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ABSTRACT
                This study examined whether or not selected recently
endorsed and currently practicing school library media specialists are using
job competencies taught to them in three schools of higher education training
programs. Based on a review of literature, the research hypothesis is that
there is a disparity between job competencies as taught and the job
competencies as required by selected school library media graduates in their
jobs. A survey instrument was developed and distributed to graduates of three
library science programs at large urban universities. Results of the study
indicated that the responding library media specialists show similar
assessment of competencies taught to them or stressed in their library
science programs regardless of length of time served in their present
positions, years since graduation, or amount of equipment. Competencies used
on the job, however, are perceived as needed "often" or "to a great extent"
more frequently among respondents who have been out of the university program
and in their positions longer than among those more recently graduated and
employed. Several responses indicated further need for training at the
university level in the areas of public relations, planning and teaching
library skills, and practical daily management and organization. The survey
instrument is appended. (Contains 93 references.) (AEF)

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Assessments by selected school library media specialists of required job competencies as compared to learned competencies

Woodruff, Laura C., Ed.D.

Wayne State University, 1994

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ASSESSMENTS BY SELECTED SCHOOL LIBRARY
MEDIA SPECIALISTS OF REQUIRED
JOB COMPETENCIES AS COMPARED TO
LEARNED COMPETENCIES

by

LAURA C. WOODRUFF

DISSERTATION

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CHAPTER 1

THE PROBLEM

Introduction

A major problem confronting school library media specialists has been the
responsibility, as part of their teacher role, to prepare students for the world of
the future. Because information is expanding, both in quantity and format, and is
becoming concomitantly complex, it is difficult for any information specialist to
keep abreast of current developments. Additionally, technological innovations
affecting information delivery must be mastered in order to access bodies of
knowledge that students may require to succeed in their academic careers. A
school library media specialist must enter the job situation with competencies
that former novices may not have found essential.

Schools of higher learning that prepare school library media specialists
will be expected to equip their graduates with the necessary competencies to
succeed in these demanding job environments. While those at work in library
education today understand the challenge, little information is available to
determine to what extent currently practicing school library media specialists
have been prepared by their library science curriculums to meet these demands.
The purpose of this study is to examine the extent to which selected graduates
from the library science curricula of three urban Midwestern universities are
using skills taught to them in their jobs as school library media specialists, as
opposed to those skills they had to learn extemporaneously.

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Statement of the Problem

School library media specialists who are endorsed and have matriculated from a program of school library media training within the last seven years were selected from lists provided by their alumni institutions. Their participation in the study was voluntary and anonymous. These persons were currently employed, either full or part-time, as school library media specialists, without regard to their school system or their building level. They were asked to complete an instrument designed to determine their assessment of competencies they were taught in their schools of higher education, as compared to the competencies they use in their job environments.

The collected assessments were analyzed to determine which competencies were taught in graduate training, but are not required in their current job responsibilities; and which competencies were required to meet their current job responsibilities, but were not taught during their training at the university level. This study and analysis could provide insight for planners in schools of higher learning as they design the curricula for future school library media specialists.

Recent graduates were selected as representative of a population most reflective of recently taught job competencies, as well as currently required job competencies. Older graduates could have failed to update themselves professionally, and may not clearly recall their library school training.

Purpose and Significance of the Study

The purpose of this research is to discover whether or not selected, recently endorsed, and currently practicing school library media specialists are using job competencies taught to them in selected school of higher education training programs. University program planners identify specific and significant competencies that they, by consensus, perceive to be important and essential for their students. These planners are to some extent handicapped by their distance from the job environments and by the variety of those environments that shall be staffed by the school library media specialists for whom they are planning the curricula. They are, as are graduates of their programs, forced to anticipate informational and educational demands of the future by projecting from the present day. By receiving feedback from recently graduated practitioners, these planners may more confidently design school library media coursework.

This study shall, furthermore, contribute to the growing body of data in the area of job analysis, task compatibility, and accountability, as frequently used by employers who practice the principles of instructional technology to maximize employee productivity. Task analysis and teacher certification are increasingly linked today in all areas of education.

Research Hypothesis

Based on a review of literature, the research hypothesis is that there is a disparity between job competencies as taught, and the job competencies as

required by selected school library media graduates in their jobs. Those competencies identified as being used and not being taught, or as being taught and not being used, will be discussed.

Definition of Terms

For the purposes of this study, the following terms shall apply:

School Library Media Specialist	One designated as responsible for the media program at the individual school level
Media	Print and nonprint forms of communication and their accompany technology
Instructional (Media) Program	An integrated group of program components organized to accomplish stated objectives
School Media Center	Area or system of areas in a school where a full range of information sources, associated equipment, and services from media staff are accessible to students, school personnel, and the school community
Job Competency	A learned skill or ability needed to accomplish a given task in the work environment
Graduate	One who is degreed or endorsed by an institution of higher learning (college or university)
Practicing	Under contract to a school or school system
Certification	Process by which an agency or association grants recognition to an individual who has met predetermined qualifications, such as graduation from an accredited or approved program, acceptable performance on a qualifying examination, or completion of work experience.

Limitations

The results of this study shall apply only to those school library media specialists described and shall not apply to school library media specialists or others who are graduates of other programs and/or who are employed in nonschool environments.

Summary

Chapter I has presented the need and rationale for a study of the competencies perceived as taught in schools of library science and as used on the job by selected school library media specialists who have graduated from a program in library science within the past seven years. This study has limited application and reflected only perceptions of those respondents, who have been anonymously selected from recent graduates of three urban university programs.

CHAPTER II

REVIEW OF LITERATURE

This chapter briefly reviews literature discussing job competencies used by school library media specialists. History and standards as applied to school library media shall be discussed.

History

There are presently about 73,352 school libraries in the United States. (Statistics of Library Media Centers, 1987) serving students from preschool through high school. This number compares to about 15,013 public libraries and 4,647 academic libraries (Bowker Annual, 1989-90). The great majority of libraries in this country, then, are school libraries. Throughout history, libraries have been viewed as storehouses for the knowledge of a civilization. Today, however, while that function still exists, the library must play an assertive role. School library media specialists are challenged to provide leadership and assistance in instructional and information technologies and to help students become discriminating users and creators of information (Information Power, 1988). Accountability issues have forced school library media specialists to prove that they are necessary to the educational program. Budget shortages have caused removal, in some cases, of certificated school library media specialists, despite studies that support a direct link between level of services, especially those that support the curriculum, and a certificated librarian (Crisis in California School Libraries, 1987).

Examination of the status of school libraries on a state level reveals problems. Evidence of the crisis described in the California report was revealed in the April, 1990, _Statewide Survey of Michigan School Libraries_, commissioned by the Library of Michigan, which reported that equitable intellectual and physical access to information does not exist for all Michigan students. In a national survey published in School Library Media Quarterly, Fall, 1990, Michigan ranked 43rd of the 50 states in the development of library media collections. Whereas the document has been developed, there is at the present time neither any information processing skills component in the Michigan Core Curriculum Program or Michigan Accreditation Program, nor a library media state consultant position. The state has no assessment process and no staffing facilities or budget guidelines for library media programs in the schools. The first annual report from the Library Media Advisory Committee to the Michigan State Board of Education states, "Most library media programs have not reached their full potential" (1990).

Since 1980 educators have been deluged with reports and studies documenting the academic deficiencies of our students. The high school dropout rate hovers at 25%. Approximately 50% of students who enter college never graduate. The National Assessment of Educational Progress reported that only one in five young adults could read a bus timetable or write a letter of application. Only one in three high school juniors could place the Civil War in the correct century. Twenty-five percent of adults could not say if the earth orbits the sun or the sun orbits the earth. In 1987, the New York Telephone Company,

after screening 51,000 applicants, found only 2,000 with sufficient skills to become entry-level operators and repair technicians (Fiske, 1991). It is questionable that the U.S. can successfully compete with so ill prepared a work force as the nations of the world enter a global marketplace.

Currently, the United States is entering a global economy in which countries will succeed or fail based upon the skills of their citizens. United States business, alarmed at the mediocrity of available workers, spends about $20 billion a year on remedial programs for its new hires. Programs such as Compact in the Detroit Public Schools and similar programs around the nation seek to push students toward excellence. The social cost of ignorance is an increasingly burdensome welfare system and an eventual deterioration in the U.S. standard of living, as other nations with better-educated work forces take over (Fiske, 1991).

Minority students, with whom American schools have been least successful, are the fastest growing segment of the school population. While already half of the population of California and Texas schools are minority, by 2020 all American schools will be at least half nonwhite. As educated citizenry replace natural resources in the global marketplace, minority children will become a critical component of the capital resource of our nation (Carnegie Forum on Education and the Economy, 1990).

Workers, in an information-based society, need abilities to concentrate, analyze, adapt and interact with abstractions to problem solve and to communicate (Turner, 1991). Information processing skills, including abilities to

identify, sort, analyze, synthesize, and evaluate information, are critical concerns

of the library professional. In terms of school library media specialists, the

Library Media Program Advisory Committee to the Michigan State Board of

Education lists these functional responsibilities:

> The library media specialist works with the classroom
> teacher as a partner to plan, design, deliver, and
> evaluate curriculum using a variety of resources and
> process skills.

> The library media specialist is a teacher and consultant
> in the transition from a textbook-centered classroom to a
> multi- resource-based classroom.

> The library media specialist will provide leadership,
> expertise, and advocacy in the use of technology and
> multi-resources for the total school community.

> The library media specialist partners with teachers to
> empower students to accept responsibility for their own
> learning, thereby becoming capable of learning over a
> lifetime.

> The library media specialist manages a program
> (personnel, resources, facility and services) in which
> students can receive instruction and practice in the
> processing of information. This program will also contain
> provisions for reading, reviewing, and listening guidance
> so that students will learn life-long informational as well
> as recreational applications of libraries (Second Annual
> Report, 1992).

Tees (1986) additionally suggested a need for skills in management,

language, subject specializations, communication and online expertise for

workers (learners) to succeed in an information-based world.

No study was found that compared competencies learned with

competencies used on the job by practicing school library media specialists.

Research literature, which has been reviewed, clearly indicated that there

have been problems with the closing of schools of library science. The study conducted by this researcher raised questions concerning the role of university library science programs. University graduate programs must have adequate funding and staffing in order to successfully prepare their graduates to meet the demands of the job. Without materials and supplies, without sufficient resources, including computer laboratories, and without enough instructors, university programs may be unable to offer library science education that will provide satisfactory educational experiences for their students. Graduates of library science programs handicapped by scarcity may have difficulty on their jobs, inasmuch as they may lack some competencies required for successful performance. Consequently, graduates of library science programs deficient in services mentioned above may be incompletely prepared to function successfully in environments of higher education and the world of work. It follows that, due to insufficient training at the university level, to inadequacy at the job level, the school library media specialist may blamelessly contribute to inferior education for k-12 students.

Standards

One approach to determining the quality of preparation for library media specialists is standards. The Council of the American Library Association (ALA) adopted Standards for Accreditation of Master's Programs in Library and Information Studies, effective January 1, 1993, as the recognized

document for accrediting programs at institutions of higher learning that offer

the master's degree for professional school library media specialists. The

document is used by the Committee on Accreditation to evaluate a program,

on the basis of evidence presented by a school and the report of a visiting

team. At present 51 schools in the U.S. are accredited by the American

Library Association.

These Standards address the six areas of: mission; goals and

objectives; curriculum; faculty and students; administrative and financial

support; and physical resources and facilities. Broad in scope, Standards

attempts to be inclusive, not limiting participation based on matters such as

title of degree or departmental organization. The thrust of the document is to

make clear to the educational community, the general public and others that

a program is clearly defined and appropriate, and is of excellent quality.

Additionally, the American Association of School Librarians (AASL)

and the ALA have produced Curriculum Guidelines for the School Library

Media Specialist Basic Preparation (1988) to assist educational institutions

and the general public in understanding and evaluating the preparation of

school library media specialists. Included are a general statement of program

objectives, the professional competencies that a student should master,

instructions for a review folio, and a completed sample. The guidelines stress

that preparation for a school library media specialist build upon a broad

general educational background, that the curriculum proceed sequentially

and incorporate both theory and practice. Ethics and professional

involvement should be stressed. Using the three roles outlined in

Information Power, the functions to be reflected in coursework for the school

library media specialist are: professionalism, communication, organization,

administration, instructional leadership, and access, including intellectual

freedom and privacy rights. Forceful direction on the part of the American

Library Association does much to ensure similarity of coursework and

uniformity of standards among accredited schools of library and information

science in the United States.

Competencies

Competencies for school library media specialists have been defined in

standards documents. Beginning with Standards for School Library Media

Programs published in 1960 by the AASL and continuing with Standards for

School Media Programs (Joint Standards) in 1969 and Media Programs:

District and School in 1975, professional organizations have been the driving

force in shaping competencies in school library media. Administrators and

other directors, who may not themselves be familiar with the job of the

school library media specialist, have traditionally used these guidelines to

describe jobs and to evaluate performance (Smith, 1989).

Since 1988 Information Power: Guidelines for School Library Media

Programs, published jointly by AASL and AECT, has been the most

influential document in clarifying ideas about school library media . A recent

document, Information Power emphasizes the school library media role in an

educational context and refines the responsibilities of the practitioner. The

document, while focusing upon the building level library media specialist,

also covers personnel, resources, equipment, facilities, and district, regional

and state leadership. Competencies are required for school library media

specialists in the areas of personal characteristics (positive attitude,

flexibility, energy, enthusiasm, warmth, ability to work with many ages,

leadership, and management skills) and professional abilities (organizational

management, personnel management, design, information retrieval,

production, instruction, evaluation, and research). The three major divisions

of interest to schools of education and employers identified in Information

Power are: information specialist; teacher; and instructional consultant.

These same divisions are also used in the instrument developed for this

study.

Accreditation

National certification or accreditation is a final strategy identified in the

literature which approaches the quality of the educational preparation of the

school library media specialist. The legal authority for certification of media

specialists is in the hands of the states, and is highly influenced by

professional organizations, such as the American Association of School

Librarians and the Association for Educational Communications and

Technology (AECT). The AASL's landmark Behavioral Requirements

Analysis Checklist (1973), described the job of the school library media

specialist as performance based. This document was followed by Media

Programs District and School (1975) and Certification Model for Professional

School Media Personnel (1976). Commonalities between the roles of the

library media specialist and the audiovisual specialist were apparent, but the

separation of the roles of the library media specialist and the audiovisual

specialist, (separately certified in most states) hindered the development of a

nationally recognized process for certification.

The difficulty in developing a national certification program was made

apparent in the Certification Model for Professional School Media Personnel

(ALA, 1976). When mailed for review to a representative sampling, the

model received responses indicating a level of agreement in practices as

outlined, but a complaint that regional and state accrediting associations

were not expressive of media program demands (Bender, 1976). In general,

school library media specialists were limited to guides, such as Performance

Criteria For Evaluating the Library Media Program in Michigan Schools

(Michigan Department of Education, 1975), Steps to Service (Nickel, 1975),

and Certification of Audiovisual, Educational Media, and Library Personnel

(Baley and Grady, 1978) to define their role. Variations from region to

region and problems with consensus have thus far prevented the

development of a national certification.

In the 1980's the merging of the school library media specialist and

the audiovisual technician functions simplified the problem of developing

standards. Still performance based, the professionally driven guides usually

addressed seven broad areas of competency: leadership and

professionalism, knowledge of client group, communication, administration,

management, knowledge of material, providing access to information, and

services (Immroth, 1989). States such as Florida (Competencies Essential

for School Media Specialists, 1982), Wisconsin (School Library Media

Programs: A Resource and Planning Guide, 1987) Missouri (Performance

Based Evaluation for Counselors and Librarians, 1985) and others

developed extensive checklists, ranging from 20 to 60 competencies for

school library media specialists. Not until Information Power in 1988 did a

clear mission statement and simplified, three-pronged description of the

school library media specialist role emerge moving toward a national model.

The same document stated, "The master's degree is considered the entry

level degree for the profession" (p. 59), placing a responsibility upon

institutions of higher learning to eliminate undergraduate certification

programs. The appropriate technological resources, faculty with specialized

expertise, and other high front-end investment, compared to enrollment,

resources required to prepare school library media specialists make this

mandate difficult to implement without special funding (SCOLE reports, ALA,

1993).

In the 1990s, especially since the 1991 White House Conference on

Library and Information Services, the movement toward a national model is

accelerating. The future establishment of a National Research and

Education Network, connecting all information repositories at every level,

and the establishment within the U.S. Department of Education of the School

Library Services title, responsible for providing leadership to school library

media programs across the nation, including funding for instructional

opportunities, may centralize and coordinate school library media programs.

On the state level, the Michigan Association for Media in Education, through

a task force chaired by Bernice Lamkin, has prepared "Endorsement of

Teachers of Library Media Specialists," calling for a school library media

endorsement on a valid Michigan teaching certificate for all who are

employed as media specialists in public elementary or secondary schools, as

a state requirement. The University of.Michigan, Central Michigan University,

and Wayne State University recently have reviewed their programs of

preparation for school library media specialists to bring them into line with

Information Power and to anticipate emerging models, both national and

state. It is anticipated that the updated Information Power currently in

process will continue the positive direction initiated by the 1988 document.

Summary. No study was found that surveyed school library media

specialists for competencies taught in university programs as compared to

competencies used in practice.

Examination of the literature revealed that the great majority of

libraries in the United States are school libraries, and that, in many states,

school libraries suffer due to financial pressures. Gaps in library programs

and lack of equitable access to quality programs for students are apparent.

Academic deficiencies in U.S. students have been documented, causing

some prognosticators to suggest that our population will be unable to compete successfully in a global economy. The information processing skills that are a primary component of the school library media program, listed previously as abilities to identify, sort, analyze, synthesize, and evaluate, are not being successfully learned by some U.S. public school graduates, who are, consequently, less qualified in the job market.

The preparation of the school library media specialist was examined here from the perspective of standards. Adopted by the ALA in 1993, Standards for Accreditation, used to evaluate university programs, is an inclusive document encompassing mission, goals and objectives, curriculum, faculty and students, administrative and financial support, and physical resources and facilities. According to Standards, school library media education should build upon a broad general background and stress ethics and professional involvement. Forceful direction from the ALA assures uniformity of standards and similarity of coursework among accredited university programs.

The role of the school library media specialist was also examined from the perspective of competencies. Evolving from lists prepared by administrators and directors, competencies for school library media specialists are now shaped by professional organizations. The landmark document, Information Power, has clarified the library media specialist role and identified three major divisions. The same divisions are used in the instrument developed for this study.

The preparation of the school library media specialist was examined finally from the perspective of accreditation. At first hindered by the separation of the roles of the school library media specialist and the audiovisual technician, since the 1980's accreditation as a national certification model has been hampered by variations from region to region and lack of consensus. Controlled by the states, accreditation for school library media specialists is influenced by professional state organizations and remains generally performance based. In the 1990's, under federal direction, a movement toward a national model for certification has been proposed but not realized.

Research Studies

Two dissertations, published in 1978 and 1979, surveyed school library media specialists directly. First, A Study of Selected Competencies of Elementary School Library Media Specialists as Perceived by Three Groups of Educators: Principals, Teachers, and Library Media Specialists (Johnson, 1978) surveyed three groups on 52 competency statements as to whether they should or should not be performed by media specialists. The results of this study indicated that all three groups were more alike than different in their perceptions of competencies of school library media specialists; selection of media, utilization of media, and administration of media programs were ranked as the most important areas of behavior or competencies; production of media, research and evaluation, and leadership

and professionalism were ranked as the lowest priority areas; and library media specialists were guided in their choices by current practices and expectations of the Atlanta Public School System, rather than by academic preparation; and number of years of experience in a position, participation or nonparticipation in curriculum development. Academic degrees attained and number of media courses taken were not reliable indicators of how subjects would perceive competencies.

A second study by G. Corr, <u>Factors That Affect the School Library Media Specialist's Involvement in Curriculum Planning and Implementation in Small High Schools in Oregon</u> (Corr, 1979) gathered data on 43 selected tasks from 61 school library media specialists at 91 high schools. Results of this study were: All groups indicated that school library media specialists were very infrequently involved in curriculum tasks; school library media specialists agreed [whether qualified or nonqualified]; professionally qualified school library media specialists rated curriculum planning and implementation much higher in importance than did nonqualified school library media specialists; and the most important factors affecting curriculum involvement were personality of the school library media specialist, principal's attitude toward the role of the school library media specialist, teachers' preference for school library media specialists who had a teaching role, the amount of support staff available, and the teachers' understanding of the media center's potential, and role of the school library media specialist in curriculum development (Corr, 1979). These two studies, slightly different

in focus, examine school library media specialists' competencies from the practioners' (and other's) point of view.

While the Johnson study included principals and teachers, the Johnson and the Corr studies are unusual in surveying the school library media practitioners themselves. The study conducted for this research report surveyed employed school library media specialists and included another focus: the respondents ranked competencies as taught and as used on the job. The study reported here, unlike the Johnson and Corr, did not examine what should or should not be competencies for school library media specialists, but what exists, in fact, in training and in practice. No study was found that surveyed school library media specialists for competencies taught in university programs as compared to competencies used in practice.

Royal (1989), Eisenberg (1991), Polk and Kahler (1990), and Evans and Tipton (1992) discussed the school library media specialist's role from the point of view of the professional training provided in preparatory programs. In "Professional Preparation of Library Media Specialists: The State of Programs in New York State," Eisenberg (1991) described programs and discussed strengths and weaknesses. Eisenberg suggested a lack of practicuum/field work experiences due to an inadequate number of hours (36 credits, 12 courses) required by the program. The researcher further suggested making continuing education a mandated requirement, as was true of some other professions.

Royal (1989) in "Information Power: Curriculum Implications"

concluded that a national, as opposed to existing state, framework for school library media preparatory programs, with an emphasis upon content and curriculum organization, is needed. Polk and Kahler (1990) surveyed Texas school library media specialists for areas of weakness and strength in their academic preparation. The researchers found areas of strength to be: materials selection, collection management, cataloging and technical services, and areas of weakness to be: public relations, planning and teaching library skills, practical daily management and organization, time management, audiovisual resources, and technology. These authors advise working through existing courses to improve library media specialist preparatory programs.

Evans and Tipton (1992) discussed two tracks for improving educational programs: a task analysis of what is being done, and a futuristic approach to prepare library media specialists to be dynamic school leaders in 2000 and beyond. The strengths and weaknesses of each approach were discussed. The authors identified some task descriptions and some roles for the school library media specialist. These roles were: administrator, change agent, certified teacher with curriculum and instructional design skills, information manager, and technologist. Core courses were identified for each area.

Eisenberg (1991) and Polk and Kahler (1990) examined university programs for areas of strength and weakness based upon the researchers' professional opinions. The study reported here examined Eisenberg's

recommendations regarding field work experiences and continuing

education. This study also examined areas of weakness revealed in the

Polk and Kahler study as in public relations, planning and teaching library

skills, and practical daily management and organization. Royal (1989),

Evans and Tipton (1992), looking toward the future, recommended changes

in university programs to equip library media specialists in areas of

curriculum development, administration, information management and

instructional design. This study also investigated development in these

broader areas.

Hug (1992), Irving (1992), and Section 1 of the 1992 edition of School

Library Media Annual, discussed competencies required by school library

media specialists, now and in the future. "Continuing Education Section 1:

Where is School Library Media in America 2000?" sets the goals expected

for the United States under the National Education Strategy proposed by

President Bush. While networking capabilities and skills are an integral part

of this design, the National Education Strategy mentions "library" only once

and offers no specific funding for implementation of the plan. "Trends and

Issues in School Library Media Programs" (Hug, 1992) discussed the need

for leadership by the school library media specialist and stated, "Institutions

are not preparing media professionals to deal with curriculum related needs"

(p. 10). A chart for professional growth was given. Irving, 1992 winner of

the School Library Media Annual Periodical Prize, stated that school library

media specialists do not prepare students to use educational technology

systems to gain access to knowledge across the world.

Grover (1993) discussed theories from psychology and the social sciences to propose a model for diagnosing work performed by the school library media specialist. The researcher suggested that research must include the influence of culture, geography, political structure, legislation and regulation, the economic system, technology, and information policy.

Pickard (1993) described a survey of 83 school library media specialists from all grade levels in public schools in DeKalb County, Georgia, to determine the extent to which these specialists were serving as consultants. Pickard found that only eight of school library media specialists were doing so to a great extent, which the researcher attributed to a 10-year lag between espousal and implementation of an instructional role. The Grover and Pickard studies show the beginnings of a shift from examination of the school library media specialist role by peripheral groups, such as professional organizations, university professionals, principals, teachers, and students, to evaluation by media specialists themselves.

The Pickard study was supported by the study conducted here, which also examined the function of serving as consultant. The 10-year lag between espousal and implementation of a role Pickard discussed as affecting the study did not apply to this study, which surveyed graduates of programs within the last 7-10 years.

Summary. Research studies, which have been reviewed, revealed few studies that surveyed practicing school library media specialists, and no

studies that compared competencies taught to them in library science

programs at the university level and competencies used on the job. The

Johnson study, which included principals and teachers as well as school

library media specialists, examined competencies performed. The Corr

study examined the school library media specialist involvement in curriculum

planning. Another group of studies (Royal, Eisenberg, Polk and Kahler,

Evans and Tipton) investigated school library media specialist preparatory

training, focusing upon university coursework. Lastly, some studies (Hug,

Irving) discussed competencies required by school library media specialists

now and in the future. Grover prepared a model for diagnosing school

library media work, while Pickard surveyed school library media specialists

regarding the extent to which they served as consultants.

Research has not indicated whether or not school library media

specialists perceive their educational program prepares them for the role

they are expected to undertake, either now or in the future. Studies found to

date have not questioned the practitioners themselves regarding their

professional preparation as it relates to the demands of their jobs. The study

conducted for this report examined competencies used by school library

media specialists, as well as competencies taught to them in their university

programs.

Competency and Jobs

Some discussion of the nature of job competency is appropriate,

inasmuch as, in education, a major responsibility is to prepare and equip students with marketable skills. In the first part of this century, and since the Industrial Revolution, innumerable commentators have predicted workplace scenarios based upon their perceptions of the direction of change in the world of work.

A competency or skill is a multidimensional attribute. It may be described as a mixture of manual and sensory talents, knowledge of the workplace, and cognitive processes. Job competencies frequently entail reformulation and replacement of elements. In the modern workplace job changes typically are evolutionary and entail modifications in order to ensure competency (Attewell, p. 48).

Competencies or skills are socially defined. In addition to the previously mentioned aspects of competency, a worker's job is also a part of a complex political system. It has been argued that "a skilled job with no real skills is possible" (Turner, 1962) based upon a socially assigned definition.

Two dominant and opposing viewpoints, the 'deskilling' school of thought and the 'upgrading' school of thought, have emerged in recent years to describe the future of American jobs. The deskilling school of thought maintains that increasing automation will result in a long-term erosion of jobs and a degradation of the worker, who will become more ignorant and more alienated as he is isolated from the total process and relegated to routine tasks. This opinion is an outgrowth of Taylorism, or Scientific Management theories, that emphasize one best way of organizing jobs.

The upgrading school of thought maintains that, as lower, routine jobs are eliminated, they will be replaced with new and different kinds of jobs requiring new skills with greater complexity. Workers, rather than being alienated or removed from their work, will move into more satisfying and more challenging tasks (Attewell, 1991).

Educational Implications

In addition to different levels of skill with greater complexity of technological and information content, the future worker must be engaged in continual learning in order to remain viable in the workplace. A report by the National Academy of Sciences in 1985 highlights this requirement, as well as the importance of teamwork and problem-solving. Research suggested that what was learned in classrooms did not easily transfer to actual work situations (Raizen, 1989; Scribner & Stevens, 1989).

> Skilled practical thinking incorporated features of the task environment (people, things, information) into the problem-solving system. It is as valid to describe the environment as part of the problem-solving system as it is to observe that problem-solving occurs 'in' the environment...This view emphasizes the inextricability of task from environment, and the continual interplay between internal representations and operations and external reality throughout the course of the problem-solving activity. (p. 42).

Apprenticeship and workplace sites for student learning are thus ideal educational models.

While public schools in the U.S. are charged with preparing students for work as a major mission, several key weaknesses undermine this task.

Surveys reveal a state of apathy among American students, who rank

friends and sports higher than teacher, classes or learning (Goodlad, 1990).

High school grades and test scores have little correlation with employment or

earning in adult life (Bishop & Rosenbaum, 1989). There is a lack of special

awards and recognition for students not at the top of their class. Aptitude

tests are more important to colleges and universities than achievement tests

or grades (Bishop and Rosenbaum, 1985). The American high school, which

took shape from 1890 to 1935 as compulsory education and child labor laws

were enforced, kept children safe from harm, kept them from competing with

adult workers and allowed children of the lower and immigrant classes to rise

through hard work. Many have suggested that these are still the major

reasons for high schools. Cooperative and vocational education, and

combined transcript/curriculum resumes for colleges or jobs are two

suggestions for reorienting U.S. students (Stern, 1991).

This research on preparing students for work was conducted on public

high school students. The study conducted here will look at graduates of

university library science programs and how their preparation is related to

the demands of their job environments.

Future Trends

Attewell (1991), Raizen (1989), Starr (1989), and Stern (1991) suggest

that, while either of the scenarios described by the deskilling school of thought

and the upgrading school of thought may be found in some work areas, the

United States work force as a whole is characterized by neither. Rather, the

most salient change in jobs in recent years has been the expansion of

white-collar, including managerial, jobs - from 20% of the total in 1900 to 60% in

1988. Manufacturing has also increased modestly, but, on the whole, U.S. jobs

today in any segment of the economy demand higher-skilled workers. This shift

to nonproduction labor has developed as low-level jobs have been shifted to

plants abroad. Today's workplace is characterized by a mixture of highly

computerized systems integrated with mechanized ones and the problems

associated with such an arrangement (Attewell, 1991).

The U.S. Bureau of Labor Statistics forecasts further growth in

managerial, professional and technical employment with a shrinking of clerical

and administrative support jobs. A small growth in precision and craft

employment is predicted, but, in general, higher-skill jobs requiring more

education and training are expected to increase more rapidly than the workforce

as a whole (Personick, 1987, p.33). By determining in part what school library

media specialists have learned and what they are doing, this study may shed

some light upon the process.

CHAPTER III

METHODOLOGY

Introduction

Chapter III presents an overview of the research methodology that was

used to collect and analyze the data needed to address the research hypotheses

posed for this study. This discussion includes the research design, variables in

the study, research questions, description of the institutions included in the

study, population, sample, instrumentation, data collection, and data analysis.

Each of these sections is presented individually.

Research Design

This study used a nonexperimental, descriptive research design. This

type of design was appropriate, as the independent variables were not

manipulated and no treatment was provided to the subjects. A survey instrument

was developed specifically for this study as the major data gathering tool. This

instrument was piloted on a small group of media specialists to provide

assurances of validity and reliability.

Variables in the Study

The dependent variables that were examined in this study included

competencies perceived as taught to selected school library media specialists in

their university programs, and competencies perceived that were used by these

specialists in their jobs. Independent variables that were collected for this study

were the length of time since the school library media specialist had completed

his/her library science programs, grade levels of the schools s/he serve, time

since s/he has worked in his/her present position, and amount of technical

equipment available in his/her library media centers.

Research Questions

Four major research questions were posed for this study:

1.   Is there a difference in the job competencies perceived as required
      by selected school library media graduates in their jobs relative to
      the length of time since they have completed their library science
      programs?

2.   Is there a difference in the job competencies perceived as required
      by selected school library media graduates in their jobs relative to
      the grade levels of the schools they serve?

3.   Is there a difference in the job competencies perceived as required
      by selected school library media graduates in their jobs relative to
      the amount of technical equipment they have available in their
      library media centers?

4.   Is there a difference in the job competencies perceived as required
      by selected school library media graduates in their jobs relative to
      the length of time they have worked in their present position?

Institutions Included in the Study

Graduates of three library science programs at large urban universities

were targeted for this study. Each of these programs is described in detail in this

section.

University A. University A traces its school library science training

program to 1918 and has one of the largest graduate degree programs in library

science in the country. This institution also offers specialist and archival

certificates. The campus, located in a large urban center, serves 34,000 students and offers 400 fields of study. One aspect of the excellence of a university is the quality of its library. In 1991, this school's library was ranked in the upper third of libraries by the Association of Research Libraries. Its large collection is housed in several buildings and is complemented by a region-wide data communication network with several laboratories and several hundred public workstations.

The library science program at this university was accredited by the American Library Association (ALA) for the first time in 1967, with reaccreditation obtained in 1988. In June, 1993, this university graduated 53 students in library science and 14 in school library media. The core library science program at University A requires 36 credits in library and information science, with a professional core of 16 credits, a minimum of 2 bibliography courses of three credits each, and 12 credits of electives. Those who enter school library work require a certificate or endorsement from the state, which qualifies them to serve as librarian for grades kindergarten through 12. All students accepted to the library science program must file a plan of work with their faculty adviser, engage in semester planning and review conferences, maintain a portfolio, complete a field experience, produce evidence of mastery in a final course, and complete an exit interview.

University B. Located in the heart of a major city, University B serves 25,000 students, including 4,500 graduate students and a large contingent of students from foreign countries. The library at this facility offers 3.6 million items,

including microform and nonprint media. In addition, a complete computing facility is available at this university. The School of Library and Information Science is fully accredited by the ALA and offers six different programs, including double (coordinated) degree and advanced study programs. In June, 1993, 51 students graduated with degrees in library science. School library media specialists are not numerically distinguished by this university.

At University B, all students complete a minimum of 36 graduate credits, with 30 credits in library science and 6 elective credits. Students choose three core courses from a list of five. They also pass a written comprehensive examination before graduation. Each student is assigned a faculty adviser at time of admission. School library media specialists complete certain required courses, including a field work course and a license course required by the state. State licenses are good for five years and must be renewed.

University C. Established in 1787, University C has 17 different campus schools and also offers programs of study abroad. Approximately 30,000 full and part-time students are served by a faculty of more than 3,000 educators on a campus located in the center of a major city. The large library collection, containing over 5 million cataloged items, is supported with computer facilities of unlimited use to students, who pay a single yearly fee for this access. The School of Library and Information Science is the largest and most diverse in North America, with doctoral, research, and leadership programs included in the school. This fully ALA accredited program is considered among the top ten nationally.

Students in the library science program at this university must complete a 36 credit program of four required courses and eight electives. School library media specialists will be state-certified upon completion of the program, but must also hold a valid teaching certificate from the state to be employed in a school program. The program is competency-based and includes consultation with an adviser and a field experience. In 1993, this university graduated 200 in library science, with 40 receiving school library media specialist certification.

The three programs are similar in number of credits required for graduation, number of core courses required, and provision of field experiences and work necessary for state certification/endorsement. They differ in requiring written exit examinations versus exit interviews and/or mastery demonstrations. All programs offer strong adviser components, and all are accredited and nationally recognized. The three universities included in this study indicated a willingness to participate in this study.

<u>Population</u>

The population that has been defined for this study are certified school library media graduates of accredited university programs. These graduates have completed their education within the past seven years from programs that are certified through the American Library Association.

These programs are appropriate for the study because they are conducted in universities with similar demographies. They are also comparable in requirements and number of school library science graduates.

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<u>Sample</u>

Three universities with certified library programs were included in the study. These universities are located in large urban centers and have approximately 100 to 200 graduates per year. Each program has a core curriculum approved by the American Library Association that provides a concentration in school library media. Each of the universities supplied a list of graduates from their programs for the past seven years. The graduates included on these lists were used as the sample for this study.

<u>Instrumentation</u>

An original instrument was developed for this research project. This instrument was designed on the competencies discussed and advocated for the school library medial specialist by the AASL and AECT.

<u>Information Power: Guidelines for School Library Media Programs</u> was published jointly by the AASL and the AECT as an effort to "prepare guidelines that provide a sound philosophical basis for the continued development of school library media programs to meet the needs of students in the twenty-first century" (ix, Introd.). This six-year project used contributors from all over the United States. <u>Information Power</u> was hailed as the model toward which quality school media programs should aim. The primary focus of these guidelines was the building-level library media specialist.

Chapter 3 of this document, "The School Library Media Specialist: Roles

and Responsibilities", details the three roles of a school library media specialist: information specialist, teacher, and instructional consultant. In the role of information specialist, the school library media specialist must determine user needs, work with administrators to ensure that funding is available for collection development, and develop access to resources within and outside of the building. The school library media specialist must assist users in developing modes of inquiry, developing higher order thinking skills, and using electronic data bases. The media specialist must be well acquainted with the wide range of retrieval systems. Responsibilities here include distance education, where appropriate, and development of policies to ensure access.

As teacher, the school library media specialist must work to develop and support lifelong learning in students, including all aspects of communication. Educators and parents should be offered guidance and learning opportunities in selection, use, evaluation, and production of media resources. Personal consultations, workshops, and speaking engagements are encouraged as ways to reach the community.

As instructional consultant, the school library media specialist is concerned with curriculum development, instructional development, and use of technology. The media specialist also should provide leadership in assessment, evaluation, and implementation of information and instructional technologies on a regular basis.

The instrument developed for use in this study was designed based upon the competencies discussed and advocated for the school library media

specialist as described above. These competencies fall into the three broad

areas of media specialist practice: information specialist, teacher, and

instructional leader. Thirty items based on these competencies were written and

piloted for use with this population. Respondents were asked to rate each item

on the survey using a five point Likert Scale in terms of its emphasis in the

university program, as well as the extent to which the competency was used in

the respondent's present job. Figure 1 presents the breakdown of each item as

it relates to the corresponding school library media specialist role.

Figure 1

Breakdown of Scale
By Role Competency

Role Competency	Items
Information Specialist	5, 6, 7, 8, 12, 13, 15, 23, 24, 26, 27
Teacher	4, 9, 10, 11, 14, 16, 17, 18, 19, 21, 25
Instructional Consultant	1, 2, 3, 20, 22, 29, 30

Validity and Reliability

Content Validity. The instrument, along with a cover letter asking for their

professional assistance in developing content validity, was sent to seven experts

in the field of library science. These experts provided comments and

suggestions that were used to make minor changes necessary to assure content

validity of the instrument. These changes included a refinement of the language

of some of the individual items to reduce ambiguity and possible confusion on

the intent of the item. The experts also assisted in grouping the items into the

three major competency areas.

Pilot Testing. The instrument was developed and field tested in an initial mailing with nine practicing school library media specialists who were sent a copy of the instrument with a cover letter explaining the purpose of the study, the need for participation, and a self-addressed, stamped envelope. The cover letter explained that the respondents would be asked to complete the instrument twice at approximately two week intervals. The reason for the second administration as a test of instrument stability was provided in the cover letter.

Reliability of the instrument was determined in two ways: internal consistency and test-retest stability. The 30 perceptual items included on the survey were rated using two criteria: "emphasized by university program" and "extent competencies used in present job". Each of these scales was tested for reliability separately. The internal consistency for "emphasized by university programs" was tested by using a split-half procedure. The resultant Cronbach's alpha of .89 was considered to show good internal consistency for this scale. The Cronbach's alpha of .88 obtained for the split-half procedure on the scale "extent competencies used in present job" also showed good internal consistency.

The second type of reliability, test-retest stability, used a Pearson product moment correlation to determine the extent of the relationship between the first and second completions of the instrument by the nine media specialists included in the study. The instruments were completed twice, approximately three weeks apart. This time frame was considered adequate to allow the media specialists

to respond to the items without remembering their initial responses. The correlation between the test-retest on the scale "emphasized by university programs" was .94, with the same correlation achieved for the scale "extent competencies used in present job." These findings support the reliability of the instrument both in terms of stability and consistency.

Data Collection

Graduates of three library science programs at three urban universities were targeted for this study. Lists of graduates for the past seven years were obtained from each of the three universities included in the study. The names and addresses of these graduates were used in sending survey packets to each of these graduates. The survey packet included a cover letter, copy of the survey, and a self-addressed, stamped envelope for return of the completed instrument. The cover letter explained the purpose and importance of the study, the need for participation by the recipient, and a note of appreciation for completing the survey. The recipients were asked to complete the questionnaire and return it in the enclosed enveloped. All survey packets were mailed to the library school alumni during a two-month period. The respondents returned the surveys through the end of June, 1993. As the responses were voluntary and anonymous, no follow-up for nonrespondents was attempted. Upon receipt of 92 completed instruments, a total considered sufficient for data analysis, the data collection was considered complete.

Data Analysis

The data contained on the surveys was entered into a data file for analysis using the Statistical Package for the Social Sciences - Windows (SPSS-W). The data analysis consisted of both descriptive and inferential statistical procedures. The descriptive statistical analyses were used to provide a profile of the school library media specialists, with the inferential statistical analysis used to address the research questions. Frequency distributions and measures of central tendency and dispersion were used to describe the sample. The inferential statistical procedures included nonparametric tests including Wilcoxon Matched Pairs Signed Rank test, t-test for two independent samples, and one-way analysis of variance. All decisions on the statistical significance of the inferential statistical procedures were made using an alpha level of .05.

Summary

Chapter III has presented a discussion of the methodology that was used to collect and analyze the data needed to address the research questions. A description of the three institutions whose library school program alumni participated in the study was included in this chapter. The discussion also included the process that was used to develop and test the original instrument for validity and reliability. The results of the data analysis for this study are provided in Chapter IV, with conclusions and recommendations presented in Chapter V.

CHAPTER IV

RESULTS OF DATA ANALYSIS

Chapter IV presents the results of the data analysis that was used to describe the sample and address each of the research questions. The data used for these analyses were collected through the use of questionnaires completed by school library media specialists who had completed their educational programs in the past seven years.

The purpose of this research was to discover whether or not selected, recently endorsed, and currently practicing school library media specialists are using job competencies taught to them in selected school of higher education training programs. University program planners identify specific and significant competencies that they, by consensus, perceive to be important and essential for their students. These planners are to some extent handicapped by their distance from the job environments and by the variety of those environments that shall be staffed by the school library media specialists for whom they are planning the curricula. They are, as are graduates of their programs, forced to anticipate informational and educational demands of the future by projecting from the present day. By receiving feedback from recently graduated practitioners, these planners may more confidently design school library media coursework.

A total of 92 school library media specialists responded to the questionnaire. Of the participants who indicated their alumnus, 29 (31.9%) were from School A, 31 (34.1%) were from School B, and 30 (33.0%) were from

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School C. There will be no attempt to examine responses to the questionnaire based on the school attended as all programs are considered to have consistency in content based on the school's accreditation with the American Library Association.

Demographic Characteristics of the Sample

The respondents were asked to provide information on professional characteristics, as well as characteristics of their school media centers. Each of these areas is presented separately.

Professional Characteristics. The graduates were asked to indicate the length of time it had been since graduation from their library science programs. The responses to this question were provided in actual number of years since graduation. The summarization of the responses to this question are provided in Table 1.

Table 1

Descriptive Statistics
Time Since Graduation

Number	Mean	Standard Deviation	Range	
			Minimum	Maximum
90	4.16	3.39	1	20

The mean number of years reported as time since graduation was 4.16 (sd=3.39) years. The range of years was from a low of 1 year to a maximum of 20 years. While the criterion for inclusion in the sample was completion of the

school library degree, some of the respondents may have used their bachelor's degree program as the length of time since graduation. Other school media specialists may have finished their library science degrees prior to the seven-year limitation imposed on this study, but returned to school to get the necessary certification to work as a school library media specialist.

The library media specialists were asked to indicate how long they had worked for their present school district and the length of experience they had in their present position. The responses to these questions were summarized using descriptive statistical procedures. The results of these analyses are presented in Table 2.

Table 2

Descriptive Statistics
Work Experience of School Library Media Specialists

Work Experience	N	Mean	Standard Deviation	Range	
				Minimum	Maximum
Present School District	89	7.99	7.81	1	34
Present Position	91	5.04	5.53	1	31

The school library media specialists had worked for their present school district from a low of 1 year to a high of 34 years. The mean number of years worked for their present school district was 7.99 (sd=7.81). The school library media specialists had been in their present positions for an average of 5.04 (sd=5.53) years. The range of experience in their present positions were from 1 to 31 years.

The respondents were asked to indicate their employment status. Their responses to this question were summarized for presentation on Table 3.

Table 3

Frequency Distribution
Employment Status

Employment Status	Frequency	Percent
Full-time	78	85.7
Part-Time	8	8.8
Other	5	5.5
Total	91	100.0

Missing 1

The majority of the participants (n=78, 85.7%) were employed full-time, with 8 (8.8%) of the school library media specialists indicating they worked part-time. Five (5.5%) of the school library media specialists indicated "other" as their employment status, but failed to indicate exactly what this "other" status entailed. One of the participants in the study failed to complete this question.

The respondents were asked if they were currently working on an advanced degree. The responses to this question are presented in Table 4.

Table 4

Frequency Distribution
Working on an Advanced Degree

Working on an Advanced Degree	Frequency	Percent
Yes	5	5.7
No	82	94.3
Total	87	100.0

Missing 5

Five (5.7%) of the participants indicated they were working on an

advanced degree. Of those who were working on an advanced degree, one

(25.0%) reported s/he were working on a master's degree, with two (50.0%)

reporting they were working on an educational specialist degree. There was one

(25.0%) respondent who was in the process of working on a doctorate. One of

the school library media specialists who indicated s/he was working on an

advanced degree failed to indicate the type of degree. Eighty-two (94.3%)

school library media specialists indicated they were not working on an advanced

degree. Five respondents did not provide a response for this question.

School Media Characteristics The respondents were asked to indicate

how many library media centers they supervised. The results of the analysis on

this question are presented in Table 5.

Table 5

Descriptive Statistics
Number of School Library Media Centers Supervised

Number	Mean	Standard Deviation	Range	
			Minimum	Maximum
84	2.49	4.27	0.00	20.00

The average number of school library media centers that were supervised
by the respondents was 2.49 (sd=4.27). The number of school library media
centers supervised ranged from a low of 0 to a high of 20. As the identification
of the school media center specialist was not known, it was not possible to
determine if the school system represented in the study was large or small or if
the respondent was a supervisor of a large group of school libraries.

The school media specialists were asked to indicate the number of school
library media specialists that were employed at all sites in their school district.
They were asked to report this number in full-time equivalents. Their responses
to this question were summarized using descriptive statistical procedures. Table
6 presents the results of this analysis.

Table 6

Descriptive Statistics
Number of School Library Media Specialists Employed at All Sites

Number	Mean	Standard Deviation	Range	
			Minimum	Maximum
84	4.81	8.51	0.00	50.00

The respondents reported an average of 4.81 (sd=8.51) school library media specialists were employed at all sites. The actual number of media specialists reported by the participants ranged from a low of 0 to a high of 50.

The school library media specialists were asked to indicate the number of library assistants were employed at all sites in full-time equivalents. Their responses are presented in summarized form in Table 7.

Table 7

Descriptive Statistics
Number of School Library Media Assistants Employed at all Sites

Number	Mean	Standard Deviation	Range	
			Minimum	Maximum
83	3.96	8.39	0.00	61.00

The number of school library media assistants employed at all sites ranged from 0 to 61. The mean number of school library media assistants that were employed at all sites was 3.96 (sd=8.39).

Volunteers in school library media centers were the focus of two questions: parent volunteers and student volunteers. The school library media specialists were asked to report the number of parent and student volunteers regardless of the amount of time worked by these volunteers. Their responses were summarized using descriptive statistical procedures. Table 8 presents the findings of this analysis.

Table 8

Descriptive Statistics
Number of Volunteers in the School Library Media Centers

Volunteer Type	N	Mean	Standard Deviation	Range	
				Minimum	Maximum
Parent	83	8.29	16.63	0.00	90.00
Student	85	7.09	10.86	0.00	52.00

The average number of parent volunteers in the school library media

centers was 8.29 (sd=16.63). The range of parent volunteers was from a low of

0 to a high of 90. Student volunteers ranged from a low of 0 to a high of 52. The

mean number of student volunteers in the school library media center was 7.09

(sd=10.88).

The respondents were asked to indicate the grades they serviced. The

grades were categorized into elementary (K through fifth grades), middle/junior

high school (sixth grade through eighth grade), and high school (ninth grade

through twelfth grade). Their responses to this question were summarized for

presentation on Table 9.

Table 9

Frequency Distribution
School Level Served by Media Center

School Level Served by Media Center	Frequency	Percent
Elementary School	39	44.8
Middle/Junior High School	22	25.3
High School	26	29.9
Total	87	100.0

Missing 5

The largest group of school library media specialists worked primarily in

the elementary schools, with 39 (44.8%) of the participants indicating these

grade levels. Twenty-two (25.3%) of the respondents reported their library

served a middle/junior high school population, with 26 (29.9%) reporting their

libraries served grades considered high school level. Five of the respondents did

not provide a response to this question.

The school library media specialists were asked to indicate the type of

equipment their media center had at the time of the survey. Their responses to

this question were summarized for presentation in Table 10.

Table 10

Frequency Distribution
Equipment Currently in Media Center

Type of Equipment	Frequency	Percent
Television Monitor	76	82.6
Video Cassette Recorder	75	81.5
On-Line Circulation	41	44.6
CD Rom Interactive	34	37.0
CD Rom Player	51	55.4
Computer Workstation	69	75.0
Photography Equipment	27	29.3
Microfilm Reader/Printer	30	32.6
On-Line Card Catalog	31	33.7
On-Line Database	23	25.0
Fax Machine	20	21.7
Satellite Programming	16	17.4
Building/District On-Line Communication	20	21.7
Television/Radio Production Equipment	18	19.6
Other	4	4.3

A total of 76 (82.6%) of the school library media specialists indicated their

school media center had a television monitor, with 75 (81.5%) reporting they had

a video cassette recorder in their library. There were 41 (44.6%) respondents

who reported their media center had on-line circulation available. Thirty-four

(37.0%) had interactive CD ROMs available with 51 (55.4%) indicating the

presence of a CD ROM player. A total of 69 (75.0%) participants reported the

existence of a computer workstation. Twenty-seven (29.3%) of the school library

media specialists had photography equipment in their school media centers, with

30 (32.6%) indicating their media center had microfilm readers/printers. Online

card catalogs were indicated by 31 (33.7%) of the school library media

specialists, compared to 23 (25.0%) who had online databases available in their

media centers. Twenty (21.7%) of the participants had fax machines in their

media centers. Sixteen (17.4%) of the respondents had satellite programming

available in their media centers. Building/district online communication

equipment was reported by 20 (21.7%) of the respondents, with 18 (19.6%)

having television/radio production equipment in their media centers. Four of the

school media specialists indicated "other" as equipment, but failed to list the

specific equipment.

Questionnaire Items

Thirty competencies were developed for use on the original instrument

that was constructed to determine if there was a difference on the emphasis of

each competency in the university program and the extent to which each

competency was used in the respondents' present job. The differences in

responses to each question relative to the university program emphasis and

extent used in present job were tested by using a Wilcoxon Matched Pairs

Signed Rank Test. The results of these tests for each item are shown in Table

11.

Table 11

Wilcoxon Matched Pairs Signed Rank Test
Competencies

Competency	University Program > Use on Job	University Program = Use on Job	University Program< Use on Job	Z Value
Integrating library media center activities with the school curriculum.	29	19	40	-1.34(NS)
Serving as instructional consultant for teacher.	36	17	35	-0.41(NS)
Assisting teachers in adopting a multimedia approach to instruction.	35	18	34	-0.31(NS)
Assisting teachers in accessing outside resources.	31	27	30	-0.21(NS)
Using the principles of library media center management: budgeting.	20	26	43	-2.83*
Using the principles of library media center management: administration	27	23	39	-1.78(NS)
Using the principles of library media center management: collection development	20	42	27	-1.15(NS)
Using the operational functions of the school library media center.	16	26	40	-3.52*
Assisting parents with communication techniques.	13	40	35	-2.56*
Assisting the school community at large with communication techniques.	23	31	35	-0.77(NS)
Assisting teachers and administrators with communication techniques.	24	31	34	-1.69(NS)
Periodically conducting analysis and evaluation of library media center programs.	30	29	30	-0.90 (NS)
Building library media center design, including remodeling and updating.	29	18	42	-1.16 (NS)
Providing opportunities for critical thinking and problem solving.	17	22	50	-4.22*
Analyzing user characteristics.	33	27	29	-0.82(NS)
Designing learning strategies.	20	18	49	-3.44*
Instructing teachers in methods of accessing resources and modes of inquiry.	26	26	36	-1.06(NS)
Instructing students in methods of accessing resources and modes of inquiry.	11	25	53	-5.36*
Designing instruction and developing programs and materials.	20	46	20	-3.24*
Using evaluation and research techniques.	37	33	19	-2.26*

Table 11 (Continued)

Wilcoxon Matched Pairs Signed Rank Test
Competencies

Competency	University Program > Use on Job	University Program = Use on Job	University Program< Use on Job	Z Value
Maintaining a staff development program for paraprofessionals and library aides.	27	20	41	-1.83(NS)
Providing on-going, in-service programs for orientation for students and teachers.	27	19	43	-1.80(NS)
Providing access to all types of materials, including professional resources.	19	35	35	-2.64*
Providing a technical facility in educational computing.	27	16	43	-1.91(NS)
Providing a technical facility in television or radio broadcasting and/or media for students.	28	36	23	-0.26(NS)
Providing a technical facility in distance education.	27	11	46	-2.69*
Serving as information specialist for students.	14	39	36	-2.79*
Serving as information specialist for teachers.	20	33	35	-1.14(NS)
Accessing opportunities for continuing professional development.	30	34	23	-0.48(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	36	39	13	-2.69*

*$p \leq .05$

The results of the Wilcoxon Matched Pairs Signed Ranks test found 12 competencies that differed significantly between the responses on the emphasis of the competency by university program and extent competency used in present job. In nine competencies, the extent the competency was used in present job exceeded the emphasis placed on the competency by the university program. Two competencies were emphasized by the university program to a greater extent than the competencies were used in present job, and one was equal in both instances.

Of the nine items that were used more than taught, two fell into the

construct "administrator": using principles of library management: budgeting and using the operational functions of the library media center. Two items were included in the construct, "designer": designing learning strategies and designing instruction and developing programs and materials. One competency was included in the construct, "communication facilitator": assisting parents with communication techniques. The three additional competencies that were used significantly more than taught were: instructing students in methods of accessing resources and modes on inquiry; providing access to all types of materials, including professional resources; and serving as information specialist for students.

Two competencies were taught at the university level more than they were used by school library media specialists. One was "using evaluation and research techniques" which was included in the construct "information specialist". The other competency that was taught more than used was: participating in professional associations on local, state, and national levels, including conferences and workshops.

Research Questions

Four research questions were posed for this study. These questions were answered using the results of the statistical analyses completed on the responses of the school library media specialists. All decisions on the statistical significance of the inferential statistical procedures used to answer the research questions were made using an alpha level of .05.

Research question one. Is there a difference in the job competencies perceived as required by selected school library media graduates in their jobs relative to the length of time since they have completed their library science programs?

A Mann-Whitney U test for independent samples was used to determine if there was a difference among the respondents relative to the length of time since they have completed their library science programs. The respondents were grouped into two groups, those who had completed their library science programs less than four years ago and those who had completed their programs four or more years ago. The dependent variables were the 12 competencies that were found to differ significantly between "taught in library science programs" and "used in present position". Table 12 presents the results of the analyses examining the extent to which the competency was emphasized in the library science programs by the length of time since completion of the program.

Table 12

Mann-Whitney U Test for Independent Samples
Emphasis of University Program by Length of Time Since Graduation

Competency	Mean Rank		Z Value
	Less than 4 years	Four years or more	
Integrating library media center activities with the school curriculum.	44.10	43.89	-.04(NS)
Serving as instructional consultant for teacher.	44.99	42.84	-.41(NS)
Assisting teachers in adopting a multimedia approach to instruction.	48.66	38.53	-1.93(NS)
Assisting teachers in accessing outside resources.	44.72	43.15	-0.30(NS)
Using the principles of library media center management: budgeting.	40.31	49.53	-1.74(NS)
Using the principles of library media center management: administration	43.66	45.51	-.36(NS)
Using the principles of library media center management: collection development	42.50	46.90	-.87(NS)
Using the operational functions of the school library media center.	39.86	42.29	-.48(NS)
Assisting parents with communication techniques.	46.89	40.60	-1.31(NS)
Assisting the school community at large with communication techniques.	45.93.	42.79	-.60(NS)
Assisting teachers and administrators with communication techniques.	43.79	45.35	-.30(NS)
Periodically conducting analysis and evaluation of library media center programs.	41.84	47.69	-1.12(NS)
Building library media center design, including remodeling and updating.	41.90	47.63	-1.08(NS)
Providing opportunities for critical thinking and problem solving.	48.07	40.21	-1.50(NS)
Analyzing user characteristics.	48.21	40.05	-1.54(NS)
Designing learning strategies.	45.30	41.42	-.74(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	41.66	46.75	-.97(NS)
Instructing students in methods of accessing resources and modes of inquiry.	41.72	47.84	-1.16(NS)
Designing instruction and developing programs and materials.	41.14	46.21	-.98(NS)
Using evaluation and research techniques.	41.96	47.55	-1.08(NS)
Maintaining a staff development program for paraprofessionals and library aides.	41.47	46.97	-1.06(NS)
Providing on-going, in-service programs for orientation for students and teachers.	41.73	47.83	-1.16(NS)

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Competency	Mean Rank		Z Value
	Less than 4 years	Four years or more	
Providing access to all types of materials, including professional resources.	43.57	45.61	-.39(NS)
Providing a technical facility in educational computing.	45.60	41.09	-.87(NS)
Providing a technical facility in television or radio broadcasting and/or media for students.	44.27	42.61	-.32(NS)
Providing a technical facility in distance education.	44.28	40.54	-.79(NS)
Serving as information specialist for students.	46.07	42.61	-.67(NS)
Serving as information specialist for teachers.	46.32	42.31	-.77(NS)
Accessing opportunities for continuing professional development.	44.44	42.37	-.39(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	44.13	44.95	-.16(NS)

The Mann-Whitney U produced no statistically significant differences in the responses on each of the 30 competencies included in this analysis between school library media specialists who have finished their programs less than four years ago and those who completed their programs four or more years ago. These results indicated that library media specialists did not differ in their perceptions on the emphasis of each of their library school programs on each of these competencies, regardless of the length of time since the graduate had completed his/her program.

A Mann-Whitney U test for independent samples was used to determine if the responses of the school library media specialists differed on the extent to which they used each of the competencies in their present job relative to the length of time since they had completed their library school programs. The results of this analysis are presented in Table 13.

Table 13

Mann-Whitney U Test for Independent Samples
Extent Competency Used in Present Position by Time Since Graduation

Competency	Mean Rank		Z Value
	Less than 4 years	Four years or more	
Integrating library media center activities with the school curriculum.	38.37	48.46	-1.96*
Serving as instructional consultant for teacher.	37.01	50.06	-2.51*
Assisting teachers in adopting a multimedia approach to instruction.	36.92	50.17	-2.55*
Assisting teachers in accessing outside resources.	37.91	47.79	-1.92(NS)
Using the principles of library media center management: budgeting.	38.28	48.56	-1.99*
Using the principles of library media center management: administration	35.66	51.65	-3.10*
Using the principles of library media center management: collection development	37.68	49.27	-2.39*
Using the operational functions of the school library media center.	34.96	45.72	-2.17*
Assisting parents with communication techniques.	37.43	49.56	-2.40*
Assisting the school community at large with communication techniques.	37.78	49.15	-2.20*
Assisting teachers and administrators with communication techniques.	33.50	54.21	-3.98*
Periodically conducting analysis and evaluation of library media center programs.	37.54	49.44	-2.28*
Building library media center design, including remodeling and updating.	39.24	47.44	-1.56(NS)
Providing opportunities for critical thinking and problem solving.	43.12	42.86	-.05(NS)
Analyzing user characteristics.	41.90	44.29	-.46(NS)
Designing learning strategies.	42.42	43.68	-.24(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	37.18	49.86	-2.43*
Instructing students in methods of accessing resources and modes of inquiry.	38.35	48.49	-2.08*
Designing instruction and developing programs and materials.	37.34	48.45	-2.13*
Using evaluation and research techniques.	37.90	49.01	-2.12*
Maintaining a staff development program for paraprofessionals and library aides.	38.30	48.54	-1.96(NS)
Providing on-going, in-service programs for orientation for students and teachers.	35.97	51.29	-2.92*

Competency	Mean Rank		Z Value
	Less than 4 years	Four years or more	
Providing access to all types of materials, including professional resources.	37.46	49.54	-2.18*
Providing a technical facility in educational computing.	36.20	47.35	-2.18*
Providing a technical facility in television or radio broadcasting and/or media for students.	41.50	43.65	-.44(NS)
Providing a technical facility in distance education.	41.21	41.82	-.17(NS)
Serving as information specialist for students.	36.70	50.44	-3.11*
Serving as information specialist for teachers.	33.93	52.38	-3.74*
Accessing opportunities for continuing professional development.	36.40	49.54	-.255*
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	38.36	47.28	-1.75(NS)

*$p \le .05$

Responses on 21 of the 30 competencies were found to be statistically

significant at an alpha level of .05. In each case, the school library media

specialists who had completed their library science programs four or more years

ago had more positive responses than those who had completed their programs

fewer than four years ago.

> Research question two. Is there a difference in the job
> competencies perceived as required by selected school library
> media graduates in their jobs relative to the grade levels of the
> schools they serve?

The school library media specialists were divided into three groups based

on the grade levels their libraries served: elementary, middle/junior high, and

high school. The grade levels were used as the independent variable with the

responses for each of the 30 competencies used as the dependent variables in

Kruskal-Wallis one-way analysis of variance procedures. The results of these

analyses are presented in Table 14.

Table 14

Kruskal-Wallis One-Way Analysis of Variance
Emphasis on Competency in University Program
By Grade Level Served

Competency	Mean Rank			Chi Square Value
	Elementary	Middle	High School	
Integrating library media center activities with the school curriculum.	37.60	45.70	50.76	4.76(NS)
Serving as instructional consultant for teacher.	37.03	46.89	50.62	5.39(NS)
Assisting teachers in adopting a multimedia approach to instruction.	37.54	48.09	48.76	4.38(NS)
Assisting teachers in accessing outside resources.	40.58	38.09	52.82	5.58(NS)
Using the principles of library media center management: budgeting.	40.28	43.64	49.88	2.40(NS)
Using the principles of library media center management: administration	41.38	47.14	45.27	.90(NS)
Using the principles of library media center management: collection development	42.65	39.84	49.54	2.25(NS)
Using the operational functions of the school library media center.	39.03	42.97	40.74	.40(NS)
Assisting parents with communication techniques.	40.15	45.55	46.92	1.78(NS)
Assisting the school community at large with communication techniques.	39.36	43.00	51.81	4.18(NS)
Assisting teachers and administrators with communication techniques.	40.68	43.14	49.71	2.19(NS)
Periodically conducting analysis and evaluation of library media center programs.	35.47	51.18	50.71	8.74*
Building library media center design. including remodeling and updating.	37.51	53.66	45.56	6.30*
Providing opportunities for critical thinking and problem solving.	37.85	50.23	47.96	4.64(NS)
Analyzing user characteristics.	37.77	46.57	51.17	5.02(NS)
Designing learning strategies.	37.26	42.29	52.56	6.22*
Instructing teachers in methods of accessing resources and modes of inquiry.	39.23	45.11	48.74	2.52(NS)

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Competency	Mean Rank			Chi Square Value
	Elementary	Middle	High School	
Instructing students in methods of accessing resources and modes of inquiry.	42.86	41.77	47.60	.83(NS)
Designing instruction and developing programs and materials.	39.21	44.43	47.50	1.98(NS)
Using evaluation and research techniques.	36.15	51.20	49.67	7.70*
Maintaining a staff development program for paraprofessionals and library aides.	40.21	46.68	45.84	1.36(NS)
Providing on-going, in-service programs for orientation for students and teachers.	40.88	41.11	51.12	3.17(NS)
Providing access to all types of materials, including professional resources.	41.36	45.07	47.06	.92(NS)
Providing a technical facility in educational computing.	41.17	40.88	47.64	1.36(NS)
Providing a technical facility in television or radio broadcasting and/or media for students.	39.88	45.00	46.23	1.31(NS)
Providing a technical facility in distance education.	37.86	42.90	47.77	3.28(NS)
Serving as information specialist for students.	39.63	43.86	50.67	3.36(NS)
Serving as information specialist for teachers.	39.64	46.98	48.02	2.34(NS)
Accessing opportunities for continuing professional development.	37.04	45.82	49.58	4.58(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	39.38	45.64	49.54	3.02(NS)

*p≤.05

When the responses from school library media specialists were compared using the grade levels their school media center served; elementary, junior high, or high school; perceptions on the emphasis in university programs of 4 of the 30 competencies were found to be significantly different across the grade levels. The responses on remaining 26 competencies were not significantly different relative to the grade levels being served. For three of the four significant findings, library media specialists at the high school level had the highest mean ranks.

Using the same breakdown of "grade levels" as the independent variable

and "responses to competencies based on the extent each was used in the school library media specialists' present position" serving as the dependent variable, Kruskal-Wallis one-way analysis of variance procedures were developed for each of the 30 competencies. The results of this analysis are presented in Table 15.

Table 15

Kruskal-Wallis One-Way Analysis of Variance
Extent to Which Competency is Used in Present Position
By Grade Level Served

Competency	Mean Rank			Chi Square Value
	Elementary	Middle	High School	
Integrating library media center activities with the school curriculum.	43.36	41.73	45.28	.26(NS)
Serving as instructional consultant for teacher.	43.27	39.09	47.74	1.52(NS)
Assisting teachers in adopting a multimedia approach to instruction.	4.59	38.19	50.80	3.94(NS)
Assisting teachers in accessing outside resources.	35.73	46.09	51.98	7.46*
Using the principles of library media center management: budgeting.	40.42	36.39	54.56	7.90*
Using the principles of library media center management: administration	43.71	37.66	48.32	2.32(NS)
Using the principles of library media center management: collection development	42.29	39.64	48.78	2.14(NS)
Using the operational functions of the school library media center.	37.44	36.60	48.33	4.30(NS)
Assisting parents with communication techniques.	45.03	39.34	44.78	.93(NS)
Assisting the school community at large with communication techniques.	44.14	36.50	48.66	3.04(NS)
Assisting teachers and administrators with communication techniques.	44.76	34.68	49.30	4.46(NS)
Periodically conducting analysis and evaluation of library media center programs.	38.56	36.48	57.38	11.71*

Competency	Mean Rank			Chi Square Value
	Elementary	Middle	High School	
Building library media center design, including remodeling and updating.	39.08	44.68	49.36	2.76(NS)
Providing opportunities for critical thinking and problem solving.	42.92	38.32	48.96	2.42(NS)
Analyzing user characteristics.	40.01	36.59	55.02	8.35*
Designing learning strategies.	45.58	38.66	44.52	1.21(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	38.65	45.93	48.92	3.03(NS)
Instructing students in methods of accessing resources and modes of inquiry.	42.55	40.32	47.78	1.42(NS)
Designing instruction and developing programs and materials.	45.47	35.89	345.50	2.78(NS)
Using evaluation and research techniques.	40.24	34.93	56.12	10.15*
Maintaining a staff development program for paraprofessionals and library aides.	41.13	41.30	49.14	1.90(NS)
Providing on-going, in-service programs for orientation for students and teachers.	40.00	40.18	51.88	4.15(NS)
Providing access to all types of materials, including professional resources.	41.14	37.93	52.08	5.10(NS)
Providing a technical facility in educational computing.	37.63	38.81	52.33	6.22*
Providing a technical facility in television or radio broadcasting and/or media for students.	40.71	32.48	56.38	13.24*
Providing a technical facility in distance education.	39.40	35.35	51.77	11.95*
Serving as information specialist for students.	43.00	41.09	46.40	.83(NS)
Serving as information specialist for teachers.	40.79	39.48	49.81	3.04(NS)
Accessing opportunities for continuing professional development.	41.26	41.50	46.96	.98(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	39.69	41.77	49.50	2.64(NS)

*p≤.05

When the responses to the 30 competencies were compared relative to the grade level served by the participant's media center, statistically significant differences were found for 8 of the 30 competencies. The high school library media specialists had higher mean ranks on these competencies. The

remaining 22 competencies did not differ relative to the grade level taught.

Research question three. Is there a difference in the job competencies perceived as required by selected school library media graduates in their jobs relative to the amount of technical equipment they have available in their library media centers?

The respondents were asked to indicate which types of technical equipment they had in their library media centers. The respondents were grouped into three groups: 1 to 4 types of equipment (n=32), 5 to 8 types of equipment (n=31), and 9-14 types of equipment (n=23). There was no distinction made regarding the kinds of types of technical equipment. Kruskal-Wallis one-way analysis of variance procedures were used with the responses on the competencies serving as the dependent variable. The groupings by amount of types of technical equipment were used as the independent variable. The results of this analysis are presented on Table 16.

Table 16

Kruskal-Wallis One-Way Analysis Of Variance
Emphasis of Competency by University Program
By Amount of Technical Equipment

Competency	Mean Rank			Chi Square Value
	1-4	5-8	9-14	
Integrating library media center activities with the school curriculum.	46.02	41.30	41.02	.81(NS)
Serving as instructional consultant for teacher.	44.98	39.37	44.98	1.07(NS)
Assisting teachers in adopting a multimedia approach to instruction.	44.59	42.15	41.89	.23(NS)
Assisting teachers in accessing outside resources.	39.91	42.65	47.76	1.51(NS)
Using the principles of library media center management: budgeting.	42.86	42.69	45.48	.21(NS)
Using the principles of library media center management: administration	48.47	39.11	42.50	2.50(NS)
Using the principles of library media center management: collection development	42.69	40.26	49.00	1.91(NS)
Using the operational functions of the school library media center.	43.76	39.52	36.05	1.53(NS)
Assisting parents with communication techniques.	45.42	39.04	44.76	1.60(NS)
Assisting the school community at large with communication techniques.	41.86	39.97	50.54	2.82(NS)
Assisting teachers and administrators with communication techniques.	41.59	40.44	50.28	2.54(NS)
Periodically conducting analysis and evaluation of library media center programs.	45.55	39.63	45.87	1.26(NS)
Building library media center design, including remodeling and updating.	45.02	40.35	45.63	.83(NS)
Providing opportunities for critical thinking and problem solving.	45.16	36.18	51.07	5.33(NS)
Analyzing user characteristics.	49.52	36.61	44.41	4.52(NS)
Designing learning strategies.	40.47	40.23	48.20	1.83(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	42.23	41.43	46.11	.56(NS)
Instructing students in methods of accessing resources and modes of inquiry.	42.56	43.11	45.33	.18(NS)
Designing instruction and developing programs and materials.	44.03	41.47	41.78	.22(NS)

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Competency	Mean Rank			Chi Square Value
	1-4	5-8	9-14	
Using evaluation and research techniques.	41.39	42.55	47.72	.04(NS)
Maintaining a staff development program for paraprofessionals and library aides.	44.94	41.15	42.72	.40(NS)
Providing on-going, in-service programs for orientation for students and teachers.	41.73	43.58	45.85	.39(NS)
Providing access to all types of materials, including professional resources.	41.44	40.00	51.09	3.22(NS)
Providing a technical facility in educational computing.	45.13	39.37	43.04	.93(NS)
Providing a technical facility in television or radio broadcasting and/or media for students.	46.23	36.03	45.46	3.45(NS)
Providing a technical facility in distance education.	42.55	39.09	43.02	.56(NS)
Serving as information specialist for students.	43.73	43.85	42.70	.04(NS)
Serving as information specialist for teachers.	44.88	43.23	41.96	.21(NS)
Accessing opportunities for continuing professional development.	43.09	38.12	47.61	2.09(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	45.30	38.90	47.20	1.95(NS)

When the responses on how each of the competencies was emphasized in the university program were compared by the amount of types of technical equipment present in the school library media center, the analyses using Kruskal-Wallis one-way analysis of variance procedures produced no statistically significant differences. There was no discernable pattern among the responses relative to the amount of types of equipment in each of the media centers.

In order to determine if there was a difference in the perceptions of the school library media specialists on the extent each of the competencies was used relative to the amount of types of technical equipment in the media center, a Kruskal-Wallis one way analysis of variance was conducted. The scores on each of the competencies were used as the dependent variable, with the amount

of types of equipment in the media center used as the independent variable.

The results of this analysis are presented in Table 17.

Table 17

Kruskal-Wallis One-Way Analysis of Variance
Extent to Which Competency is Used in Present Position
by Grade Level Served

Competency	Mean Rank			Chi Square Value
	1-4	5-8	9-14	
Integrating library media center activities with the school curriculum.	35.20	44.95	53.09	7.74*
Serving as instructional consultant for teacher.	30.48	49.47	53.57	15.36*
Assisting teachers in adopting a multimedia approach to instruction.	30.42	48.38	53.48	14.91*
Assisting teachers in accessing outside resources.	35.47	46.72	48.63	5.25(NS)
Using the principles of library media center management: budgeting.	34.69	50.79	45.93	7.44*
Using the principles of library media center management: administration	39.69	45.37	46.28	1.31(NS)
Using the principles of library media center management: collection development	36.73	51.21	42.52	6.59*
Using the operational functions of the school library media center.	33.59	44.18	44.27	4.20(NS)
Assisting parents with communication techniques.	37.50	47.31	46.72	3.32(NS)
Assisting the school community at large with communication techniques.	34.03	45.74	53.65	9.30*
Assisting teachers and administrators with communication techniques.	32.72	44.87	56.65	13.27*
Periodically conducting analysis and evaluation of library media center programs.	36.39	46.39	49.50	4.62(NS)
Building library media center design, including remodeling and updating.	35.75	49.84	45.74	5.50(NS)
Providing opportunities for critical thinking and problem solving.	37.47	45.24	49.54	3.80(NS)
Analyzing user characteristics.	41.19	43.58	46.61	.68(NS)
Designing learning strategies.	35.48	47.76	48.91	5.59(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	28.80	52.15	52.30	18.80*

Competency	Mean Rank			Chi Square Value
	1-4	5-8	9-14	
Instructing students in methods of accessing resources and modes of inquiry.	40.09	46.58	44.09	1.34(NS)
Designing instruction and developing programs and materials.	37.14	44.08	49.74	4.03(NS)
Using evaluation and research techniques.	37.61	45.39	49.15	3.31(NS)
Maintaining a staff development program for paraprofessionals and library aides.	37.66	43.39	51.78	4.54(NS)
Providing on-going, in-service programs for orientation for students and teachers.	32.95	47.60	52.65	10.07*
Providing access to all types of materials, including professional resources.	37.55	44.56	50.35	4.22(NS)
Providing a technical facility in educational computing.	25.92	51.55	51.63	23.39*
Providing a technical facility in television or radio broadcasting and/or media for students.	27.81	52.55	51.67	22.39*
Providing a technical facility in distance education.	33.00	45.43	50.57	15.11*
Serving as information specialist for students.	39.75	46.05	45.28	1.78(NS)
Serving as information specialist for teachers.	34.59	44.47	52.78	8.82*
Accessing opportunities for continuing professional development.	42.70	39.60	48.23	1.69(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	37.11	44.20	49.63	3.88(NS)

*$p<.05$

Thirteen of the 30 competencies included on the survey were found to be statistically significant when compared by the amount of types of technical equipment that was available in the school library media specialists' media center. There was a similarity in the responses between those media specialists who had listed 5 to 8 types of technical equipment and those with 9 to 14 types, with these two groups having higher scores on each than those media specialists who reported 1 to 4 types of technical equipment. Higher scores reflected greater emphasis of the competency in the library school programs.

Research Question Four. Is there a difference in the job
competencies perceived as required by selected school library
media graduates in their jobs relative to the length of time they
have worked in their present position?

The respondents were divided into three groups based on the length of
time the respondent had been in his/her present position divided into the
following categories: 1 to 2 years, 3 to 5 years, and over 5 years. These
categories were used as the independent variable in the Kruskal-Wallis one-way
analysis of variance procedure. The responses on each of the competencies as
they were emphasized in the respondents' university program were used as the
dependent variable. The results of this analysis are provided in Table 18.

Table 18

Kruskal-Wallis One-Way Analysis Of Variance
Emphasis on Competency in University Program
By Length of Time in Present Position

Competency	Mean Rank			Chi Square Value
	1-2	3-5	over 5	
Integrating library media center activities with the school curriculum.	45.69	46.98	45.60	.05(NS)
Serving as instructional consultant for teacher.	46.47	45.52	45.80	.02(NS)
Assisting teachers in adopting a multimedia approach to instruction.	48.28	46.17	43.05	.70(NS)
Assisting teachers in accessing outside resources.	48.68	44.90	43.58	.75(NS)
Using the principles of library media center management: budgeting.	46.18	49.23	44.72	.41(NS)
Using the principles of library media center management: administration	45.75	53.10	42.17	2.50(NS)
Using the principles of library media center management: collection development	44.79	45.08	49.80	.78(NS)
Using the operational functions of the school library media center.	42.49	44.43	42.45	.12(NS)

Competency	Mean Rank			Chi Square Value
	1-2	3-5	over 5	
Assisting parents with communication techniques.	47.91	45.63	43.95	.50(NS)
Assisting the school community at large with communication techniques.	46.36	47.77	45.67	.09(NS)
Assisting teachers and administrators with communication techniques.	43.82	50.50	46.70	1.00(NS)
Periodically conducting analysis and evaluation of library media center programs.	45.76	47.71	46.47	.08(NS)
Building library media center design, including remodeling and updating.	44.46	54.56	42.63	3.24(NS)
Providing opportunities for critical thinking and problem solving.	51.37	44.58	41.87	2.48(NS)
Analyzing user characteristics.	49.95	47.29	41.50	1.82(NS)
Designing learning strategies.	52.11	44.59	38.05	5.12(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	43.66	40.54	53.25	3.85(NS)
Instructing students in methods of accessing resources and modes of inquiry.	44.43	42.46	52.35	2.38(NS)
Designing instruction and developing programs and materials.	46.07	43.67	46.29	.18(NS)
Using evaluation and research techniques.	45.30	45.85	48.53	.29(NS)
Maintaining a staff development program for paraprofessionals and library aides.	43.36	47.79	47.82	.28(NS)
Providing on-going, in-service programs for orientation for students and teachers.	45.26	45.98	48.48	.28(NS)
Providing access to all types of materials, including professional resources.	43.53	45.65	50.95	1.45(NS)
Providing a technical facility in educational computing.	47.72	49.02	40.02	2.19(NS)
Providing a technical facility in television or radio broadcasting and/or media for students.	45.33	46.33	45.03	.04(NS)
Providing a technical facility in distance education.	46.22	46.65	40.66	1.24(NS)
Serving as information specialist for students.	46.09	46.10	47.33	.05(NS)
Serving as information specialist for teachers.	44.64	47.90	47.73	.34(NS)
Accessing opportunities for continuing professional development.	41.45	48.52	48.18	1.62(NS)
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	45.84	52.38	42.63	2.06(NS)

When the responses on how each of the competencies listed on the survey were compared using the length of time in present position as the independent variable in a series of Kruskal-Wallis one-way analysis of variance procedures, the resultant chi square values were not statistically significant. This result indicates that the respondents, regardless of how long they had been in their present position, did not differ in their perceptions on how each of the competencies was emphasized in their university programs.

The responses on extent to which each of the competencies was used in the respondents' present position were used as the dependent variable with the length of time in present position used as the independent variable in a Kruskal-Wallis one-way analysis of variance. The results of this analysis are shown in Table 19.

Table 19

Kruskal-Wallis One-Way Analysis Of Variance
Extent Competency Used in Present Position
By Length of Time in Present Position

Competency	Mean Rank			Chi Square Value
	1-2	3-5	over 5	
Integrating library media center activities with the school curriculum.	38.06	43.69	54.71	7.38*
Serving as instructional consultant for teacher.	38.39	40.75	56.72	9.65*
Assisting teachers in adopting a multimedia approach to instruction.	35.63	46.56	54.14	9.10*
Assisting teachers in accessing outside resources.	37.50	50.31	48.14	4.80(NS)
Using the principles of library media center management: budgeting.	40.26	39.56	55.38	7.51*
Using the principles of library media center management: administration	33.58	48.81	56.02	13.87*

Competency	Mean Rank			Chi Square Value
	1-2	3-5	over 5	
Using the principles of library media center management: collection development	38.56	48.67	49.97	4.63(NS)
Using the operational functions of the school library media center.	34.98	38.52	53.41	10.10*
Assisting parents with communication techniques.	36.43	44.83	55.78	10.17*
Assisting the school community at large with communication techniques.	38.25	45.35	53.09	5.71(NS)
Assisting teachers and administrators with communication techniques.	34.42	47.75	55.86	12.19*
Periodically conducting analysis and evaluation of library media center programs.	42.46	37.56	54.31	6.48*
Building library media center design, including remodeling and updating.	37.03	47.75	52.32	6.49*
Providing opportunities for critical thinking and problem solving.	45.25	41.40	47.67	0.87(NS)
Analyzing user characteristics.	41.29	44.52	50.00	1.98(NS)
Designing learning strategies.	47.92	44.88	41.48	1.06(NS)
Instructing teachers in methods of accessing resources and modes of inquiry.	37.69	45.04	54.03	6.82*
Instructing students in methods of accessing resources and modes of inquiry.	39.81	40.40	55.26	8.33*
Designing instruction and developing programs and materials.	44.23	40.77	47.91	1.15(NS)
Using evaluation and research techniques.	39.63	39.52	56.21	8.52*
Maintaining a staff development program for paraprofessionals and library aides.	40.81	36.52	57.22	10.60*
Providing on-going, in-service programs for orientation for students and teachers.	40.44	43.31	52.05	3.53(NS)
Providing access to all types of materials, including professional resources.	41.53	36.96	55.97	9.48*
Providing a technical facility in educational computing.	37.80	43.19	50.24	4.06(NS)
Providing a technical facility in television or radio broadcasting and/or media for students.	41.10	40.40	52.00	4.36(NS)
Providing a technical facility in distance education.	39.07	46.37	46.68	3.69(NS)
Serving as information specialist for students.	38.24	48.50	50.50	6.16*
Serving as information specialist for teachers.	34.89	50.10	51.47	9.67*
Accessing opportunities for continuing professional development.	4150	39.04	52.64	4.84(NS)

Competency	Mean Rank			Chi Square Value
	1-2	3-5	over 5	
Participating in professional associations on local, state, and/or national levels, including conferences and workshops.	41.77	43.42	48.69	1.34(NS)

*p≤.05

In the Kruskal-Wallis one-way analysis of variance, 17 of the 30 competencies were found to be significantly different at an alpha level of .05. These results showed that the longer the school library media specialists had been in their position, the more the competencies were used in their school library media centers.

Summary

Chapter IV has presented the results of the statistical analysis that was used to answer the four research questions posed by this study. The conclusions and recommendations that can be determined from this analysis are presented in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study focused upon school library media specialists who graduated

from similar urban university, certificated school library media programs within

the last seven years, and who were currently practicing at the time of the survey.

The research hypothesis: Is there a disparity between job competencies as

taught, and job competencies as required by selected school library media

graduates in their jobs: was investigated using an original instrument developed

for this study.

Using selected respondents who completed and returned a piloted

instrument, the study examined four major research questions: (a) Is there a

difference in the job competencies as required by selected school library media

graduates in their jobs relative to the length of time since they have completed

their library science programs; (b) Is there a difference in the job competencies

as required by selected school library media graduates in their jobs relative to

the grade levels of the schools they serve; (c) Is there a difference in the job

competencies as required by selected school library media graduates in their

jobs relative to the amount of technical equipment they have available in their

library media centers; and (d) Is there a difference in the job competencies as

required by selected school library media graduates in their jobs relative to the

length of time they have worked in their present position.

A nonexperimental, descriptive research design was incorporated in this

study, with an original survey instrument used as the major data gathering tool. The population defined for this study was school library media specialists who had completed their library science program within the past seven years and were currently working in school media centers.

The alumni of three universities were selected for inclusion in this study. The curriculum of each of these university's library science programs was approved by the American Library Association, and each provides a concentration in school library media. The study universities provided a list of graduates from their library science programs for the past seven years. All of the graduates, regardless of their area of concentration, were sent a survey. Only those who were currently working in a school library setting were asked to complete and return the survey. As data gathering was anonymous, no follow-up was possible.

An original instrument was developed for this study by the researcher. It included 30 competencies that were divided into the three main tasks of school library media specialists: information specialist, teacher, and instructional consultant. Each of these competencies was measured twice: the first time as it was emphasized in the respondent's university program, and again considering the extent the competency is used in the media specialist's present position. Both ratings used a 5 point Likert scale with a 1 indicating "not at all" and a 5 "to a great extent". The instrument was pilot tested with a group of nine practicing school library media specialists. These individuals completed the instrument twice to measure both internal consistency and test-retest stability. The results

of the testing for reliability showed the instrument had good internal consistency and stability. Content validity of the instrument was determined by sending the survey to a group of seven experts in the field of library science. These experts provided comments and suggestions that were used to make minor changes necessary to assure content validity.

After the surveys were returned, the information was entered into a computer file for analysis using the Statistical Package for the Social Sciences - Windows (SPSS-W). All decisions on the significance of the inferential statistical analysis were made using an alpha level of .05.

The library media specialists were asked to provide the length of time since they had completed their education, as this variable was a criterion for inclusion in the study. The mean number of years since graduation for all of the respondents was 4.16 years. The respondents had worked in their present school district for an average of 7.99 years, and had been in their present position for 5.04 years. The majority of school media specialists indicated they worked full time. Five of the respondents were working on an advanced degree.

The school levels served by the media specialist were elementary school (44.8%), middle/junior high school level (25.3%), and high school (29.9%). The type of technical equipment in the school media center ranged from television monitors and video cassette recorders to television/radio production equipment.

The school library media specialists' responses on the 30 competencies were compared as to how the competency was emphasized in the university program versus the extent to which the competency is used in their present

position. The results of this analysis found 12 of the 30 competencies that

differed significantly between the emphasis on the competency by the university

program and extent used in present position. In 9 of the 12 competencies found

to differ, the extent used in present position exceeded the emphasis placed on

the competency by the university program. Two were emphasized by the

university program to a greater extent than the competencies were used in the

student's present position. The remaining competency was equally emphasized

and used.

Four research questions were posited in this study. The findings and

conclusions that apply to each question are presented separately. Each

question will be discussed at length in the Discussion section following the

presentation of findings and conclusions.

Research question one. Is there a difference in job competencies
perceived as required by selected school library media graduates in their
jobs relative to the length of time since they have completed their library
science programs?

The groupings used for comparison in this research question were school

library media specialists who had graduated within the last three years, and

those who had graduated four or more years ago. A Mann-Whitney U test for

independent samples was used to test for differences in perceptions of the

competencies on Parts A and B.

Findings. When responses on Part A of the survey were compared by

the years since graduation, there were no differences found on any of the 30

competencies. On Part B, 21 items showed significant difference with the

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difference in direction as length of time since graduation increased. In each

case the school library media specialists who had completed their library science

programs four or more years ago had more positive responses than those who

had completed their programs fewer than four years ago.

Conclusions. Constructs relating to competencies taught in schools of

library science at the university level are perceived or remembered among

practicing library media respondents in this survey who have graduated with the

last ten years similarly, regardless of length of time since graduation, as

indicated by the lack of significant differences in Part A responses. Conversely,

the findings indicated that, as the years since graduation increased, school

library media specialists felt that the competencies were used more extensively

on their jobs.

Research Question Two. Is there a difference in job competencies as
required by selected school library media graduates in their jobs relative
to the grade levels of the schools they serve?

School library media specialists were divided into three groups based on

the grade levels their libraries served: elementary (k-5), middle/junior high school

(6-8), and high school (9-12). Grade levels were used as the independent

variable with responses for each of the 30 competencies as the dependent

variable in the Kruskal-Wallis one-way analysis of variance procedures.

Findings. Perceptions on the emphasis in university programs (Part A)

were significantly different on four competencies, with three of the four showing

specialists at the high school level with highest mean ranks. The responses on

the remaining 26 competencies were not significantly different relative to the

grade levels being served. On Part B, statistically significant differences were found for 8 of the 30 competencies, with high school media specialists again having higher mean ranks on these competencies. The remaining 22 competencies did not differ relative to grade level being served.

Conclusions. Some job competencies as assessed on this instrument appear to be more strongly valued by high school media specialists, both at the university training level and in practice, with practice more important (one versus eight items). As compared to the overall instrument, consisting of 30 items, these items found to be significantly different by high school media specialists occupy a minor portion of the total. It may be possible that, while the majority of job competencies as surveyed in this study are not directly related to grade levels served by respondents, selected job competencies are perceived by high school library media specialists as especially important at the high school level.

Research Question Three. Is there a difference in the job competencies perceived as required by selected school library media specialists in their job relative to the amount of technical equipment they have available in their library media centers?

For purposes of analysis three groupings were made: 1-4 types of equipment (32 respondents), 5-8 types (31 respondents), and 9-14 types (23 respondents). A Kruskal-Wallis one-way analysis of variance procedure was used to test for differences in the perceptions of competencies on Part A and Part B.

Findings. Using these groupings, no significant differences on Part A emerged. On Part B, 13 items showed significant difference in a positive

direction with increasing equipment.

Conclusions. Because constructs relating to competencies taught or stressed in schools of library science as assessed on Part A show no significant differences with increasing amounts of types of equipment available to the library media specialist, it appears that these competencies are perceived similarly by respondents. However, since 13 of these competencies not seemingly related by constructs as revealed by Wilcoxin analysis, are identified as significantly different in a positive direction by those library media specialists having larger amounts of types of equipment, it is possible that some competencies are more strongly valued in more diversified and technologically current library media centers by the study respondents.

Research Question Four. Is there a difference in responses based upon length of time respondents have served in their present positions?

The school library media specialists were divided into three groups based on the length of time they had been in their present position: 1 - 2 years (38 respondents), 3 - 5 years (21 respondents), and over 5 years (31 respondents). A Kruskal-Wallis one-way analysis of variance procedure was used for this analysis.

Findings. None of the competencies, using the ratings on Part A, were found to be significantly different relative to the length of time the media specialist had been in his/her present position. The analysis revealed significant differences on 17 competencies on Part B based on the length of time the media specialist had been in his/her present position. The school library media

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specialists who had been in their present position for longer periods of time indicated a greater use of the competency.

Conclusions. Library media specialists who responded on this survey showed similar assessment of competencies taught to them or stressed in their library science education regardless of length of time served in their present positions, as shown by the lack of significant difference on Part A responses. On Part B, the 17 items of significant difference showing increased use related with longer time in the media specialist's present position suggested that, as library media specialists become more immersed in their positions, they may value some job competencies identified on this instrument more strongly.

Discussion

Competencies that did not emerge as significant in this study were found in items 1, 2, 3, 4, 6, 7, 10, 11, 13, 15, 17, 21, 22, 24, 25, 28, and 28. These competencies covered areas of serving as instructional consultant, using principles of library media center management (administration, collection development), assisting with communication techniques, conducting evaluation and analysis, building design, and serving as teacher for students. Additional items were providing inservice and staff development, providing educational computing and television/radio broadcasting, serving as information specialist for teachers, and accessing opportunities for continued professional development. Responses by the surveyed school library media specialists were similar in assessment of emphasis in university program and extent used in present job for

these competencies, whether rated "not at all", "occasionally", "somewhat",

"often", or "to a great extent". All of the competencies that emerged as not

significant were rated with little discrepancy between ratings on Part A and Part

B of the instrument. These results seem to indicate that competencies little used

could be considered for possible elimination in designing university courses for

school library media specialists, while those strongly used might be more

carefully studied for possible modification, in order to achieve maximum learning

and lead to improved preparation for the job.

Constructs relating to competencies taught or stressed in schools of

library science at the university level are perceived or remembered among

practicing library media respondents who have graduated within the last 7 to 10

years similarly, regardless of assignment, length of service, or amount of

equipment. Competencies used on the job, however, are perceived as needed

"often" or "to a great extent" more frequently among practicing library media

respondents who have been out of the university program and in their positions

longer than among those more recently graduated and employed. Job

experience may possibly clarify for these senior respondents the competencies

most important and required. Examination of the 12 significant competencies

revealed that, in 9 competencies, the extent the competency was used in the

present job exceeded the emphasis placed on the competency by the university

program. Two competencies were emphasized by the university program more

than they were used on the job, and one competency was emphasized by the

program equally with use on the job.

The two competencies identified as being taught, but less used on the job, were: using evaluation and research techniques; and participating in professional associations on local, state, and national levels, including conferences and workshops. Urban universities, often institutions that devote much attention to research, may be inclined to emphasize evaluation and research techniques and professional development in their graduate programs. Given this assessment by respondents, university program designers might want to reconsider, modify, or incorporate differently the research techniques that are covered in library science coursework. Perhaps this emphasis, if deemed important in future program design, could be modified and incorporated into a practical experience for school library media students. By learning how to use these research techniques on the job, students may be more inclined to value and to continue to use the skills in their positions of employment. The study results indicate a lack of transfer from university coursework to employment experience in the area of research and evaluation.

Competencies identified as being used on the job to a greater extent than emphasized in university library programs of education were numerous. These competencies included: budgeting, operational functions, assisting parents with communication techniques, providing opportunities for critical thinking and problem solving, designing learning strategies, instructing students in methods of accessing resources and modes of inquiry, designing instruction and developing programs and materials, providing access to all types of materials, including professional resources, serving as information specialist for students, and

providing a technical facility in distance education. The competencies, covering various areas of library media center management, teaching, and serving as information specialist, deal directly with needs school library media specialists encounter in their jobs.

While one respondent indicated having been out of school 20 years, which may be related to having used the bachelor's degree and having received the master's degree much later, the mean number of years since graduation for these respondents was 4.16 years. Similarly, while work experience ranged from a minimum of 1 to a maximum of 34 years, and while the years in present position ranged from 1 to 31 years, the mean number of years for these categories were 7.99 and 5.04 years respectively, indicating that most respondents were well within the 7 to 10 years range. The survey results showed that these respondents saw their university training in much the same way and had a common understanding of competencies covered by the survey instrument. Observation and supervised experience in a work environment may assist students of library science to acquire these competencies to a greater degree, and to feel more comfortable meeting challenges in these areas of employment.

The similarities in responses on Part A of the instrument, reflecting library media competencies as taught in university programs, echo results found in Johnson's survey, "A Study of Selected Competencies of Elementary School Library Media Specialists," suggesting that competencies are similarly perceived by the study population in the Johnson study and the study conducted here.

This result might indicate a commonality among school library media specialists regarding competencies connected with the school library media environment. The lack of emphasis upon professional development activities in responses on Part B, indicating that these are of minor importance on the job, are in agreement with the results of Corr and Eisenberg. The results of the Johnson Study and the Corr and Eisenberg study suggest that the need for professional development is not perceived or emphasized by practicing school library media specialists. Both studies indicated a deficiency in the area of professional development, and Eisenberg and Royal suggested making continuing education for school library media specialists a mandate.

Several Part B responses indicated a need for greater emphasis at the university level. Confirming Polk and Kahler's results, areas of weakness continue to be: public relations, item 9 on the instrument; planning and teaching library skills, items 14, 16, 18,19, 23, and 27 on the instrument; and practical daily management and organization, items 5 and 8 on the instrument. Time management, audiovisual resources, and technology, found to be areas of weakness in the Polk and Kahler study, were not identified as such in this study. The large number of significant items under planning and teaching library skills and serving as information specialist for students indicated a strong agreement regarding a need in this area among respondents.

The failure among library media specialists to consider professional development activities, such as participation in professional associations, including conferences and workshops, and to value evaluation and research

techniques, may be related to the pressing demands of the job environment, which may allow little time for professional development and research. Another possibility is a lack of leadership, or, as suggested by Pickard, the ten-year time lag between espousal and implementation of an instructional role could be the case. A view among school library media specialists that such activities are extraneous or unnecessary to their jobs is also a possibility. In any case, despite the emphasis upon these activities at the university level and among designers of university program models (Evans & Tipton, 1992, Royal, 1989, Eisenberg, 1991, Hug, 1992), these school library media respondents, supporting past results, did not value professional and research activities as priority items. These respondents seem to be concerned with practical aspects of job competencies, particularly as related to serving student needs.

Further, since the world of information is continually changing, some areas; including technological updating, public relations and marketing, providing access to all types of materials, and designing instruction; require continuing education, even after school library media specialists enter their jobs. Designers of school library university programs may wish to consider continuing coursework for the practicing media specialist in these areas of concern. Evans and Tipton (1992) suggested roles which library media specialists may need to learn as the profession meets future demands: change agent, teacher with instructional technology skills, information manager, and technologist. These concerns mirror the competency responsibilities listed by the Library Media Program Advisory Committee to the Michigan State Board of Education (1992). Looking ahead,

designers of school library media programs may choose to incorporate these competencies into their coursework on all graduate levels.

In the area of equipment, the majority of the school library media centers of the study population had television monitors (82.6%) and video cassette recorders (81.5%). A majority also had at least one computer workstation (75.0%), and one or more CD Rom players (55.4%). Less than half the respondents had CD Rom interactive (37.0%), on-line circulation (44.6%), microfilm reader/printer (32.6%), on-line card catalog (33.7%), or on-line database (25.0%). Photography equipment was owned by just under one-third of respondents (29.3%). Fax machines (21.7%), satellite programming (17.4%), building-district on-line communication (21.7%), and television/radio production equipment (19.6%) were owned by about one-fourth of respondents in their media centers. The technological sophistication of the school library media centers where the study respondents worked did not affect their responses on Part A of the instrument, indicating that their university education was remembered similarly.

Twelve competencies used on the job emerged as significant in this study. These competencies covered areas of principles of library media center management: budgeting, using operational communication techniques, providing opportunities for critical thinking and problem solving, designing learning strategies, instructing students in modes of inquiry, designing instruction and developing programs and materials, using evaluation and research techniques, providing access to all types of materials, providing a technical facility in distance

education, serving as information specialist for students, and participating in

professional associations on local, state, and/or national levels, including

conferences and workshops (items 5, 8, 9, 14, 16, 18, 19, 20, 23, 26, 27, and

30). In all but three cases, these competencies were more strongly used on the

job than taught at the university level. The more strongly emphasized at the

university level competencies were: using evaluation and research techniques,

and participating in professional associations, including conferences and

workshops. One competency, designing instruction and developing programs

and materials, was used on the job and emphasized in university training

equally.

It seems based upon the results of this survey that recent graduates of

selected programs of library science do not value or find useful on the job

competencies related to professional development and research. Since

university programs often emphasize these areas, it may not be clear to some

graduates why they need these competencies or the ways in which these

competencies relate to their jobs. Perhaps, designers of university programs

could investigate the apparent lack of transfer from university education to job

environment that seems to exist for these school library media graduates.

The competencies more strongly valued in this survey could be examined

by designers of school library media programs to ensure adequate education in

these areas, since these respondents indicated a greater need for these

particular competencies in their job environments.

An area of concern that has not been directly addressed in this study is

that of library media center management, accessibility for students and staff. In

school settings it is common for teachers and students to find the library media

center closed for record-keeping activities, such as inventory, book and material

ordering, and various "housekeeping" tasks connected with managing the

collection. While many experienced library media specialists know that all these

chores can be accomplished without closing the media center or seriously

disrupting the school program, some school specialists may follow the traditional

and outdated practice of closing the center, in order to devote full attention to

collection-management tasks. Such specialists may need guidance from

building administrators, who may point out to them the vital part the library media

center plays within the school program on a daily and hourly basis, and/or may

need observation and practice in the accomplishment of these tasks while

keeping the library media center open. Schools of library science can assist by

emphasizing in the coursework of students the need to avoid closing the media

center and the practical steps to use in completing routine chores while staying

open. If students enter their jobs with the philosophy that they can and will keep

their media centers open, the problem of closure will be minimized to an extent,

and, if building administrators are apprised of the need for an open library, and if

they regularly visit their library media centers and remind the school library media

specialists of their important role in the total school program, the problem of

accessibility might be diminished. Teachers and students also have

responsibilities to voice their concerns directly to the school library media

specialist in this area, as well as other concerns, as opposed to accepting

without direct complaint policies and procedures that infringe upon their information access. Communication among all members of the school family can alleviate many inconveniences and may forestall hostilities arising from misunderstanding. The school library media specialist who realizes the meaning of the important role "information specialist" in all of its ramifications will avoid closing the school library media center, as s/he will be concerned with serving people first. While every efficient specialist understands the need for order in the school library media center, tasks of library management are not priority items and often can be handled by paraprofessionals and student aides, with some supervision from the specialist. University programs offering real or simulated job experience can teach these management methods.

Recommendations For Investigation and Practice

Since school library media specialists more strongly valued competencies used on the job as assessed by this instrument with length of time since graduation, it seems that continuing support for practicing school library media specialists is called for. Such support might take the form of continuing education, either legally required or not, but, either way, supported and encouraged by the school system, in order to allow school library media specialists to function with feelings of adequacy. This applies to all school library media specialists, regardless of position or amount of types of equipment in the library media center. Equipment does not seem to be a factor in this concern.

Since school library media specialists surveyed by this instrument more

strongly valued some competencies as they spend more time in their job environments, perhaps the practicuum or apprenticeship kind of experience should be required at the university level as previously recommended by Eisenberg (1993), Hug (1992), and Irving (1992).

Items of significance, such as integrating library media center activities with the school curriculum, serving as instructional consultant, assisting teachers in adopting a multimedia approach to instruction, instructing students and teachers in methods of accessing resources and modes of inquiry, and related items in the areas of curriculum and technology were more strongly emphasized with length of time since graduation and length of time in present position (Tables 13 and 19). School library media specialists have come under critical scrutiny for failure to take leadership roles, particularly in the area of curriculum and technology. School library media specialists surveyed here indicated compelling need for on-going support.

This study indicated that university programs of library science that regularly survey people working in the field of school library media might benefit from careful analysis of the feedback. It could be helpful, as well, to create a laboratory environment - "information center of the future" - for student use during the educational experience. Such a setting might give practical experience and a sense of vision to the school library media program.

Observation and supervised experience in a work environment in an on-going and regular basis during the entire process of library science education may assist students of library science to acquire those previously mentioned

competencies found to be strongly needed to a greater degree, and to feel more comfortable meeting the challenges of the work environment. While all of the institutions included in the study offer a kind of field experience as a requirement for the master's degree, the university requirement is, perhaps, insufficient or lacking in meaningful transfer to the job environment. A future investigation might examine in depth the practicuum activity and might evaluate the value of this experience for the employed school library media specialists.

Providing a technical facility in distance education may be more important for school library media specialists working in rural or small communities, which may not describe the sample for this study. A future study could survey school library media specialists working in rural and/or small school districts to examine this competency in depth in the rural school environment.

An item that emerged on the instrument as an item of job emphasis is that of serving as information specialist for students. Since a common complaint among school library media users, both teachers and students, is that the library media center is frequently closed, both during the school day and at the beginning and the end of the school year, a researcher might investigate to what extent the school library media specialist is actually fulfilling the information specialist function. As accessibility is a prerequisite for library media users, it is possible that the specialist may have an inadequate understanding of the competency or may be confused about the role of information specialist. A future study could examine this competency in depth, from the users' or the specialists' points-of-view, or from both.

A point of interest is the place of public relations in the school library media center program. School library media specialists may not adopt a proactive, promotional role in serving the needs of school and community patrons. In this study, assisting parents with communication techniques was an item of significance, indicating a job need. It could be helpful to more closely examine the extent to which this factor is considered important and/or is used by school library media specialists, as well as the extent to which it is emphasized in university programs of information science.

A factor not found to be significant in this study was that of building library media center design, including remodeling and updating. As technology changes and as school library media centers respond and adapt to change, this factor might be expected to emerge as important. Two possibilities may account for the results found here: education for school library media specialists does not cover library media center design, or the library media specialist is not asked for and does not seek input in design when they are on the job. A future study could investigate this factor, its place in school library media center service, and the extent to which school library media specialists participate in design and updating of the physical facility.

A future study could examine the aspect of professional development in a broader perspective than examined here. The failure to engage in research activities and professional development, including participation in local, state, and national organizations, could be a behavior not limited to school library media practitioners. Other groups in the educational spectrum, such as teachers

and administrators, could be investigated as to opinions and practices in this area. It is possible that the breech between K-12 education and university education is a critical factor in placing value upon research and professional development. Differences in job environments and job demands may have some impact in regard to this competency. Cost may be another hindrance.

Results of this survey indicate a measurable level of stress and a sense of isolation among many respondents, increasing with length of time since graduation and length of time in the job. Continuing support at the university level and at the building level is appropriate, and by professional organizations on all levels. Since respondents (whether unwilling or unable) indicate a lack of participation in professional organizations, perhaps these associations need to develop alternative methods of serving professional development needs. It seems apparent that associations need to explore approaches to school library media specialists that expand the existing formats.

The ongoing theme of professional organizations emphasizes the value and importance of professionalism, proactivity, and involvement. In the area of professional development these respondents indicate a short-sightedness and a lack of anticipation of future developments in the field. Coursework at the university level need not be designed without input from graduates; practicing school library media specialists should remain in contact with their parent institutions. Isolation and frustration on the job can be addressed and sometimes alleviated by networking and by taking part in professional activities. There can be no growth without exposure, and one cannot become acquainted

with what is taking place in the field of information science as a whole without acquaintance. Library media specialists need to recognize that they have a responsibility to be proactive, especially as concerns information technology and formats, as information today is neither owned nor controlled by any single group. Those specialists who confine their concerns to the printed word are already far behind.

Specialists today, additionally, have a responsibility to give input into legislation affecting school library media standards, both state and national. Unfortunately for the profession, many elected officials are unfamiliar with current status and practice and may base their ideas and recommendations upon their own experiences of 20 or 30 years ago. Such legislators may exert pressure to remain print-based in school library media centers and to cut costs required for on-line technology and software. If practicing specialists do not educate those who formulate laws, the profession as a whole may suffer. If professionals in school library media do not participate in the mainstream of the information complex, they risk having the complex propelled by business, government, and others intimately connected to and dependent upon the world of information. Students, in schools left outside the mainstream, will be less experienced with handling the modern information base and will be less prepared for the world of work. Such students will, consequently, be less able to compete for jobs on an international level, as discussed by Fiske and others. It is important for students as well as for our nation that school library media specialists provide the broadest and best information accessibility available.

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Recommendations for the Profession

Recently, the heads of 10 schools of library science debated the future of library education at the 1994 Association for Library and Information Science Education (ALISE) Conference. The closing of nine U.S. library schools since 1979, and the current resignation of 10 library school deans, who are planning to leave their positions to teach or to do research, has created uncertainty about graduate programs (Library Journal, April 1, 1994, pp. 60-64). The debate revealed basic philosophical differences among the 10 leaders regarding the value of the M.S.L.S. degree and the place of ALA accreditation in terms of library education. Some predicted a disappearance of separate programs and a merging with other departments in the information field, while others defended the "critical mass" of core coursework that ensures the quality of the educational program and provides a commonality among graduates.

The study here suggests that, on the whole, the problems these respondents encounter, rather than being linked to their university training, relate to time in the job environment. At a period of four or more years on the job, the respondents indicated need for support. Although it is undoubtedly helpful and beneficial to examine graduate educational programs leading to the M.S.L.S., it might be more important to examine the need for and the ways in which a university can develop educational programs for school library media specialists and other librarians practicing in their fields. It may be a mistake to consider the granting of the degree as the point of termination between the student and the university. University professionals could be focusing upon recruitment and

initial coursework when their focus should also be beyond the point of graduation.

Clearly, among these respondents, despite their need for support, there is little effort in the direction of professional development on their part. A vacuum between the university and the practitioner exists, which is an invitation to program planners to explore innovative paradigms to reach potential students. In the world of modern technology where space and time need be no barrier to information, such a challenge should not be insurmountable. It is as difficult to understand the downsizing and closing of schools of library science at the university level as it is to comprehend starvation in a condition of agricultural surplus. Perhaps politics and methods of delivery are to blame.

Professional organizations, schools of library science, and others concerned with library media specialists could consider using focus groups as a method of developing new ideas. Questions to be addressed include how to interact with practitioners in their environments, how to meet their needs four or more years after graduation, and how to influence their attitudes regarding growth and professional development.

Recommendation for Further Research

The results of this study provided evidence of a disparity between the emphasis on specific competencies as taught in university programs and the extent these competencies were used in the present position of the school library media specialist. While completing this study, the researcher noted several

topics that could benefit from additional research, including:

- Examine the library media specialists' daily tasks to determine those that are most commonly performed in a school library media setting. Using those competencies, determine the extent to which they are taught in university programs.

- Extend the current study to media specialists in other venues, such as college libraries, corporate libraries, and/or public libraries, to determine if the university programs are meeting the needs of diverse media specialists.

- Study the effect of in-service training on school library media specialists, including attitudes toward this kind of training, effects of specific training programs, and willingness to attend inservice programs.

- Survey the teachers and users of the school library media center to determine if their educational needs are being met and where there needs to be additional service provided.

- Providing a technical facility in distance education may be more important for library media specialists working in rural districts or small communities, which may not describe the sample for this Study. This competency could prove to be important in a study of rural and/or small school districts.

- Repeat the survey with a different sample, such as rural, and compare the results with the results found in this study. Commonalities might emerge that could apply to the profession as a whole.

- Study the 10-year lag between espousal and implementation of a role. The 10-year lag Pickard discussed did not apply to respondents studied here, who were graduates of programs within the last 7 to 10 years. A future study could examine this sample population 10 or more years after graduation to discover whether or not responses change, and in what direction.

- Examine each one of the competencies on the survey instrument to determine at which point on the Likert scale the competency was rated. In this manner, a researcher could identify a competency strongly emphasized and strongly used, as well as a competency little emphasized in university training and little used on the job.

APPENDIX A

INSTRUMENT

COMPETENCY SURVEY,
SCHOOL LIBRARY MEDIA SPECIALISTS

Below you will find a series of statements that represent competencies or
functions performed by a person in library sciences. Please place a checkmark
(✓) in the appropriate column on the left to indicate, in your judgement, the
extent that each of the following competencies was emphasized in your
university library science education. Then, place a checkmark (✓) in the
appropriate column on the right of the statement that indicates how the following
competencies are used by you in your present job. It is important that you
respond to each statement on the instrument.

Please use these definitions to determine your responses:
Emphasized by University Program Stressed in coursework, either
theoretically or practically, as basic and essential information.

Extent Competencies Used in Present Job Necessary, occurs frequently,and
essential to media specialist functioning in the school library media center.

Use the following scale to address each of the following items :

1	2	3	4	5
Not at All	Occasionally	Somewhat	Often	To a Great Extent

Emphasized by University Program					Competencies	Extent Competencies Used in Present Job				
1	2	3	4	5		1	2	3	4	5
					1. Integrating library media center activities with the school curriculum					
					2. Serving as instructional consultant for teacher					
					3. Assisting teachers in adopting a multimedia approach to instruction					
					4. Assisting teachers in accessing outside resources					
					5. Using the principles of library media center management: budgeting					
					6. Using the principles of library media center management: administration					

Emphasized by University Program					Competencies	Extent Competencies Used in Present Job				
1	2	3	4	5		1	2	3	4	5
					7. Using the principles of library media center management: collection development					
					8. Using the operational functions of the school library media center					
					9. Assisting parents with communication techniques					
					10. Assisting the school community at large with communication techniques					
					11. Assisting teachers and administrators with communication techniques					
					12. Periodically conducting analysis and evaluation of library media center programs					
					13. Building library media center design, including remodeling and updating					
					14. Providing opportunities for critical thinking and problem solving					
					15. Analyzing user characteristics					
					16. Designing learning strategies					
					17. Instructing teachers in methods of accessing resources and modes of inquiry					
					18. Instructing students in methods of accessing resources and modes of inquiry					
					19. Designing instruction and developing programs and materials					
					20. Using evaluation and research techniques					
					21. Maintaining a staff development program for paraprofessionals and library aides					
					22. Providing on-going, in-service programs for orientation for students and teachers					

Emphasized by University Program					Competencies	Extent Competencies Used in Present Job				
1	2	3	4	5		1	2	3	4	5
					23. Providing access to all types of materials, including professional resources					
					24. Providing a technical facility in educational computing					
					25. Providing a technical facility in television or radio broadcasting and/or media for students					
					26. Providing a technical facility in distance education					
					27. Serving as information specialist for students					
					28. Serving as information specialist for teachers					
					29. Accessing opportunities for continuing professional development					
					30. Participating in professional associations on local, state, and/or national levels, including conferences and workshops					

The following questions are to provide background information about you as a school librarian/media specialist.

What type of Library Science Program did you attend:

□   Library Science Certificate   □   Masters in Library Science

How long has it been since you have completed your library science educational program?

_____ Years

How long have you been working for your present school district?

_____ Years

How long have you been working in your present position?

_____ Years

What is your current employment status?

☐ Full-time ☐ Part-time ☐ Other (Specify)_____

Are you currently working on an advanced degree?

☐Yes ☐No

If yes, answer the following questions:

Type of Degree

☐ Masters (In Area other than Library Science)
☐ Educational Specialist
☐ Doctorate

Area of Degree (ex. Higher Education, Educational Administration)

_____

How many School Library Media Centers do you currently supervise?

_____

How many librarians are employed at all sites?

_____ (number of full time equivalents (FTEs)

How many library assistants are employed at all sites?

_____ (number of (FTEs)

How many parent volunteers are working in all library media centers you supervise?

_____ (total number)

How many student volunteers are working in all library media centers you supervise?

_____ (total number)

Check (✓) the grade levels your library serves (Check all that apply)

☐ Kindergarten ☐ First ☐ Second ☐ Third
☐ Fourth ☐ Fifth ☐ Sixth ☐ Seventh
☐ Eighth ☐ Ninth ☐ Tenth ☐ Eleventh
☐ Twelfth ☐ Other (Specify)_____

Please check (✓) all of the equipment that you currently have in your media center.

☐ Television Monitor
☐ Video Cassette Recorder
☐ On-line Circulation
☐ CD Rom Interactive
☐ CD Rom Player
☐ Computer Workstation
☐ Photography Equipment
☐ Microfilm Reader/Printer
☐ On-Line Card Catalog
☐ On-Line Database
☐ Fax Machine
☐ Satellite Programming
☐ Building/District On-Line Communication
☐ Television/Radio Production Equipment
☐ Other (Specify)_____

Comments:_____

_____

_____

_____

THANK YOU FOR TAKING THE TIME TO

COMPLETE THIS SURVEY

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ABSTRACT

ASSESSMENTS BY SELECTED SCHOOL LIBRARY
MEDIA SPECIALISTS OF REQUIRED
JOB COMPETENCIES AS COMPARED TO
LEARNED COMPETENCIES

by

LAURA C. WOODRUFF

December, 1994

Adviser: Dr. John Childs

Major: Curriculum and Instruction

Degree: Doctor of Education

This study of school library media specialists who have graduated from

three urban university programs within the last seven years and who are

currently practicing examined job competencies. The research hypothesis: Is

there a disparity between job competencies taught and job competencies as

required by selected school library media graduates in their jobs: was

investigated using an original instrument designed for this study.

Four major research questions were addressed: (1) Is there a difference

in the job competencies as required by selected school library media graduates

in their jobs relative to the length of time since they have completed their library

science programs; (2) Is there a difference in the job competencies as required

by selected school library media graduates in their jobs relative to the grade

levels of the schools they serve; (3) Is there a difference in the job competencies

as required by selected school library media graduates in their jobs relative to the amount of technical equipment they have available in their library media centers; and (4) Is there a difference in the job competencies as required by selected school library media graduates in their jobs relative to the length of time they have worked in their present position.

Results of the study indicated that library media specialists who responded on this survey show similar assessment of competencies taught to them or stressed in their library science programs regardless of length of time served in their present positions, years since graduation, or amount of equipment. Competencies used on the job, however, are perceived as needed "often" or "to a great extent" more frequently among respondents who had been out of the university program and in their positions longer than among those more recently graduated and employed. Several responses indicated further need for training at the university level in the areas of public relations, planning and teaching library skills, and practical daily management and organization.

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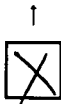
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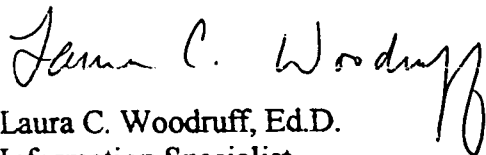August 8, 1999

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