which could reflect in the ability to access resources offered in the media program; professional development in the use of technology, etc.

Scheduling Model

Scheduling model, based on the national standards and recent research, was considered to be a variable that should show some level of correlation to a number of the resurveyed job task analysis items. Table 29 reports the eight items with which statistically significant correlations were found. They are:

- Item 40, “Provide formal instruction in information skills.”
- Item 41, “Provide informal (one-on-one) instruction in information skills.”
- Item 43, “Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)”
- Item 44, “Introduce materials of special interest to class groups.”
- Item 47, “Work with teachers to design innovative instructional approaches”
- Item 52, “Assist students and/or teachers with general reference services (e.g., answer reference questions)”

- Item 55, “Inform faculty and/or students of copyright laws and interpret as necessary”
- Item 63, “Coordinate special reading, writing, and student production programs.”

The follow up data found in Table 28 shows that the mean saliency ratings for each of the items that requires a more individualized approach is higher for those school library media specialists operating under either a flexible or combination scheduling model than for those operating under a fixed scheduling model. These findings tend to support other studies (Bishop and Larimer, 1999; Callison, 1999; Haycock, 1998; McCracken, 2001 and Tallman & van Deusen, 1994) that indicate the need to allow the school library media center to operate under either a flexible or combination scheduling model in order to give the school library media specialist the flexibility needed to perform these different types of instruction and to coordinate various types of special programs. Further, these findings support Principle Four of *IP2* (p.89), which states, “The library media program requires flexible and equitable access to information, ideas, and resources for learning.” The flexible and/or combination scheduling model may become even more relevant as additional focus is placed on the school library media specialist as a primary promoter of reading and writing skills, in addition to information literacy skills instruction.

Administrative Support

Table 29 reports that the largest number of statistically significant correlations in this study occurred with the variable “The principal encourages teachers to make use of the resources of the school library media center in the development of their curriculum units.” There were statistically significant correlations between this variable and 24 of the

37 resurveyed job task analysis items. This result supports other studies (Haycock 1999; Oberg, 1995; Oberg, Hay & Henri, 2000) that have found that the principal is the single most influential person in the school when it comes to affecting curriculum and the actions of the instructional staff in their school. The items found to correlate with this variable are:

- Item 41, "Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)." Generally, informal instruction occurs most often when the school library media center is operating under a flexible or combination scheduling model. A supportive principal would see such a scheduling model as the most efficient means of achieving collaboration between the classroom teachers and the school library media specialist, thus making informal instruction a more realistic goal.
- Item 43, "Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)." A supportive principal, allowing the school library media center to operate on a flexible or combination would provide the school library media specialist with more time for one-on-one instruction.
- Item 44, "Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)."
- Item 45, "Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques." If the principal is making supportive statements about the use of resources available in the school library media center teachers are more likely to respond favorably to

the offering of training in the use of a variety of materials and technologies in the school library media center.

- Item 46, “Instruct teachers concerning ways to incorporate technology into the classroom curricula.”
- Item 47, “Work with teachers to design innovative instructional approaches.” Supportive statements by the principal will support collaboration between the school library media specialist and the classroom teachers, which will lead to additional request for assistance with innovative teaching strategies using technologies.
- Item 48, “Participate in team teaching activities.”
- Item 49, “Inform faculty of new media center services, materials, and technology.” Supportive statements by the principal will result in classroom teachers expecting the school library media specialist to inform them as new services and materials become available in the school library media center.
- Item 50, “Keep teachers informed concerning students' information skills.”
- Item 51, “Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units.”
- Item 52, “Assist students and/or teachers with general reference services (e.g., answer reference questions).”
- Item 58, “Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.).”
- Item 59, “Provide adaptive technologies for students with special needs.”

- Item 60, “Organize and/or participate in technology teams/technical committees.”
- Item 61, “Use online services to retrieve information (e.g., in doing research).”
- Item 62, “Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides.”
- Item 63, “Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books.”
- Item 65, “Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.).”
- Item 66, “Develop a strategic plan for the media center, including mission, goals and objectives.”
- Item 67, “Organize and/or facilitate a school media advisory committee for short and long range planning.”
- Item 69, “Plan and participate in meetings to present the functions and services of the media center to parent and community organizations.”
- Item 70, “Lead or participate in School Improvement Teams.” A principal who would make supportive statements about the use of the school library media resources may also expect the school library media specialist to participate in such important committees.
- Item 71, “Maintain and support a computer network for the media center.”
- Item 73, “Work cooperatively with district and/or regional education and media center service units.”

Further, these findings support those of Bishop and Larimer (1999) who found that administrators who ask how the teachers are using the resources of the school library

media center and the expertise of the school library media specialist created an atmosphere where collaboration was more likely to occur.

When asked if, in their opinion, if their principal was supportive, 88.3% of the respondents rated their principals, to some degree, supportive. Three statistically significant correlations were found between this variable and the job task analysis items. Those items are:

- Item 44, "Introduce materials of special interest to class groups (e.g., via book talks or story telling activities." This item also was correlated with the previous item related to the *principal* encouraging teachers to make use of the LMC resources in their curriculum planning.
- Item 62, "Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides"
- Item 70, "Lead or participate in School Improvement Teams." This item also was correlated with the previous item related to the *principal* encouraging teachers to make use of the LMC resources in their curriculum planning.

These findings support the tenet of *IP2's* Administrative Principle Four, which states, "An effective library media program requires ongoing administrative support" (p.100).

District Level School Library Media Supervisor

Baumbach (2003) inferred a number of significant effects for the school library media program as a result of having a fulltime or part time supervisor assigned to this area; however, the only significant correlation found in this study was with Item 57, "Instructing students and teachers in the use of the public access catalog." This correlation seems practical in that those districts with school library media supervisors

tend to be the medium and larger sized districts, which in turn have more resources with which to implement electronic public access catalogs earlier than those with fewer resources. It was expected that those districts with a fulltime or part time dedicated school library media program supervisor would have somewhat different perceptions on the job task analysis items; however, no such statistically significant correlations could be identified.

Level of Technology Integration

Table 33 shows that 81% of the respondents were not the primary technology person in their schools. This, along with the data from the item related to having a fulltime technology support person in their schools, seems to indicate that many schools/school districts have made a commitment to the technology focus by designating someone, other than the school library media specialist, as the person responsible for technology related issues. This may have had a somewhat detrimental affect on school library media specialists' perceptions of their role in the technology focus at their schools. This opinion is somewhat validated by the response levels on the *not a part of job* items. On that section, the items related to instructing students in the use of various technology objects and instructing students/teachers in the use of various production techniques both showed increases in those respondents who did not consider these tasks a part of their job.

In the area of offering computer training to students and/or teachers, 74% of the respondents offered such training at least occasionally to teachers. In addition, 86.6% of the respondents offered such training at least occasionally to students. The particulars of

what type of training is specifically involved were not investigated. However, this would be a topic worthy of additional investigation.

The statistically significant correlation found between the variable related to the school library media center being integrated into the school-wide network and item 48, "Participate in team teaching activities" may support the concept that extending the services/resources of the school library media program beyond the walls of the school library media center encourages greater interaction between all members of the learning community as proposed in *IP2*. This correlation has encouraged further investigation as to what degree these resources are actually accessed by teachers and/or students from their classrooms. Further, it would be interesting to determine to what degree these resources are accessed from beyond the school facility.

School Library Media Specialists' Demographic Variables that May Correlate to Job Task Analysis Responses

Research Question 4*:* Do demographic variables, related to the school library media specialist, correlate with their ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:

a. Gender
b. Age
c. Ethnicity
d. Highest degree earned
e. Years in teaching
f. Years as a school library media specialist
g. Time in current position

h. Method of earning certification

Gender

One significant correlation was found at the .05 level between this variable and the saliency of the 37 job task analysis items. That correlation occurred with item 57, "Instruct students and/or teachers in the use of the public access catalog system." No attempt was made to discern any practical value of this correlation.

Age

Table 41 shows that the two job task analysis items to which this variable correlated related to working with teachers to design innovative instructional approaches and assisting students and/or teachers with the general reference services (e.g., answer reference questions). The age group that rated both of these job tasks highest was the 30-39 group. There is no basis for determining if these correlations have any practical significance.

Table 41 also shows that overall the respondents rated assisting students and teachers with reference services higher than assisting teachers with the design of innovative teaching approaches. This is somewhat understandable in that answering reference questions has traditionally been the bread and butter of the school library media specialist. However, it is somewhat perplexing that the overall saliency ratings for working with teachers on innovative teaching approaches were more than .50 lower than were the saliency ratings for answering reference questions. On these types of saliency ratings, .50 is a very large difference. Such a large difference in these items' saliency means may indicate some lack of comfort on the part of the respondents with the concept of working with teachers on innovative teaching approaches. There appears to be a need

to further investigate the level of comfort of school library media specialists as related to working with teachers on innovative teaching approaches.

Ethnicity

Although a statistically significant correlation was found related to the item "Assist teachers and students in the use of production techniques," the investigator contends that this correlation has no practical significance.

Highest degree earned

One correlation was found with item 69, "Plan and participate in meetings to present the functions and services of the media center to parent and community organizations" and the variable highest degree earned. There may be some validity to the notion that those with the higher level degrees better understand the need for communicating the functions of the school library media program to both in-school and out-of-school audiences.

Years as a Teacher

Some practitioners and educators theorize that having been a classroom teacher prior to becoming a school library media specialist would be of benefit to the new school library media specialist. Statistically significant correlations were found between this variable and item 70, "Lead or participate in School Improvement Teams" and with item 71, "Maintain and support a computer network for the media center." Participation in School Improvement Teams is a valuable participatory activity for any school-based instructional person; however, it is considered essential, as noted in *IP2,* that the school library media specialist be an active participant in these types of school-based

committees. It was unfortunate that 11% of the respondents stated that this was not a part of their job, while 4% saw it as unimportant.

One might surmise that having been a classroom teacher prior to becoming a school library media specialist may have given that person additional insight into the importance of decisions made by the school improvement team. In many schools this team has tremendous influence in the allocation and spending of instructional funds. In order to insure that the school library media program is considered in the deliberations for funding and support, it would seem logical that the school library media specialist would want to be a part of this team.

Years as School Library Media Specialist

No significant correlations were found between either the job task analysis items or the other demographic variables in this study. This was somewhat of a surprise since one might expect those who have been in the field longer to have reflected perhaps significantly different perceptions than those newer to the field. Some of this discrepancy might be explained by the fact that 54.3% of the respondents had been a school library media specialist for less than 10 years.

Time in Current Position

As reflected in Table 46, for all groupings, with the exception of the more than 25 group, the mean saliency for item 71 was higher than for item 56. This may indicate that maintaining the computer network in the school library media center was perceived to be of more value than assisting students and teachers in the use of production techniques. This perception would be contradictory to the underlying theme of *IP2*, which posits that

helping people is always of more value than working with and/or completing thing related activities.

Method of Earning Certification

Baumbach (2003) reported that having a university trained and certified school library media specialist was reflected in higher FCAT scores at all school levels with the highest difference being 22.2% at the high school level.

Some professionals theorized that, due to the 2001 change in methods of certification in Florida, the method of certification may correlate to responses on the job task analysis items and other variables in the study; however, only one such significant correlation was found. That item, which dealt with introducing materials of special interests to groups through book talks and storytelling activities, showed that those respondents who took the FTCE with no prior coursework rated this item with a higher saliency score than did any other segment of the sample. Since these respondents would have had to be previously certified teachers in order to be allowed to add on school library media certification in this manner, their ranking of this item could add some credence to the perception that being a classroom teacher prior to becoming a school library media specialist adds some depth to the person's execution in that position.

School Demographic Variables that may Correlate to Perceptions about the 37 Job Task Analysis Items

Research Question 5: Do demographic variables, related to the school, correlate with school library media specialists' ratings of job tasks in collaboration, leadership and technology? The specific factors of interest are:

a. Level of the school: elementary, middle, high, other

b. Number of students

c. Geographic location: rural, rural/suburban, suburban, suburban/urban, urban

Level of School

As shown in Table 48, seven significant correlations were found between this variable and the 37 job task analysis items. They are:

- Item 42, “Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)”. When focusing on the three major school levels (elementary, middle and high), those respondents at the high school level rated this item higher than did the other two levels. This result is somewhat understandable given the increased focus on research and writing at this level. Also, during the 10 year period between the 1996 PDRI study and the current study, much of the focus on electronic resources for information gathering was placed at the high school level.
- Item 44, “Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)”. When focusing on the three major school levels (elementary, middle and high), those respondents at the high school level rated this item higher than did the other two levels. This result may reflect the more highly departmentalized approach at the high school level. Subject areas teachers at that level might request more specifically focused materials for the school library media specialist to introduce to their classes.
- Item 45, “Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques”. When

focusing on the three major school levels (elementary, middle and high), those respondents at the high school level rated this item higher than did the other two levels. Due to scheduling arrays at the high school level, there seems to be more time for this type of activity to occur; whereby subject area teams can get together with the school library media specialist for this type of training.

- Item 53, "Assist students and/or teachers in locating and selecting materials". When focusing on the three major school levels (elementary, middle and high), those respondents at the high school level rated this item higher than did the other two levels. Once again, this result may be related to the subject area diversification at this level.
- Item 55, "Inform faculty and/or students of copyright laws and interpret as necessary". When focusing on the three major school levels (elementary, middle and high), those respondents at the high school level rated this item higher than did the other two levels. This may have occurred due to the focus on specific research areas at this level. There has been a noticeable increase in the awareness of high school teachers and the copyright infringements occurring as a result of the Copy and Paste features when students are doing their research from electronic resources. Therefore, there is an increased need for teaching both teachers and students the legal ramifications of copyright infringements.
- Item 62, "Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides". When focusing on the three major school levels (elementary, middle and high), those respondents at the middle school level rated this item higher than did the other two levels. In

many middle school models, the school library media center is a part of the "wheel" and would thus be involved in the planning of units with teachers from the various "families". This organizational arrangement may somewhat explain the results of this item.

- Item 66, "Develop a strategic plan for the media center, including mission, goals and objectives". When focusing on the three major school levels (elementary, middle and high), those respondents at the middle school level rated this item higher than did the other two levels. Due to the organizational arrangement within the middle school model, school library media specialists at this level may feel as though they have a greater need to develop a strategic plan in order to meet the needs of their school's curriculum foci.

Number of Student in School

Two correlations were found between the number of students in the school and the 37 job task analysis items. Those correlations occurred with items 43 and 44. Item 43 states, "Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)". Item 44 states, "Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)". Table 50 indicates that those respondents from the schools with 1801-2300 students rated providing one-to-one instruction in media center and/or school-wide technology resources higher than did those in other size schools. This finding would correlate with previous findings that school library media specialists in high schools rated this item highest since this is a population size most often related to high schools in Florida.

The respondents in schools with 1301-1800 students rated introducing materials of special interest to class groups higher than did the other groups. This finding would correlate with the previous finding that school library media specialist in middle schools rated this item highest as well since this is the population size most associated with middle schools in Florida.

Geographic Location of School

A correlation was found with item 58, "Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentation, multimedia presentations, etc.)". A correlation was also found with item 68, "Interpret and apply national, regional, state, and local standards and guidelines to library media programs". Table 51 indicates that respondents from urban schools rated the instruction of students in the use of various technology objects higher than did respondents from other geographical locations. There may be several explanations for this result, one of which may be that many urban schools get a proportionately larger amount of federal aid dollars from which they have been enhancing their technology capabilities. In the metropolitan Florida school district in which the investigator previously taught, Title 1 funded schools began being networked in 1991 while non Title 1 schools were left to their own devices to locate funding for such technology. Many of those schools not receiving federal funds were not fully networked until the 2000-2001 school year; thus giving federally funded schools a 10 year head start in the use of networked technology resources.

Table 51 also indicates that those respondents in rural/suburban schools rated interpreting and applying national, regional, state, and local standards and guidelines to library media programs higher than did respondents in the other geographic locations.

Summary of Analysis

In this section the results discerned from this study were reflected upon. Although significant differences were found for many of the perceptions of the respondents on the 37 resurveyed job task analysis items and the correlational analysis of the environmental and demographic variables studied, many questions were also identified for additional research.

Significance of This Study

This study is significant in several ways. First, it established the lack of familiarity with the national standards for school library media programs. The study revealed a lack of in-service on these standards. However, the study was unable to determine to what degree those with university training were familiar with *IP2.*

Second, this study identified, to some degree, changes in school library media specialists' perceptions on 37 job task analysis items that directly relate to the areas of collaboration, leadership and technology; all important components of the national standards delineated in *IP2.* In addition, changes in the number of respondents considering items not a part of their job were noted on a number of the job tasks. Where these changes were positive, research should be done to further understand how these school library media specialists have developed their perceptions. Likewise, where these changes were negative, research should be done to determine what factors contributed to this negative change.

Third, with the upcoming revision of the national standards just a few years away, this study may have identified some variables that need to be addressed with respect to the marketing and staff development needed to ensure the more thorough education of school library media specialists in those revised standards, once they are published. Some recommendations as a result of this study's findings would be:

- The Florida Department of Education's coordinator for school media programs must actively solicit the support of school library media supervisors and the state's professional organization to develop a plan for the statewide implementation of new standards.
- School library media supervisors must develop in-service programs and make sure that participants are aware that the tenets of the workshop are based on their national professional standards.
- Copies of new standards publications must be provided to all school library media specialists in the state and reviewed with them on a regular basis so that they become equally as aware of their own professional standards as they are of those of other curriculum areas.

Fourth, while presenting some of the findings from this study at the 2006 FAME conference, it was noted that many of the themes within *IP2* are discussed and developed in a variety of in-service workshops and/or conference sessions, although they are not always credited to *IP2.* One response to this possibility is that supervisors and presenters need to be sure that all school library media specialists attending such sessions are aware of where the tenets being presented in the session were derived. Knowing that these tenets are a part of the national standards for school library media programs is an

important part of what the profession is about. Hopefully, continuing to share the results of this study will enhance the awareness of the importance of the *IP2* goals and objectives.

Future Research

This study has revealed numerous areas in need of additional research. Some of these areas for future research have been mentioned in the previous discussion and may be expanded on here while others, not previously mentioned, are introduced in this section.

Collaboration

One of the first areas to show a need for additional research was within the category of collaboration. When comparing the saliency means, it is interesting to note that 42.8% of the items have a saliency score lower in 2006 than was the case in 1996. This result should be cause for concern. Item 53 showed the largest negative change in actual saliency. The item states, "Assist students and/or teachers in locating and selecting materials." This item also has the largest effect size (2.84) of that group. This reflects a statistically negative shift in the perceptions of school library media services to students and teachers. Further research needs to be done to determine if, in fact, the perception of school library media specialists in Florida concerning assisting teachers and students with locating and selecting materials has indeed changed to the point that they now consider this less important than it was 10 years ago.

In addition, the second largest of these reductions in saliency was on item 52, which states, "Assist students and/or teachers with general reference services (e.g., answer reference questions." These two tasks represent bulwarks of the school library

media program. It is somewhat confounding as to why there would be such a statistically significant negative change in these tasks. Additional research needs to be done to determine what factors may be contributing to this change.

More research needs to be done into the factors that hinder collaboration between the school library media specialist and the classroom teachers. Since there was an increase in the number of respondents who considered giving one-on-one instruction as not a part of their job, perhaps research into the effects of the FCAT testing pressure would be valuable. Informal discussions with school library media specialists around the state have led some professionals to believe that teachers feel so much pressure to be "in the classroom" cramming for the FCAT that they don't feel comfortable with any type of activity outside the classroom, at least not until FCAT testing is over for the year.

In ancillary data not directly used in this study, when discussing collaboration, and some of the hindrances to being able to collaborate, one respondent mentioned using email as a collaborative tool. Since this is one of the items on the FLDOE's list of technology characteristics for school library media specialists, it would be valuable to follow up on this thread and determine ways in which effective collaborators have used email for this purpose. It might also reveal ways in which others could be trained in the use of email for developing effective collaborative partnerships.

Leadership

Since 12 of the 13 tasks related to leadership increased in their saliency, it would be beneficial to develop a survey around Zsiray's characteristics of leadership and determine to what extent school library media specialists in Florida possess these characteristics. It would also be useful to survey the National Council for the

Accreditation of Teacher Education (NCATE) accredited school library media programs in Florida to determine to what extent they discuss/develop these types of characteristics in graduates of their programs. Further, research into the leadership characteristics of those school library media specialists holding National Board Certification might inform the profession as to characteristics of those persons seen to be "at the top" of the profession. In addition, the research from a study of National Board Certified school library media specialists could be compared with similar study results of school library media specialists who received certification from taking and passing the FTCE for pK-12 school media without having taken any university coursework to determine what similarities and differences might occur between these two groups in the area of leadership.

Instructional Leader

Additional research needs to be done related to school library media specialists' perceptions of themselves as an instructional leader in their school. The role of instructional partner was developed in *IP1* but, as noted by Buchanan (1993), it has been one that school library media specialists seem reticent to incorporate into their various other roles. More research needs to be done to determine school library media specialists' perceptions of themselves as instructional leaders so that additional training may be developed to assist them in becoming more comfortable with this role.

Technology

School-wide Networks and Information Access

Given that 85% of the respondents said that students and teachers have access to school library media center resources from their classrooms, it would be important to be

able to document to what degree these resources are being accessed from the classrooms. School districts in Florida spend millions of dollars annually to make these electronic resources available to their teachers and students, yet no research could be found to validate the degree to which these resources are actually being used. There are two questions that should be addressed on this topic. First, are the electronic resources being accessed and second, from where in the school are they being accessed? The focus on the second question should be; are classroom teachers and students being informed about these resources and are they being encouraged to access them from their classrooms and not just from the school's library media center.

In keeping with the above item, it would also be beneficial to know the policies and procedures that school library media programs have in place for access to their electronic resources. It has been posited that school library media specialists often put up so many barriers to the use of certain types of materials as to make classroom teachers reluctant to attempt to use those resources.

Instruction in the Uses of Technology

Research needs to be done to determine why media specialists do not feel more strongly about their role in the instruction of technology. The investigator had a first hand experience while attempting to do an in-service workshop for the school library media specialists in a medium sized school district in central Florida. The investigator was told that all of the participants would be knowledgeable in a specific set of productivity software programs. However, upon beginning the workshop, it became immediately apparent that this was not the case. The majority of those in attendance had little or no

experience with the software. Thus, the plan for the workshop had to be immediately revised, on the spot.

The particular school district mentioned above has done an apparently wonderful thing. They have provided each school with a fulltime technology person. However, the unexpected fallout from this action was to make many of the school library media specialist think that they no longer had to worry about keeping up with the latest technologies and/or software. This is an area of research that needs to be pursued, as to why and how school library media specialists have the opinions they have about their place in the technology program of their school.

Adaptive Technologies

More research needs to be done on the provision of adaptive technologies, not only through the school library media program but through the general school program as well. Although 27% of the respondents in this study stated that they spend about the same amount of time providing adaptive technology to students with disabilities, 28% either considered it not a part of their job or spent much less time providing these technologies. In many cases FDLRS (Florida Developmental Learning Resource Service) is active in providing adaptive technologies for students with disabilities. Research could be done to assess the level of familiarity of school library media specialists with FDLRS and the level of interaction between the two.

The Role of the School Library Media Specialist in Technology Integration

Additional research should be done to quantify school library media specialists' attitudes about their role in technology integration and the overall use of technology in the school library media center and school at large. Since the school library media

specialist has the largest group of resources from which to draw, research needs to be done to determine if they understand the immensity of the role they could/should play in the development of integrated technology uses in their schools.

Although Seavers (2002) studied the level of collaboration between school library media specialists and technology specialists, the sample size was too small to render significant external validity. A more thorough study should be developed to determine how each of these groups perceives their responsibilities in their school. This study could use many of the technology related job tasks from the PDRI study to make some determinations as to which of these positions takes the lead in technology innovation and integration in their schools.

Research could be done into the perception of school library media specialists as to their position in the future of technology in their school. There was a noticeable increase in the number of respondents who thought that working with students in developing media productions was not a part of their job. It would be beneficial to better understand how school library media specialists perceive themselves and their role in, not only the production of media, but other forms of technology integration in their school.

Environmental Factors

Administrative Support

There is a significant body of research supporting the concept that the principal has direct effect on the direction that their school's library media program will take (Haycock 1999; Oberg, 1995; Oberg, Hay & Henri, 2000) and Bishop and Larimer (1999) found that supportive statements by the principal contributed to more collaboration between the school library media specialist and classroom teachers,

additional research could be done to further quantify those characteristics of supportive principals from the perspective of the school library media specialist as well as from the perspective of administrators.

Research could be done on the perceptions of principals about the school library media program. In keeping with research showing that the principal has the single most influence over the school's programs and given that 88.3% of the respondents to this survey considered their principal to be supportive, it would be interesting to determine what common characteristics these principals have that make them supportive of the school library media program.

Scheduling Model

According to Tallman & Van Deusen (1994), the greatest amount of collaboration occurs when the school library media specialist has a flexible schedule and team planning is encouraged by the principal. More research needs to be done into the effects of scheduling model on the area of collaboration as it relates to the time available for the school library media specialist to devote to collaborative types of activities. The design of this study did not result in any significant correlation; however, as noted previously, other research contends that there is a correlation. An attempt should be made to identify exactly which aspects of the scheduling model correlate to improved collaboration, increased leadership opportunities and greater involvement in the technology planning by the school library media specialist.

School Library Media Program Supervisor at the District Level

Since none of the 16 statewide studies previously done to determine correlations between school library media programs and student achievement have assessed the value

of a district level supervisor to the level of program development in these states, research could be done on the differences between school district library media programs where there is a specific supervisor associated with the media program and those where there is either a split supervisor and/or no supervisor. Although Baumbach (2003) and this study addressed this issue in varying degrees, more research needs to be done to document the need for school districts to commit to a fulltime school library media supervisor.

Method of Certification

One of the items in this study attempted to determine the means by which the respondents became certified as a school library media specialist and to then determine if there were any correlations between perceptions about the 37 job task analysis items of those respondents. One reason for this question was to determine if the 2001 legislative change in means by which one could become a certified school library media specialist would have an affect on saliency responses. The level of response of those persons who had been certified by only passing the FTCE was too small to make any significant determinations. A similar survey focused on those current school library media specialists who have been test certified without any additional university coursework could be beneficial.

Level of School

As shown in Table 48 there were seven statistically significant correlations identified between level of school and the 37 job task analysis items. In every case the highest saliency score was shown to be from either the middle or high school level. Additional research needs to be done to determine more specifically why this occurred. There are several theoretical reasons why this may have occurred. One possibility may be

the scheduling model used by secondary schools. In most cases secondary schools use a flexible scheduling model.

Classroom Teacher's Perceptions of the School Library Media Specialist's Role and the Role of the School Library Media Program in Their School

More research needs to be done into the classroom teachers' perceptions of the school library media program and the school library media specialists' role in the instructional program. Some of the qualitative comments, not addressed directly in the results of this study, related to collaboration with classroom teachers. There were a number of comments that indicated that, in the school library media specialists' opinion, the classroom teachers did not understand the various roles of the school library media specialist. Additional research into the perceptions of classroom teachers about the school library media program/specialist's roles in the instructional program could result in the development of new strategies for informing classroom teachers about the value of interfacing with the school library media specialist. Of course this is a two way street and thus school library media specialists' perceptions about classroom teachers should also be an area of research. Both of these may offer interesting insights into variables that are affecting the level of collaboration in schools.

Teacher Union Contracts and Their Affect on the Implementation of School Library Media Programs

Research could be done about the number of school districts in which the school library media program is addressed in the Classroom Teacher Association (CTA) contract, as one qualitative response, not directly addressed in this study, noted. Having been a CTA negotiator, it was appalling to hear of the school library media program

being written into the teacher contract in such a way as to make it a part of “fine arts” and thus be included in the scheduling rotation to provide teacher planning time. This defines it as a “support” program and thus diminishes much of the emphasis placed on the importance of the school library media program by *IP2.*

Marketing and Implementation of National Standards

Since AECT & AASL are in the process of establishing the committee for the revision of the national standards for school library media programs, more research needs to be done to determine effective means of implementation of those standards. This research could, based on the current study, determine those districts from which the most *IP2* friendly responses were given and then discuss the types of in-service and professional development that was done in those districts to establish the procedures for implementation of future *IP* standards, goals and objectives.

Other Research

Given that *time spent* was one of the two factors used in the determination of the *saliency* composite used for analysis of the means from the 1996 study and this study, some questions arose as to the efficacy of *time spent* as an indicator of change in and of itself. This seems to be a credible topic for future research.

The rationale behind doing additional research on *time spent* is that some respondents rated an item’s *time spent* rating somewhat high but did not subsequently give an equally high *criticality* rating. This occurred often enough as to make it a plausible future research topic; as to why someone would spend a considerable amount of time on a task while not considering it critical to complete that task.

Chapter Five Summary

There is much that still needs to be known about the various roles defined by *IP2* and the ways in which school library media specialists in Florida perceive and implement those various roles. The future research outlined above could do much in helping to understand how Florida's school library media specialists perceive themselves and their respective roles. Further, this study and the additional research discussed in this section could assist in making plans for better professional development training at both the university and local levels. Several school districts have already requested the investigator to work with them in analyzing their needs in the areas addressed by this study and assisting them in developing more standards specific professional development training for their respective school library media specialists.

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Appendices

Appendix I. *Directions for Subject Matter Experts for Selection of Resurvey Items*

First of all, thank you so much for agreeing to help me with this vital part of my doctoral work. The following are the directions that I need for you to follow to make this activity as valid as possible.

I am attaching a copy of the original survey items from a 1996 FLDOE sponsored task analysis of school library media specialists. On this survey school library media specialists were asked to rate each item in terms of *time spent* and *criticality*. Those two responses were then translated into a saliency score. You can see these scores on the original form. They are not really important for you to consider for purposes of this activity.

The original set of job tasks is divided into clusters. Some of these clusters have no *direct* relationship to the targeted areas of collaboration, leadership and technology. Therefore, you can skip over them. The clusters that you may skip over are: G, H, I, J, K, L, M and Q.

1. Based on the three areas of collaboration, leadership and technology please identify 50 items from the list of 250 that you feel are in alignment with *Information Power: Building Partnerships for Learning* goals for these three areas. All you need to do is make a list of the selected item numbers, not in any particular order. The alternative is that you can just put a check mark next to the selected items and fax the document back to me. Be sure to include the information in item 2 below as well.

Appendix I. (Continued)

2. After you have made your item selections, please go back and mark a capital C, L, or T next to each one to define which of the 3 areas you feel that item addresses. Some items will have some possible overlap; however, I need for you to determine which *one* of the 3 areas it best fits into and mark it accordingly.
3. For each of your choices please also indicate which of the following applies (you may just place the appropriate letter next to the number of the item # on your list:
    a. Very relevant
    b. Relevant
    c. Somewhat relevant

So, if you are making a list, your list should look something like this.

Item #	Area	Relevancy
10	C	a
21	T	a
37	L	b

I hope this makes sense. If not, please feel free to call me at any of these numbers:

Office: (except Thanksgiving and following Friday 9:30 AM to 5 PM) 813-974-7650

Home: (between 6 PM and 11 PM) 813-759-4339

Cell: (anytime 7 AM to 7 PM) 813-758-4073

Or email

Work: weekdays tpace@cas.usf.edu

Home: weekends mpace1@tampabay.rr.com

Appendix II. Results from Subject Matter Experts Task Selection

	Rose		Correll		Clay 1		Clay 2		Clay 3		Clay 4			
PDRI Item #	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy		
1	C	A	T	A	C	A			C	A	C	B	**1**	**C**
2	C	A	T	A	C	A	C	A			C	A	**2**	**C**
3	C	A	T	A	C	A					T	B	**3**	**T**
4	C	A	T	A	C	A	T	A			T	A	**4**	**T**
5			T	A	C	A								
6	C	B			C	A			C	B				
7									C	B				
8			L	A	C	A								
10	C	B	C	A	C	A			C	A	C	B	**5**	**C**
11							T	A	C	C	T	A		
12	T	B	L	A	C	A	L	B	L	B	L	B	**6**	**L**
14	C	A	L	A	C	A	C	B	L	B	L	B	**7**	**T**
15	L	A			C	A					L	A		
16	C	B	L	B			C	B	C	B	C	B	**8**	**C**
17			C	A	C	A	C	B	C	C	C	B	**9**	**C**
18	L	C									L	A		

Appendix II. (Continued)

	Rose		Correll		Clay 1		Clay 2		Clay 3		Clay 4			
PDRI Item #	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy		
19	L	B	L	A	C	A					L	A	**10**	**L**
20					C	A								
21	L	A	C	A	C	A			C	C			**11**	**C**
22							C	B						
23	C	A	L	A	C	A	L	B	C	B	L	A	**12**	**C**
26	C	B	T	A	C	A					L	A	**13**	**C**
27	C	B	T	A	C	A			C	B			**14**	**C**
28	C	A									L	A		
29	L	B	L	A	C	A			L	B	L	A	**15**	**L**
30					C	A								
31			L	A					C	B				
32			T	A	C	A	T	B	C	A	T	B	**16**	**T**
34					T	A								
36					T	A	T	B			T	B		
36			T	A	T	A	T	A	C	A	L	A	**17**	**T**
37			T	A	T	A	T	B			T	B	**18**	**T**
38					T	A	T	B			T	B		

Appendix II. (Continued)

	Rose		Correll		Clay 1		Clay 2		Clay 3		Clay 4			
PDRI Item #	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy		
39			T	B										
40	L	B			T	A	T	A			T	A	**19**	**T**
41			T	A	T	A								
42									T	C				
43			L	A										
44	T	A	L	A			C	A			L	A	**19**	**L**
45	L	C												
47							T	A	T	A				
48	T	A	T	A	T	A			T	A			**20**	**T**
49			T	A					T	C				
50	C	A							C	C	C	A		
51	L	A	L	A	T	A	C	A	L	B	L	A	**21**	**L**
52									L	C				
53	C	B	L	A			C	B			C	A	**22**	**C**
54	C	C					L	B						
55			L	B										
56	C	B			T	A	C	B						

Appendix II. (Continued)

	Rose		Correll		Clay 1		Clay 2		Clay 3		Clay 4			
PDRI Item #	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy		
57			L	A										
58			?	A										
59			?	A										
60	L	B	L	A	T	A	L	B	L	B			**23**	**L**
61	L	A			T	A	L	B	L	A	L	A	**24**	**L**
62	L	A	L	A	L	A	L	B			L	A	**25**	**L**
63	L	A			L	A	L	B						
64					L	A	L	B	L	C				
65					L	A								
66	L	A	L	A	L	A	C	B	L	C	L	B	**26**	**L**
72			L	A	L	A			L	A				
74	L	A	L	A	L	A	L	A	C	A			**27**	**L**
76	L	B	L	A	L	A	L	B	L	C	L	B	**28**	**L**
77	L	C												
81					L	A			T	C				
82	L	B	L	A			C	A	L	A	L	A	**29**	**L**
83					L	A	C	B						

Appendix II. (Continued)

	Rose		Correll		Clay 1		Clay 2		Clay 3		Clay 4			
PDRI Item #	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy		
161	L	A												
173			L	A	T	B	T	A	T	B	T	A	**30**	**T**
179									T	A				
183							T	A						
184							T	B			T	A		
187	C	B					L	A	L	B	L	A	**31**	**L**
188	C	B			L	B	C	A	L	C			**32**	**C**
190	C	C			L	B	C	A	C	C	L	B	**33**	**C**
191									L	B	L	B		
192											L	B		
193							C	A			L	B		
197							C	A						
199							C	A						
203							T	B	T	A	T	B		
206	L	B	L	A										
207			T	A					T	A				
208									L	A				

Appendix II. (Continued)

	Rose		Correll		Clay 1		Clay 2		Clay 3		Clay 4			
PDRI Item #	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy	Area	Relevancy		
215			L	A										
225							L	B			L	B		
226									C	A				
227	L	B							T	B				
228	L	B									L	B		
229			L	A			L	A	L	B				
230	L	B					L	B			C	B		
234	L	B							L	C				
236	L	B												
236									L	C				
237	T	A	L	A			T	A	T	B	T	A	**34**	**T**
238	T	A					L	A	L	B				
239											C	B		
240	L	A					L	A	L	C	L	A		
242	L	B					L	B			L	A		
243			L	A			C	B			L	A		
244			C	A			C	B			C	A		
250											C	B		

Appendix III. Introduction to Survey

Introduction

Hello,

You are about to become a participant in a survey for my doctoral dissertation. I sincerely appreciate your time and effort to help me with this vital component of my dissertation.

My name is Mel Pace. I am the Associate Director of the School of Library and Information Science at the University of South Florida. I am also a doctoral candidate in Instructional Technology at USF. I am a former elementary school media specialist, a past member of the FAME Board Directors (2002-2005), and 2004 FAME Conference Chair (the guy in the Pirate outfit).

This survey is the basis of my doctoral dissertation data collection. I am attempting to determine if, since the publication of Information Power: Building Partnerships for Learning in 1998, the perceptions of media specialists with regards to specific tasks from a 1996 survey have changed.

Having previously been an elementary school media specialist, I know how valuable your time is; however, your responses to this survey would be helpful to me and may assist in developing additional training that will benefit media specialists, administrators and others across the state of Florida.

The survey should take you less than 30 minutes to complete.

Since all data will be reported in aggregate form your confidentiality is assured.

Appendix IV. Original PDRI Results on 37 Items Chosen for Part 2 Resurvey

Item #	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
A1	Collab	Provide *formal* instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	513	14	2.82	1.23	3.85	.98	3.43	1.06
A2	Collab	Provide *informal* (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	513	7	3.18	1.06	4.02	.8	3.70	.85
A3	Tech	Provide *formal* instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	511	21	2.41	1.21	3.52	1.00	3.06	1.10
A4	Tech	Provide *informal* (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	510	10	2.74	1.17	3.60	.95	3.26	.99
A10	Collab	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	502	23	2.51	1.32	3.29	.97	2.93	1.13
B 12	Lead	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	512	22	2.06	1.09	3.60	0.90	2.99	1.01
B 14	Tech	Instruct teachers concerning ways to incorporate technology into the classroom curricula	510	63	1.95	1.15	3.53	0.91	2.71	1.25
B 16	Collab	Work with teachers to design innovative instructional approaches	508	62	1.75	1.06	3.31	0.94	2.52	1.2
B 17	Collab	Participate in team teaching activities	512	93	1.57	1.15	3.08	0.98	2.2	1.29

Appendix IV (Continued)

Item #	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
B19	Lead	Inform faculty of new media center services, materials, and technology	513	3	2.77	.98	3.87	.82	3.36	.76
B 21	Collab	Keep teachers informed concerning students' information skills	512	44	1.81	1.02	2.91	0.91	2.37	1.05
B23	Collab	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	512	4	3.04	1.02	3.87	.82	3.58	.81
C26	Collab	Assist students and/or teachers with general reference services (e.g., answer reference questions)	509	4	3.17	1.03	3.84	.85	3.59	.85
C27	Collab	Assist students and/or teachers in locating and selecting materials	511	2	3.68	.91	4.12	.77	3.97	.73
C29	Lead	Inform faculty and/or students of copyright laws and interpret as necessary	509	4	2.21	.97	3.67	1.01	3.17	.88
C 32	Tech	Assist teacher and students in the use of production techniques	510	45	2.06	1.22	3.09	0.9	2.57	1.15
D36	Tech	Instruct students and/or teachers in the use of the public access catalog system	509	124	2.09	1.56	3.74	0.99	2.58	1.68
D37	Tech	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	513	30	2.75	1.26	3.87	.82	3.36	1.13
D 40	Tech	Provide adaptive technologies for students with special needs	512	206	0.99	1.07	3.07	0.89	1.55	1.4
D44	Lead	Organize and/or participate in technology teams/technical committees	504	157	1.63	1.41	3.25	.92	2.04	1.54

Appendix IV (Continued)

Item #	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
D 48	Tech	Use online services to retrieve information (e.g., in doing research)	505	163	1.41	1.36	3.36	0.99	1.99	1.56
E51	Lead	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	507	104	1.70	1.28	3.42	.89	2.38	1.40
E60	Lead	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	510	36	2.09	1.13	3.45	.94	2.83	1.11
E 61	Lead	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	507	48	2.11	1.27	3.33	0.9	2.71	1.18
F62	Lead	Develop a strategic plan for the media center, including mission, goals and objectives	512	18	2.05	1.07	3.8	.96	3.13	.99
F 66	Lead	Organize and/or facilitate a school media advisory committee for short and long range planning	510	52	1.64	1.01	3.28	0.89	2.36	1.1
F 74	lead	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	513	21	2.08	1.03	3.34	0.91	2.83	0.98
F76	Lead	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	511	87	1.36	1	3.09	0.87	2.17	1.19
F 82	Lead	Lead or participate in School Improvement Teams	512	30	2.36	1.25	3.45	0.89	2.95	1.09
F173	Tech	Maintain and support a computer network for the media center	501	185	1.89	1.77	4.15	0.91	2.37	1.94

Appendix IV (Continued)

Item #	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
O187	Lead	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	509	9	1.94	.97	3.50	.94	2.94	.88
O188	Collab	Work cooperatively with district and/or regional education and media center service units	508	13	2.11	.97	3.54	.87	3.00	.89
O190	Collab	Work cooperatively with public libraries to promote and encourage student and family use of resources	507	46	1.45	.95	3.04	.93	2.33	1.04
S237	Tech	Keep informed about new technologies	507	3	2082	1.02	4.06	.85	3.63	.80

Appendix V. 2006 Results on 37 Items Chosen for Part 2 Resurvey

Item # PDRI/2006	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
A1/40	Collab	Provide *formal* instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	498	13	3.5	1.95	4.5	0.71	3.27	1.23
A2/41	Collab	Provide *informal* (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	496	8	2.54	1.74	3.04	1.01	3.75	0.94
A3/42	Tech	Provide *formal* instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	492	30	2.23	1.75	3.37	1.08	3.17	1.17
A4/43	Tech	Provide *informal* (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	492	30	2.23	1.71	3.27	1.04	3.13	1.07
A10/44	Collab	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	492	16	2.08	1.61	3.24	1.04	2.7	1.07
B 12/45	Lead	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	493	30	1.69	1.49	3.37	1.02	2.93	.093
B 14/46	Tech	Instruct teachers concerning ways to incorporate technology into the classroom curricula	477	51	1.83	1.64	3.24	1.03	2.9	1.1

Appendix V (Continued)

Item # PDRI/2006	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
B 16/47	Collab	Work with teachers to design innovative instructional approaches	474	57	1.66	1.54	3.02	1.07	2.72	1.04
B 17/48	Collab	Participate in team teaching activities	477	63	1.71	1.59	3.05	1.05	2.74	1.11
B19/49	Lead	Inform faculty of new media center services, materials, and technology	477	3	2.44	1.69	3.73	0.87	3.55	0.89
B 21/50	Collab	Keep teachers informed concerning students' information skills	476	36	1.87	1.54	3.08	1.03	2.87	1.01
B23/51	Collab	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	476	4	2.49	1.75	3.71	0.87	3.55	0.91
C26/52	Collab	Assist students and/or teachers with general reference services (e.g., answer reference questions)	469	4	2.27	1.64	3.51	0.87	3.34	0.9
C27/53	Collab	Assist students and/or teachers in locating and selecting materials	469	3	4.29	1.80	3.83	0.84	3.7	0.88
C28/54	Lead	Instruct teachers and students in media center policies and procedures	469	2	2.16	1.57	3.31	0.91	3.16	0.9
C29/55	Tech	Assist teacher and students in the use of production techniques	469	2	2.19	1.63	3.63	0.96	3.37	0.95
C 32/56	Tech	Assist teacher and students in the use of production techniques	465	91	1.46	1.53	2.54	0.94	2.39	0.98
D36/57	Tech	Instruct students and/or teachers in the use of the public access catalog system	467	10	2.33	1.76	3.54	0.95	3.41	0.96
D37/58	Tech	Provide adaptive technologies for students with special needs	468	33	2.01	1.68	3.16	1.72	3.02	1.11

Appendix V (Continued)

Item # PDRI/2006	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
D 40/59	Lead	Provide adaptive technologies for students with special needs	465	112	1.37	1.50	3.15	1.10	2.64	1.17
D44/60	Tech	Organize and/or participate in technology teams/technical committees	468	40	2.02	1.75	3.37	0.99	3.15	1.04
D 48/61	Lead	Use online services to retrieve information (e.g., in doing research)	464	4	2.81	1.99	3.62	1.14	3.05	1.28
E51/62	Lead	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	461	76	1.74	1.69	3.35	1.06	2.14	0.79
E53/63	Collab	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	462	18	2.11	1.70	2.60	1.83	3.34	1.03
E6064	Lead	Develop a strategic plan for the media center, including mission, goals and objectives	460	33	2.05	1.59	3.41	1.01	3.17	1
E 61/65	Lead	Organize and/or facilitate a school media advisory committee for short and long range planning	464	33	2.19	1.83	3.22	1.02	3.11	1.15
F62/66	lead	Develop a strategic plan for the media center, including mission, goals and objectives	465	5	2.19	1.66	3.69	1.01	3.41	1.01
F 66/67	Lead	Organize and/or facilitate a school media advisory committee for short and long range planning	454	41	2.16	1.75	3.00	1.02	2.94	1.02

Appendix V (Continued)

Item # PDRI/2006	IP 2 Type	Task	Total N	N Not part of job	Time Spent		Criticality		Salience	
					M	SD	M	SD	M	SD
F 74/68	Lead	Lead or participate in School Improvement Teams	456	14	2.05	1.65	3.34	1.02	3.14	1.02
F76/69	Tech	Maintain and support a computer network for the media center	456	48	1.61	1.50	2.95	0.98	2.67	1.03
F 82/70	Lead	Lead or participate in School Improvement Teams	455	51	1.92	1.73	3.30	0.98	2.98	1.15
F173/71	Tech	Maintain and support a computer network for the media center	459	152	1.68	1.95	3.83	1.16	3.11	1.46
O187/72	Lead	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	476	5	2.04	1.56	2.55	1.71	2.21	0.74
O188/73	Tech	Keep informed about new technologies	476	23	2.04	1.60	2.37	1.64	2.95	1.01
O190/74	Collab	Work cooperatively with public libraries to promote and encourage student and family use of resources	476	36	1.80	1.53	2.17	1.52	2.69	1.03
S237/75	Tech	Keep informed about new technologies	475	1	2.55	1.78	2.78	1.81	3.53	1.02
S240/76	Lead	Upgrade relevant professional skills (e.g., attend college courses and/or seminars)	478	2	2.29	1.67	2.69	1.77	3.35	1.03

Appendix VI. Comparison of Participation by School District

District	# of Respondents 1996	# of Respondents 2006
Alachua	0	3
Baker	5	1
Bay	13	15
Bradford	0	0
Brevard	0	29
Broward	0	60
Calhoun	0	0
Charlotte	14	9
Citrus	0	12
Clay	0	6
Collier	10	4
Columbia	10	0
Dade	55	11
Desoto	0	0
Dixie	8	0
Duval	52	42
Escambia	34	7
Flagler	0	3
Franklin	0	0
Gadsden	11	1
Gilchrist	0	0
Glades	0	2
Gulf	3	0
Hamilton	3	0
Hardee	0	7
Hendry	0	6
Hernando	20	3
Highlands	7	6
Hillsborough	0	64
Holmes	0	1
Indian River	0	3
Jackson	8	0
Jefferson	0	0
Lafayette	1	0
Lake	24	6
Lee	0	6
Leon	16	5
Levy	9	2
Liberty	2	1
Madison	2	0
Manatee	0	8
Marion	6	5
Martin	8	0
Monroe	0	4
Nassau	0	5
Okaloosa	0	3
Okeechobee	6	1

Appendix VI (Continued)

District	# of Respondents 1996	# of Respondents 2006
Orange	50	23
Palm Beach	0	39
Pasco	27	24
Pinellas	19	46
Polk	0	27
Putnam	9	2
St. Johns	0	3
St. Lucie	0	3
Santa Rosa	15	0
Sarasota	0	1
Seminole	15	13
Sumter	0	2
Suwannee	2	1
Taylor	3	1
Union	0	0
Volusia	8	45
Wakulla	6	0
Walton	7	0
Washington	4	0
Other	2	0
Total Respondents	509	586
*Participants not responding to this item		58

Appendix VII. *Skewness and Kurtosis Analysis of 37 Resurveyed Job Tasks-2006 Sample*

2006 Item #	Task	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
40	Provide formal instruction skills to students in classroom or small group settings (e.g., use of materials, reference techniques, etc.)	-0.429	0.11	-0.44	0.219
41	Provide informal (e.g., one-on-one) instruction in information skills (e.g., use of materials, reference techniques, etc.)	-0.561	0.11	0.623	0.22
42	Provide formal instruction to students in classroom or small-group setting in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	-0.266	0.111	-0.352	0.221
43	Provide informal (e.g., one-on-one) instruction to students in media center and/or school-wide technology resources (e.g., multimedia production, etc.)	-0.353	0.111	-0.138	0.221
44	Introduce materials of special interest to class groups (e.g., via book talks or story telling activities)	-0.401	0.111	0.264	0.221
45	Conduct workshops/in-service and other training for teachers - use of materials, equipment, technology, and new production techniques.	-0.341	0.111	-0.029	0.222
46	Instruct teachers concerning ways to incorporate technology into the classroom curricula	-0.286	0.113	0.177	0.225
47	Work with teachers to design innovative instructional approaches	-0.241	0.113	0.058	0.225
48	Participate in team teaching activities	-0.272	0.113	-0.186	0.225

Appendix VII (Continued)

2006 Item #	Task	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
49	Inform faculty of new media center services, materials, and technology	-0.522	0.112	0.976	0.224
50	Keep teachers informed concerning students' information skills	-0.263	0.112	-0.045	0.224
51	Act as a resource to teachers in providing ideas, and/or resource materials to be included as part of classroom units	-0.38	0.112	0.539	0.224
52	Assist students and/or teachers with general reference services (e.g., answer reference questions)	-0.537	0.113	1.146	0.225
53	Assist students and/or teachers in locating and selecting materials	-0.821	0.113	2.005	0.225
54	Instruct techers and students in media center policies and procedures	-0.163	0.113	0.458	0.225
55	Inform faculty and/or students of copyright laws and interpret as necessary	-0.404	0.113	0.349	0.225
56	Assist teacher and students in the use of production techniques	0.058	0.111	-0.208	0.221
57	Instruct students and/or teachers in the use of the public access catalog system	-0.462	0.111	0.089	0.221
58	Instruct students and/or teachers in the use of various technology objects (e.g., CD-ROM encyclopedia, graphic arts presentations, multimedia presentations, etc.)	-0.332	0.111	0.063	0.221

Appendix VII (Continued)

2006 Item #	Task	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
59	Provide adaptive technologies for students with special needs	-0.18	0.113	-0.257	0.225
60	Organize and/or participate in technology teams/technical committees	-0.331	0.111	-0.04	0.222
61	Use online services to retrieve information (e.g., in doing research)	-0.276	0.111	-0.689	0.221
62	Serve on curriculum committees and assist in the selection of appropriate materials for resource units and curriculum guides	-0.476	0.111	-0.103	0.222
63	Work with faculty to coordinate media center materials, activities, and technology in conjunction with curriculum programs, units, and text books	-0.558	0.108	0.678	0.215
64	Evaluate the adequacy and suitability of facilities, equipment, materials, and services with regard to their impact on learning outcomes	-0.164	0.108	0.094	0.215
65	Coordinate special reading, writing, and student production programs (e.g., Sunshine State Reader's program, Jim Harbin video awards, etc.)	-0.403	0.108	-0.13	0.215
66	Develop a strategic plan for the media center, including mission, goals and objectives	-0.291	0.107	-0.281	0.214
67	Organize and/or facilitate a school media advisory committee for short and long range planning	-0.423	0.108	0.353	0.216

Appendix VII (Continued)

2006 Item #	Task	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
68	Interpret and apply national, regional, state, and local standards and guidelines to library media programs	-0.248	0.108	0.085	0.216
69	Plan and participate in meetings to present the functions and services of the media center to parent and community organizations	-0.028	0.109	-0.351	0.217
70	Lead or participate in School Improvement Teams	-0.435	0.11	0.161	0.219
71	Maintain and support a computer network for the media center	-0.814	0.111	0.175	0.221
72	Attend meetings/conferences and participate in professional organizations (e.g., FAME, AASL, etc.)	-0.285	0.109	0.087	0.217
73	Work cooperatively with district and/or regional education and media center service units	-0.344	0.109	0.094	0.218
74	Work cooperatively with public libraries to promote and encourage student and family use of resources	-0.124	0.109	-0.041	0.218
75	Keep informed about new technologies	-0.381	0.109	0.28	0.217
76	Upgrade relevant professional skills(e.g., attend college courses an/or seminars	-0.257	0.109	0.17	0.217

Appendix VIII Levene's Equality of Variance for 37 Job Tasks

Item #	Levene Statistic	df1	df2	Sig.
40salien	.197	4	485	.940
41salien	.611	4	484	.655
42salien	1.688	4	480	.152
43salien	1.148	4	480	.333
44salien	2.172	4	479	.071
45salien	.633	4	480	.639
46salien	1.476	4	460	.208
47salien	.962	4	463	.428
48salien	1.189	4	460	.315
49salien	.754	4	468	.556
50salien	.151	4	466	.962
51salien	.318	4	466	.866
52salien	1.125	4	460	.344
53salien	.987	4	460	.414
54salien	1.228	4	461	.298
55salien	.417	4	461	.796
56salien	1.825	4	443	.123
57salien	.219	4	453	.928
58salien	.554	4	490	.696
59salien	.243	4	490	.914
60salien	.964	4	490	.427
61salien	2.295	4	490	.058
62salien	2.682	4	446	.031
63salien	.560	4	490	.692
64salien	.949	4	452	.436
65salien	3.779	4	451	.005
66salien	.774	4	456	.542
67salien	.429	4	444	.788
68salien	.169	4	446	.954

Appendix VIII (Continued)

Item #	Levene Statistic	df1	df2	Sig.
69salien	1.585	4	441	.177
70salien	1.469	4	434	.211
71salien	1.468	4	417	.211
72salien	.301	4	490	.877
73salien	1.131	4	490	.341
74salien	.313	4	490	.869
75salien	1.058	4	490	.377
76salien	.920	4	490	.452

About the Author

Terrell M. Pace currently serves as the Associate Director of the School of Library and Information Science at the University of South Florida. He has held this position since 2001. Previously he held positions as a classroom teacher and school library media specialist in the Hillsborough County, Brevard County and Broward County school districts in Florida. In addition he has 15 years experience in business.

Terrell received a Bachelor of Arts degree in Elementary Education from Florida Atlantic University in 1970. He received a Master of Arts degree in Library and Information Science from USF in 1996 and is currently pursuing a Ph.D. in Instructional Technology at USF, where in addition to his duties as Associate Director of SLIS he also teaches courses in the Foundations of Library and Information Science, Preparing Instructional Materials, and Library Services to Patrons with Disabilities. He expects to continue in his current at USF upon completion of this degree.

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