

**THE IMPACT OF SUBSCRIPTION ELECTRONIC RESOURCES ON SELECTION
DECISIONS BY MEDIA SPECIALISTS AND UTILIZATION PRACTICES BY
TEACHERS AND STUDENTS IN ELEMENTARY LIBRARY MEDIA CENTERS**

By

SEAMUS B. EDDY

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TABLE OF CONTENTS

	<u>page</u>
ACKNOWLEDGMENTS	iii
LIST OF TABLES	vi
ABSTRACT.....	viii
CHAPTER	
1 INTRODUCTION	1
Problem Statement.....	4
Purpose Statement	5
Research Questions.....	5
Significance of the Study.....	5
2 REVIEW OF LITERATURE	8
Library Media Centers.....	8
Media Specialists	10
Selection and Collection Development	11
Subscription Electronic Resources	12
Summary.....	19
3 METHODOLOGY	21
Population and Sample	21
Instrumentation	22
Preliminary Trial.....	22
Data Collection	23
Statistical Analysis.....	24
Ethical Assurance	25
4 RESULTS AND DISCUSSION.....	26
Research Question 1	26
Subscription Electronic Resources Found in Elementary School	26
Funding Sources Used to Purchase Subscription Electronic Resources in Media Centers	27

Subscription Electronic Resources Affecting Available Money for Other Materials	27
Media Specialists Perceived Adequate Funding for Subscription Electronic Resources	28
How Purchases for Other Materials Have Changed as a Result of Information Found on Subscription Electronic Resources	28
Materials Bought or Planned to Buy that Specifically Supplement Subscription Electronic Resources	31
Amount of Materials that Have Been Superseded by Superior Information Found in Subscription Electronic Resources	31
Research Question 2:	32
Subscription Electronic Resources Accurately Support School Curriculum	32
Teachers Effectively Understanding and Using Subscription Electronic Resources	33
Media Center Having Computer Technology That Can Access Subscription Electronic Resources Effectively	34
Media Center Having the Technology Support for Hardware (Computers) and Software to Access Subscription Electronic Resources.....	35
Summary	35
Research Question 1	35
Research Question 2	37
5 CONCLUSIONS AND RECOMMENDATIONS	38
Research Question 1	38
Research Question 2	39
Findings for Research Question 2	40
Conclusions and Recommendations for Future Studies	40
Other Recommendations for Future Studies.....	42
APPENDIX	
A SPEARMAN'S RANK CORRELATION COEFFICIENTS.....	44
B SURVEY	45
C COVER LETTER.....	48
LIST OF REFERENCES	51
BIOGRAPHICAL SKETCH	55

LIST OF TABLES

<u>Table</u>	<u>page</u>
3-1 Descriptions of the Number and Percentages of Sizes of School Districts.....	22
3-2 Descriptions of the School Districts, Size Codes, and Number of Respondents from the Sample	22
4-1 Subscription Electronic Resources Found in Elementary School.....	26
4-2 Funding Sources Used to Purchase Subscription Electronic Resources in Media Centers.....	27
4-3 Subscription Electronic Resources Effecting Available Money for Other Materials.....	28
4-4 Media Specialists Perceived Adequate Funding for Subscription Electronic Resources	28
4-5 How Purchases for Other Materials Have Changed as a Result of Information Found on Subscription Electronic Resources.....	30
4-6 How Media Specialists Would Spend Extra Money in Budget	30
4-7 Materials Bought or Planned to Buy that Specifically Supplement Subscription Electronic Resources	31
4-8 Amount of Materials that Have Been Superseded by Superior Information Found in Subscription Electronic Resources	32
4-9 Subscription Electronic Resources Accurately Support School Curriculum	32
4-10 Teachers Effectively Understanding and Using Subscription Electronic Resources	33
4-11 Students Effectively Understanding and Using Subscription Electronic Resources	34
4-12 Media Center Having Computer Technology That Can Access Subscription Electronic Resources Effectively	34

4-13 Media Center Having the Technology Support for Hardware (Computers) and Software to Access Subscription Electronic Resources.....	35
A-1. Spearman's rank correlation coefficients of interest comparing survey questions 6, 7, 8, and 9.	44

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Media specialists' selection decisions for collection development determine the materials found in elementary library media centers and schools. Our study examined the extent to which subscription electronic resources (SERs) effect elementary media specialists' selection decisions. Subscription electronic resources also must be effectively utilized by teachers and students. Therefore, we also determined to what extent teachers and students effectively utilize SERs in elementary library media centers. Results indicated that SERs did not have a major effect on media specialists' selection decisions for other materials in elementary library media center collections. We also found that media specialists do not prioritize adding additional SERs with existing SERs. The SERs generally do not have a significant influence on the addition of many materials specifically designed to supplement the use of SERs or superseding other materials found in elementary library media centers. Findings also showed that although SERs support school curriculum, they are only marginally utilized by teachers and students.

Elementary library media centers were also found to have adequate technological hardware and support personnel for use of SERs. The results of this study provide a foundation for future research related to SERs impact on media specialists' selection decisions and on the effective utilization of SERs by teachers and students in library media centers.

CHAPTER 1 INTRODUCTION

According to the *American Association of School Librarians and Association for Educational Communications and Technology* (1988), the purpose of the library media center in schools is to provide teachers and students with educational resources and learning activities (AASL/AECT, 1988). Library media centers are facilities located within schools that house, display, circulate, and facilitate the use of materials to their users. They provide materials for teachers and students that support the schools' curriculum (AASL/AECT, 1988, Eisenberg & Berkowitz, 1988, Prostano & Prostano, 1999, 1987). As the hub of student learning in schools, library media centers have been shown to have a positive impact on student learning (Didier, 1984, Lance, 2002, Lance, Welborn, & Hamilton-Pennell, 1993).

By law or mandate in most states, library media centers are administrated by certified media specialists. Media specialists promote and direct their school's library media programs (AASL/AECT, 1988, 1998, Cleaver & Taylor, 1989, Doll, 2005, Kearney, 2000). They are responsible, among many other services, for the selection of materials that become a part of their library media center collections (AASL/AECT, 1988, Prostano & Prostano, 1999). "Selection is an active process performed by professional librarians who consider and make purchasing decisions on the basis of their knowledge of the collection as a whole and the needs of the clients of the library" (Orick, 2000, p.316). Selection is an essential service performed by media specialists because it determines the curricular material for collection development in library media centers

(AASL/AECT, 1988, Evans, 2000, Gardner, 1981, Prostano & Prostano, 1987).

Consequently, selection and collection development choices can affect the extent to which teachers and students effectively use quality materials to promote student achievement (Krashen, 2004, Lance, 2002).

Collection development in elementary library media centers should always support the curricular guidelines of the school (AASL/AECT 1988, Eisenberg & Berkowitz 1988, Evans, 2000, Prostano & Prostano, 1999). Supporting school curriculum is the primary function of all library media programs (Prostano & Prostano, 1999). However, selection and collection development are continuous processes that evolve with changes in school curriculum, clientele needs, and the integration of educational technology. As selection and collection development evolve, media specialists are faced with new challenges in providing updated curricular resources to their clientele. Recently, collection development plans have had to contend with the contrasting issues of high user demands for electronic resources, such as subscription electronic resources, and limited funding in library budgets (Miller, 2000, Stewart, 2000).

In addressing these demand issues, media specialists have integrated Internet-based electronic resources into their collections. The availability of Internet websites provides extensive amounts of educational information and resources to teachers and students in schools (Bitter & Pierson, 2002, Heinich, Molenda, Russell, & Smaldino, 2002, MacDonald, 1997, Prostano & Prostano, 1999). However, because they are unregulated, many Internet websites do not possess valid or reliable content for educational purposes (Brooks, 2001, Heinich, Molenda, Russell, & Smaldino, 2002, Sweetland, 2000). Inaccurate information found on Internet websites has led media specialists to select and

acquire subscription electronic resources in their collections (Brooks, 2001, Gregory, 2000). Subscription electronic resources (SERs) are online electronic resources accessed through the Internet that provide specialized curricular support for a contracted fee. Educational information retrieved from SERs is more accurate and current than general information retrieved on Internet websites (Gregory, 2000). Subscription electronic resources also provide teachers and students with current curricular information that is readily available. Therefore, media specialists are increasingly selecting and integrating subscription electronic resources as necessary educational resources for elementary library media centers.

Research indicates that media specialists' selection decisions are being affected by the presence of SERs (Davis, 1997, Evans, 2000, Gregory, 2000, Miller, 2000, Stewart, 2000, Weber, 1999). Although SERs are effective curricular tools for learning, they are very expensive to acquire and maintain (Stewart, 2000, Weber, 1999). Library media center resources are limited and must be allocated efficiently to all library media center programs (Prostano & Prostano, 1999). Consequently, limited library media program budgets may cause SERs to alter selection decisions for other materials in elementary library media center collections.

The selection of materials that are utilized by teachers and students can positively impact student learning only as far as their effective use allows. In order to be effectively utilized, educational technology must support the school curriculum in a manner that supports structured student learning (AASL/AECT, 1988, 1998, Dede, 2000, Eisenberg & Berkowitz, 1988, Prostano & Prostano, 1999). When integrating educational technology, such as SERs, into the teaching and learning environment, the use should be

meaningful and effective (Dede, 2000, Jonassen, Peck, & Wilson, 1999, Roblyer, 2003, Trotter, 1998). The effective utilization of educational technology is necessary to positively influence student learning (Dede, 2000, Jonassen, Peck, & Wilson, 1999). Subscription electronic resources should therefore be effectively utilized by teachers and students in elementary library media centers.

Another essential factor in establishing effective use of SERs is for library media centers to possess adequate technology for successful operation (Lockard & Abrams, 2004, Picciano, 2006, Trotter, 1999, US Congress, 1995). Adequate technology includes both sufficient computer equipment and skilled technology proficient personnel. Consequently, when determining the effective utilization of SERs, it is important to know if SERs are supporting school curriculum, to understand how they are being used by teachers and students, and to identify whether library media centers possesses the adequate technology essential for their successful operation.

Problem Statement

Media specialists' selection decisions for collection development determine the materials found in elementary library media centers and schools. As a result, selection decisions made by media specialists can have an impact on student learning (Krashen, 2004, Lance, 2002). The presence of SERs in library media center collections creates the potential for significant changes to occur in selection decisions (Davis, 1997, Evans, 2000, Gregory, 2000, Miller, 2000, Stewart, 2000, Weber, 1999). Due to limited library media program budgets, media specialists' selection decisions for SERs may effect selection decisions for other materials in elementary media center collections.

Subscription electronic resources must also be effectively utilized by teachers and students. This is necessary in order for SERs to positively affect student learning (Dede,

2000, Jonassen, Peck, & Wilson, 1999). To date, no research studies have been conducted that indicate whether media specialists' selection decisions are being affected by SERs or if SERs are being used effectively by teachers and students in elementary library media centers.

Purpose Statement

The purpose of this study is to determine the extent to which the presence of subscription electronic resources affects the selection of other library media center materials and to determine if subscription electronic resources are being effectively used by teachers and students in elementary library media centers.

Research Questions

The main questions that this study will seek to address:

1. To what extent does the presence of subscription electronic resources in elementary library media center collections effect media specialists' selection decisions?
2. To what extent are subscription electronic resources in elementary library media centers being effectively utilized by teachers and students?

Significance of the Study

This study is necessary because it addresses media specialists' selection decisions of, and the effective use of, SERs in elementary library media center collections.

Selection decisions made in elementary library media center collections can have a major impact on overall student learning done in schools (Krashen, 2004, Lance, 2002). The effective use of selected SERs also impacts student learning (Dede, 2000, Jonassen, 1996, Jonassen, Peck, & Wilson, 1999). Thus, it is important to determine how SERs affect media specialists' selection decisions for other materials found in elementary library media center collections and also to determine how effective the utilization of SERs is by teachers and students. This study is significant to elementary media specialists, or to

those that select and acquire SERs for elementary library media center collections, in that it attempts to better understand SERs' role in elementary library media center collections.

Limitations

- The analysis of data could not be generalized to elementary library media centers in states other than Florida.
- The sample of those participants surveyed for this study includes only kindergarten through 5th grade and pre-kindergarten through 5th grade elementary school media specialists in the State of Florida.
- The definition of subscription electronic resources could be interpreted differently by various elementary media specialists. A narrowly defined definition was not included in the data collection instrument used in this study.

Definitions

Collection development: “A systematic process administered by the library media staff to bring together the materials and equipment to meet users’ needs” (AASL/ALA, 1988, p, 72).

Effective use: The operation of materials in a manner that is producing a decided, decisive, or desired effect.

Electronic resources: Non-print titles found in a library collection designed for educational purposes that contain some electrical component.

Library media center: The area of a school that houses educational material, equipment, expertise, and space to service its clientele.

Library media program: The school wide academic plan administered by media specialists to implement the curricular goals of the school through the library media center to all of its users.

Media specialist: An educator that is licensed by a state to manage and operate a library media center at a school.

Selection: The process of determining exactly what educational materials will be chosen to be added to the library media center's collection.

Subscription electronic resources: Educational electronic resources that are found on the Internet that must be subscribed to for a contracted time and fee.

CHAPTER 2 REVIEW OF LITERATURE

The purpose of this chapter is to provide in-depth review of the research literature related to the research questions. The literature review is divided into five sections: Library Media Centers, Media Specialists, Selection and Collection Development, Subscription Electronic Resources, and the Effective Utilization of Subscription Electronic Resources.

Library Media Centers

The American Association of School Librarians and the Association for Educational Communications and Technology (1988), who are a primary authority in the field of library sciences, define library media centers as a place to “provide the space for the materials, equipment, and services, needed to achieve the mission, goals, and objectives of the library media program” (AASL/AECT, 1988, p.85). Additionally, in defining the primary function to be carried out by library media centers, they state, “The central function of the library media center facility is the housing, circulation, and centralized distribution of the collection of information resources and equipment used in the school’s instructional program” (AASL/AECT, p.87). Library media centers house, circulate, and distribute print materials, electronic resources, and equipment that enable teachers and students to utilize the various resources that support school curriculum.

Library media centers are designed to provide intellectual and physical access to resources that support the school curriculum in multiple subject areas and formats for its users (AASL/AECT, 1988). Prostano and Prostano (1999) define the school curriculum

as “all the learning activities planned, organized, and carried out under the auspices of the school” (p. 81). They claim that the goal for library media centers is to have the complete integration of all educational materials into the school curriculum (Prostano & Prostano, 1999). By integrating all educational materials into school curriculum, library media centers promote more frequent and focused use of educational materials by teachers and students. The promotion of educational resources positively affects student learning experiences. Eisenberg and Berkowitz (1988) state that the purpose of a library media center is to promote the school curriculum and to see the school’s curricular goals turned into student learning experiences. In order for this to occur successfully, library media center patrons must have access to numerous educational resources and professional services. They also maintain that it is crucial for library media centers to possess a wide range of curricular resources in various formats to enhance student learning experiences.

Ultimately, the goal of library media centers is to positively impact student achievement. Library media centers that effectively implement their school’s curricular programs show a positive impact on student learning. Didier (1984) synthesizes numerous readings on the positive academic impact of library media centers, proving how library media programs with centralized library media centers increase standardized test scores for elementary students. Lance, Welborn, & Hamilton-Pennell, (1993) also provide research evidence of the positive academic impact of library media centers on student achievement in schools. They found that the funding of library media centers directly effects student test scores. Lance (2002) also concludes that teachers and students effectively utilizing their library media center programs increase the academic

achievement levels of students. Therefore, viable library media centers are essential to fulfilling the curricular support and student achievement in schools.

Media Specialists

Media specialists are responsible for administering and promoting their school's library media programs. They are "partners in the learning process that provide a link between a well developed library media programs and the users served by the program" (AASL/AECT, 1988, p.24). A major responsibility for media specialists is to translate the curricular goals of the school into learning experiences for students (AASL/AECT, 1988, 1998, Eisenberg & Berkowitz, 1989). "Library media specialists have special responsibility for the information resources of schools: how information is made available, how it is integrated with curriculum, and how students and faculty colleagues acquire the skills and attitudes that make information a productive presence in their lives and futures" (Cleaver & Taylor, 1989, p. vii). Kearney (2000) contends that media specialists must be knowledgeable about all levels of school curriculum, understand curricular design, and participate in its creation if they are to operate an effective library media program. "Media specialists have an important role to play in the development and implantation of the general school curriculum as a contributor, participant, and consultant" (Prostano and Prostano, 1999, p. 81). Clearly, media specialists have numerous important responsibilities to teachers, students, and administrators when integrating curricular materials into their media center programs.

In order to provide the highest levels of service to the school community, media specialists must also provide expertise and leadership to the school community so that the library media program is an integral part of the instructional program of the school (AASL/AECT, 1988, Doll, 2005, Kearney, 2000). They must develop lasting

partnerships with teachers in the planning, implementation, and assessment of school curriculum so that the library media program is effectively promoted to all of its users (Doll, 2005, Kearney, 2000). For example, Doll (2005) claims media specialists' understanding of collaboration theories and techniques can develop productive interpersonal working partnerships with teachers and administrators. Kearney (2000) concurs in that media specialists must create active partnerships with teachers in order to successfully implement the curricular programs of the library media center. Partnerships between media specialists and teachers should provide comprehensive assistance to both parties in achieving curricular programs across all subject areas (Kearney, 2000). All media specialists should have the goal of not only being successful in administering library media programs, but also effectively promoting them to all of its users as well.

Selection and Collection Development

One of the many responsibilities media specialists fulfill is the selection of library media center materials for collection development (AASL/AECT, 1988, Prostano & Prostano, 1987). Selection is the process of media specialists making decisions on what materials to add to their library media center collections. “Collection development is a systematic process administered by the library media staff to bring together the materials and equipment to meet user’s needs” (AASL/AECT, 1988, p. 72). Evans (2000) stresses the fundamental importance of collection development is that it “is the process of creating a plan to correct collection weaknesses while maintaining its strengths” (p.70). Prostano & Prostano (1987) offer that the purpose of collection development is to translate knowledge of user needs into action through evaluation, selection, acquisition, and organizational processes. Media specialists are responsible for all of these actions and must take an active role in evaluating their collections routinely in order to

successfully select new materials for collections. Selection and collection development are comprehensive and require skilled professionals to administer successfully. Gardner (1981) proposes that selection decisions for materials are made on a continuum between the perceived quality of the material and the client demand for the material. When selecting materials, media specialists must weigh the quality of materials for collection development with the demand of the users of the library media program. Media specialists must commonly make selection decisions for new materials with no clear correct choice presented. Thus, it is very important that media specialists understand all aspects of their library media center collections as best as possible to make informed selection decisions.

Selection decisions that make up the library media center collections are designed to support the school curriculum (AASL/AECT 1988, Eisenberg & Berkowitz 1988, Evans, 2000, Prostano & Prostano, 1999). It should be a goal for every media specialist to provide teachers and students with quality resources and training with all equipment that assist in student learning and improving student achievement. The educational quality and number of materials in library media center collections effects the overall use of those materials and, consequently, student achievement on standardized tests (Lance, 2002). Krashen (2004) concludes that library media centers with materials of higher quality and quantity will be used more often by students, enhancing their reading and language education. Therefore, the selection of materials that support the school curriculum in library media programs is an integral part of successful student learning.

Subscription Electronic Resources

Media specialists play an important role in the integration of educational technology material into school curriculum (AASL/AECT, 1998, Prostano & Prostano,

1999, Wright & Davie, 1999). As a result of high demand by the users of library media programs, media specialists have integrated electronic resources into library media center collections. One such major electronic resource utilized in library media centers is the Internet. Internet sites are the most notable and challenging electronic resources for media specialists to integrate. The Internet provides users with access to extensive amounts of educational information (Bitter & Pierson, 2002, Heinich, Molenda, Russell, & Smaldino, 2002, MacDonald, 1997, Prostano & Prostano, 1999). However, due to a lack of regulation, many educational Internet sites are not appropriate for student use. Consequently, many Internet sites are unreliable and contain invalid content (Brooks, 2001, Heinich et al., 2002, Sweetland, 2000). Brooks (2001) states that there is uncertainty surrounding the credibility of many free educational Internet sites and librarians face challenges in determining what electronic resource information should be integrated into their collections. Heinich, Molenda, Russell, & Smaldino (2002) also have reservations about the authority of many Internet sites stating, "Anybody can post anything on the Web, including unsubstantiated, erroneous, or untruthful information" (p. 272). Moreover, Sweetland (2000) describes that users and developers of Internet sites can be unconcerned with reliability, validity and accuracy. He also claims that professional librarians, such as media specialists, are necessary for selecting and applying quality electronic resources information from Internet sites.

Due to the difficulties associated with integrating quality electronic resource information from the Internet sites into the school curriculum, media specialists have selected, acquired, and integrated subscription electronic resources (SERs) as superior curricular materials (Brooks, 2001, Gregory, 2000). Subscription electronic resources are

programs found on the Internet that contain specialized educational information and are subscribed to for a contracted period of time and fee. Information found within SERs is more accurate and valid than Internet sites (Brooks, 2001, Gregory, 2000). This is because SERs provide users with high quality and access to detailed educational information that is supported and maintained by professional educators and technological support staff. Because of this, Gregory (2000) claims that SERs should be integrated into collection development policies in libraries. Subscription electronic resources “have become valid and necessary primary sources of information, they must be acquired in ways so as to fit into an overall collection plan” (Gregory, 2000, p. 94). Brooks (2001) adds that quality Internet-based information materials, such as SERs, should be selected for libraries because such materials would add more curricular value to existing libraries. Therefore, if it is feasible, SERs should be added into elementary library media center collections to enhance the curricular information available for teachers and students.

Selecting SERs alters the curricular resources available in library media center collections. Consequently, media specialists’ selection decisions are affected by the presence of SERs (Davis, 1997, Evans, 2000, Gregory, 2000, Miller, 2000, Stewart, 2000, Weber, 1999). Subscription electronic resources are expensive to add to library media center collections (Stewart, 2000, Weber, 2000). Stewart (2000) provides comprehensive criteria of selection decisions for SERs. In these criteria, the cost of the SERs is seen as a major selection challenge for librarians. Library media programs have increased demands upon materials and services offered in library media centers. Due to these increased demands and limited library media center budgets, resources spent on library media programs must be allocated efficiently (Prostano & Prostano, 1999).

Weber (2000) presents that it is important for selectors of SERs to determine and relate the relative advantage they provide over less expensive similar print material found in collections in order to justify acquisitions to the school community. Media specialists must therefore understand and communicate not only which SERs are desired to be added to library media collections, but also their specific curricular purposes. The acquisition of SERs may limit the budget accessible for purchasing other materials, resources, and equipment. As a result, the presence of SERs may similarly affect media specialists' selection decisions for other materials in elementary library media center collections.

Effective Utilization of Subscription Electronic Resources

Although subscription electronic resources may affect media specialist's selection decisions for other materials in a collection, they also must be utilized efficiently and with purpose by teachers and students for enhanced student learning to occur (Dede, 2000, Jonassen, Peck, & Wilson, 1999). For the effective utilization of subscription electronic resources to occur in elementary library media centers, three criteria must occur. First, subscription electronic resources must support and follow the school curriculum (AASL/AECT, 1998, Evans, 2000, Prostano & Prostano, 1999). The second decisive criterion that needs to occur is that SERs have to be effectively used by teachers and students (Jonassen, Peck, & Wilson, 1999, Trotter, 1998). Third, library media centers must provide adequate technological support to effectively operate SERs (Lockard & Abrams, 2004, Picciano, 2006, Roblyer, 2003, Trotter, 1999). All three are necessary for enhanced student learning to occur from teachers and students utilizing subscription electronic resources.

A major factor in enhancing student learning is for educational technology, such as SERs, to be successfully integrated into the school curriculum (AASL/AECT, 1998, Evans, 2000, Prostano & Prostano, 1999). Prostano & Prostano (1999) explain that new forms of educational media that support the school curriculum need to be made available to teachers and students in library media centers. New forms of educational media, such as SERs, are selected with the fundamental intention of supporting the school curriculum in elementary library media center collections. However, having SERs that support school curriculum available for users in library media centers is not necessarily enough to enhance student achievement (Dede, 2000, Jonnassen, Peck, Wilson, 1999). Subscription electronic resources that support school curriculum must also be utilized effectively by teachers and students and possess adequate support technology to positively affect student learning.

Another factor that determines if SERs are being effectively utilized by teachers and students is to assess whether or not users have meaningful and effective purpose when operating them. (Dede, 2000, Jonassen, Peck, & Wilson, 1999, Trotter, 1998). Subscription electronic resources found in library media center collections vary greatly with the use they receive. Trotter (1998) claims that the difficulty in determining the effectiveness of certain forms of educational technology is that there is so little consensus about their purpose. Jonassen, Peck, & Wilson (1999) also maintain that when utilizing educational technology, there must be clear educational objectives to students about the purpose of their use. Furthermore, a technologically proficient media specialist should be available to assist teachers in shaping purposeful lessons founded on school curriculum.

This collaboration will assist in providing users with a more effective use of educational technology by teachers and students.

The overall goal of using educational technology effectively in schools is to enhance student learning. Media specialists select, acquire, and integrate educational technology into library media programs for the purpose of enhancing student learning (AASL/AECT, 1998, Prostano & Prostano, 1999). Jonassen, Peck, & Wilson (1999) believe that authentic student learning occurs when educational technology is “used as engagers and facilitators of thinking and knowledge construction” (1999, p.13). Authentic student learning should be principal in the design of integrating educational technology into school curriculum. Educational technology can be utilized in teaching strategies that promote the effective of such electronic resources. For example, Dede (2000) provides that educational technology can be used to develop research-based curriculum projects that can focus on problem solving for students. Subscription electronic resources can be used by teachers and students in the creation of such research-based curriculum projects. The main idea behind developing these projects is for educators, such as media specialists, to provide learning opportunities for users to experience authentic learning that is purpose driven. Subscription electronic resources should therefore be integrated and utilized by media specialists and teachers into the school curriculum with the purpose of promoting authentic student learning.

The last component that determines if SERs are being effectively utilized by teachers and students is for library media centers to possess adequate technology for their successful operation (Lockard & Abrams, 2004, Picciano, 2006, Roblyer, 2003, Trotter, 1999). Library media centers need to have sufficient computer hardware and

technological support from skilled personnel in order to maintain the proper functioning of viable subscription electronic resource services. Media specialists, and those who administer library media center budgets, must also be aware of all the financial costs associated with maintaining viable subscription electronic resource services. Roblyer (2003) consents “that the initial cost of equipment is only a fraction of the funds required to keep it available and useful to teachers” (Roblyer, 2003, p.36). Maintenance requirements and security concerns for computer hardware can greatly impact the ability for teachers and students to successfully utilize SERs. Subscription electronic resources therefore need to be administered by qualified personnel to insure their continuous successful operation.

Along with possessing adequate technology in library media centers, media specialists must have access to qualified personnel skilled in technological maintenance support for SERs. Locakard & Abrams (2004) believe that educators must have access to all necessary technological expertise to successfully operate schools’ educational technology. Such access is vital for the continued successful operation of subscription electronic resources. Picciano (2006) goes further in that educators need to have a sound understanding of the media resources available to them and to also successfully operate, maintain, and instruct others on their use. Trotter (1999) also agrees that media specialists should be responsible in facilitating all technological aspects of integrating subscription electronic resources into library media center collections. However, many educators simply do not have the necessary skills necessary to troubleshoot technological problems that are associated with utilizing computer hardware and software. Therefore, media specialists must take the initiative in being their schools’ technological expert for

operating all available computer equipment found in library media centers. In many instances, media specialists do act as the technology expert for their library media center or school, but in all cases, the library media center should have access to skilled personnel that can maintain computer application such as SERs.

Summary

In this chapter the role of library media centers, media specialists, selection and collection development, subscription electronic resources, and the effective utilization of SERs were all examined to determine the extent to which the presence of SERs affects the selection of other library media center materials and to determine if SERs are being effectively utilized by teachers and students in elementary library media centers. Library media centers are the locales in schools where all aspects of the library media program are carried out. They are designed to provide accessible resources and services to the school community. Library media centers have recently provided electronic resources to teachers and students for the purpose of providing updated electronic resources that assist in student learning.

Media specialists are licensed professionals responsible for administering and promoting school library media programs. They create active partnerships with teachers to provide resources for curricular support. This includes media specialists selecting and integrating innovative educational technology, such as SERs, into the library media center collections. Additionally, media specialists are responsible for making selection decisions that determine the collection development of resources in library media centers. Media specialists have been selecting and integrating SERs as opposed to potentially less valid Internet websites in library media center collections due to the superior educational information made available to teachers and students. As a result, the added expense of

SERs may affect media specialists' selection decisions for other resources in library media center collections.

Subscription electronic resources must be utilized effectively for enhanced student learning to occur. For effective utilization to happen, SERs found in library media centers must fulfill three criteria. Subscription electronic resources must first support school curriculum. They must also be used with purpose by teachers and students for the effective use of SERs to positively impact student learning. Finally, library media centers must possess adequate technology in terms of both equipment and technological support for the successful operation and maintenance of SERs.

CHAPTER 3 METHODOLOGY

The purpose of this chapter is to describe the methodology used to investigate the extent to which the presence of subscription databases used in elementary library media centers affects the selection of materials to be included in those collections.

Population and Sample

Elementary media specialists in the State of Florida were the focus of this study. A Florida Department of Education directory was used to identify the sampling field of all elementary media specialists (FLDOE). A random sampling of kindergarten through 5th grade and pre-kindergarten through 5th grade elementary schools throughout the State of Florida was taken; the elementary media specialists' schools were numbered and 700 random samples were chosen (Table 3-1). A total of 700 surveys were mailed representing 46% of the targeted population of 1,521 kindergarten through 5th grade (K-5) and pre-kindergarten through 5th grade (pre K-5) elementary schools in the State of Florida (Table 3-2). Although the Florida Department of Education stated 1839 K-5 and pre-K-5 elementary schools exists, only 1,521 were available for data analysis by the Alachua County School District. These data proved to be robust as responses across varying school district sizes were similar (Table A-1). The targeted sample of 700 was chosen to ensure a satisfactory response rate and to insure the validity of the study. The researcher desired a percentage response of at least 25% for the 700 targeted sample respondents. A total of 302 surveys were returned by respondent K-5 and pre-K-5 elementary Florida media specialists representing a 43.1% sample response rate.

Size of school district determined by number of K-12 students	5 Very large†	4 Large	3 Medium	2 Medium /small	1 Small
>100,000		40,000 to 100,000	20,000 to 40,000	7,000 to 20,000	<7,000
Number of K-5 and pre K-5 elementary schools in Florida (n=1839)	N=970	N=336	N=333	N=115	N=85
Number of media specialist participants (n=299)*	128	85	39	32	15
Percentages of K-5 and Pre K-5 elementary schools in Florida	52.7%	24.3%	12.0%	6.3%	4.6%
Percentages of size of school district from respondents (n=299)	42.8%	28.4%	13.0%	10.7%	5.0%

† Information on school district scale and elementary school percentages obtained from the Florida Department of Education website

* 3 unidentified participants

Instrumentation

The data collection instrument (Appendix B) was a two-page survey designed and created by the researcher. This was done to identify responses regarding media specialists' responses on SERs effecting selection decisions for other materials in elementary library media center collections and how effectively the SERs are being utilized by teachers and students. The survey questions were described to specifically answer the research questions as to ensure the validity and reliability of the study.

Preliminary Trial

A preliminary test to improve the reporting instrument was conducted among two selected elementary library media specialists who would not be receiving the final survey. The researcher and dissertation committee members evaluated feedback and

suggestions from these two media specialists of the test group to revise and clarify survey questions. Changes were made to make the survey easier to comprehend for elementary media specialists. The alterations made to the survey by experienced media specialists enhanced the quality and effectiveness of the data collection instrument. This in turn enhanced the measure which predicts a valid sample exhibiting characteristics of the population.

Table 3-2 Descriptions of the school districts, size codes, and number of respondents from the sample

School district	Size code	Number of media specialists	School district	Size code	Number of media specialists
Alachua	3	8	Leon	3	10
Brevard	4	2	Levy	1	2
Broward	5	1	Madison	1	1
Charlotte	2	2	Manatee	4	13
Citrus	2	3	Marion	3	8
Collier	4	5	Martin	2	5
Columbia	2	4	Monroe	2	2
Dade	5	20	Nassau	2	7
Duval	5	13	Okaloosa	4	9
Escambia	4	1	Okeechobee	1	3
Flagler	2	1	Orange	5	10
Gadsden	1	1	Osceola	4	1
Gilchrist	1	2	Palm Beach	5	22
Gulf	1	1	Pasco	4	3
Hernando	3	4	Pinellas	5	21
Hillsborough	5	42	Polk	4	15
Holmes	1	1	Putnam	2	4
Indian River	2	2	Santa Rosa	3	1
Jackson	2	4	Seminole	4	12
Jefferson	1	1	St. Lucie	3	2
Lake	3	6	Volusia	4	13
Lee	4	10	Walton	1	1

† Sample size n=299 with 3 unidentified responses

Data Collection

A simple random sampling was conducted to provide fairness and inference to the population (Agresti & Finlay, 1999). The survey was mailed August 23rd, 2006 to 700

Florida elementary media specialists at their respective library media centers. All elementary schools that were sent a survey were either classified by the State of Florida as K-5 or pre K-5. Each survey was printed on colored paper in an attempt to improve the survey return rate by gaining the attention of the recipient (Borg & Gall, 1983). Elementary media specialists were sent surveys printed on light colors of paper for ease of identification. A cover letter (Appendix C) accompanied the survey to explain the reason for the survey and to guarantee confidentiality. A self-addressed stamped envelop was included to increase the percentage of returned surveys by participants (Aday, 1996). The surveys were coded to enable efficient recording of the school district of origin from each of the returns. The code on the surveys did not reveal any names or personal information of any media specialists.

Statistical Analysis

The investigator used a quantitative methods descriptive study to analyze participants' responses in the experiment. A researcher-designed survey was used to collect data (Appendix B). Statistical analysis methods used frequency data (PROC FREQ) and Spearman's rank correlation coefficients (PROC CORR) (SAS, 2006). These statistical analyses were used to answer the two research questions posed in chapter one (Aday, 1996, Peck, Olsen, & Devore, 2001). Frequencies were chosen by the researcher to describe percent distribution of respondents' data in both research questions. The Spearman's Rank Correlation Coefficient was chosen because it does not assume normal distribution and data can be used for variables measured at the ordinal level. The Spearman's Rank Correlation Coefficient data was not shown due to a lack of any significant correlations between variables (Appendix A). Frequency data were then aggregated for descriptive statistics analysis.

Ethical Assurance

The researcher received informed consent forms from the participants when conducting the experiment. Informed consent forms were approved by the Institutional Review Board at the University of Florida (UF IRB Protocol #2006-U-633). The UF IRB form describes the nature and purpose of this study, the procedures to be followed, the confidentiality of research data and the voluntary participation as advised. The form additionally indicates that voluntary participations would not affect the participants' academic consequences in any way. Participants were provided with personal information of the investigator, supervisor's names, addresses, emails, and phone numbers for participants' questions and concerns about the experiment.

CHAPTER 4 RESULTS AND DISCUSSION

The purpose of this study was to examine the two research questions stated in Chapter 1. The first research question explores the extent to which the presence of subscription electronic resources (SERs) affects the selection of other library media center materials. The second research question explores the extent to which SERs are being effectively utilized by teachers and students in elementary library media centers. Frequency data and Spearman's rank correlation coefficients were used to analyze the quantitative data.

Research Question 1

- To what extent does the presence of SERs in elementary library media center collections effect media specialists' selection decisions?

Subscription Electronic Resources Found in Elementary School

Of the K-5 and pre K-5 elementary media specialists in Florida, 88.4% possess SERs in their library media center collections (Table 4-1). Only 11.6% of the

Table 4-1 Subscription electronic resources found in elementary school
Survey question 4:

Subscription electronic resources found in elementary school (n=302)	Percentage of respondents
Yes	88.4 (n=267)
No	11.6 (n=35)

respondents claimed that they did not possess any SERs in their library media center collections. Therefore, 11.6% of the respondents either continue to use Internet websites that do not necessarily possess valid or reliable content for educational purposes or do not

use any online educational information in library media centers (Brooks, 2001, Heinich, Molenda, Russell, & Smaldino, 2002, Sweetland, 2000).

Funding Sources Used to Purchase Subscription Electronic Resources in Media Centers

Virtually all elementary media specialists (98.9%) receive funding for SERs in their library media center collections from their respective school districts (Table 4-2). Although some SERs are financed through media center budgets (9.1%), and outside donations or other school funds (6.8%), many of these respondents also received funding through their school district. It is important to note that in Table 4-2 the respondents were able to answer one, two, or all three answers revealing what sources SERs are funded in library media center collections. The 267 media specialists in the study that have SERs in their collections made a total of 303 responses. The data suggests that media specialists perceive that selection decisions made for SERs in elementary library media center collections is primarily done at the school district level and not through the selection decisions of individual media specialists.

Table 4-2 Funding sources used to purchase subscription electronic resources in media centers

Survey question 5:

Funding sources used to purchase subscription electronic resources in media centers (n=267)*	Percentage of respondents
Media center budget	9.1 (n=24)
School district	98.9 (n=261)
Outside donations or other school funds	6.8 (n=18)

*Respondents may answer more than one response 303 responses

Subscription Electronic Resources Affecting Available Money for Other Materials

Of the respondents, 44.8% of respondents believe that SERs found in media center collections do not affect money being available for other materials (Table 4-3). However, 41.6% of elementary media specialists feel that SERs do have a “somewhat” to

“very much so” impact on the purchases made for other materials in library media center collections. This information reveals that there is little consensus among elementary media specialists as to the impact of SERs on purchasing power for other materials in library media center collections.

Table 4-3 Subscription electronic resources affecting available money for other materials Survey question 6:

Subscription electronic resources affecting available money for other materials (n=257) (10 non respondents)	Percentage of respondents
(1) Not at all	44.8 (n=115)
(2)	13.6 (n=35)
(3) Somewhat	17.1 (n=44)
(4)	6.2 (n=16)
(5) Very much so	18.3 (n=47)

Media Specialists Perceived Adequate Funding for Subscription Electronic Resources

Only 20.3% of elementary media specialists believe that not enough money is being spent on SERs in their library media center collections (Table 4-4). The majority of elementary media specialists (71.4%) feel that there is an adequate amount of funding attributed to acquiring SERs to library media center collections. However, very few media specialists (8.4%) believe that too much money is being spent on SERs. Most elementary media specialists feel that there are adequate resources attributed to SERs, but there exists a sizable minority that do not feel enough money is being spent on SERs.

How Purchases for Other Materials Have Changed as a Result of Information Found on Subscription Electronic Resources

In survey question 8 elementary media specialist respondents could answer more than one response due to the different areas of information obtained in the question (Table 4-5). Respondents have shown that 29.2% of elementary media specialists feel that they have spent less on print materials as a result of the information found on SERs.

Table 4-4 Media specialists perceived adequate funding for subscription electronic resources

Survey question 7:

Media specialists perceived adequate funding for subscription electronic resources (n=262) (5 non respondents)	Percentage of respondents
(1) Not enough money spent	9.2 (n=24)
(2) Less money than should be	11.1 (n=29)
(3) Appropriate amount of money	71.4 (n=187)
(4) A little bit more money	6.9 (n=18)
(5) Too much money being spent	1.5 (n=4)

This response could be a result of certain forms of print reference materials being replaced by SERs that are online reference materials. Elementary media specialists believe that other non-subscription electronic resources (non SERs) are the largest category not purchased (44.6%) due to the presence of SERs in elementary library media center collections. This suggests that the selection of SERs have taken the place and function of non SERs found in elementary library media center collections. A small percentage (6.4%) of respondents has spent less on equipment as a result of information found on SERs. This indicates that equipment purchases are only slightly affected by the information found on SERs. Only 4.1% of respondents have selected and acquired more SERs to library media center collections. This suggests that the SERs present in library media center collections are either sufficient in library media programs, or there is little priority in complementing existing SERs with newer SERs. A major discovery of information retrieved in survey question 8 is that 29.2% of respondents either did not answer survey question 8 or made comments to the side of the question on the survey that stated that there was no change in purchases for other materials as a result of information found on SERs. The last category for “no change in purchases for other materials” was created after all responses had been collected and was necessary to describe valid information from the surveys (Table 4-5). The researcher considered that not initially

including “no change in purchases for other materials” in survey question 8 before sending the surveys to the sample to be an instrumentation design error (Appendix B).

Table 4-5 How purchases for other materials have changed as a result of information found on subscription electronic resources

Survey question 8:

How purchases for other materials have changed as a result of information found on subscription electronic resources (n=267)*	Percentage of respondents
Have spent less on print materials	29.2 (n=78)
Have spent less on other non-subscription electronic resources	44.6 (n=119)
Have spent less on equipment	6.4 (n=17)
Have spent more on other subscription electronic resources	4.1 (n=11)
No change in purchases for other materials	29.2 (n=78)

*Respondents can answer more than one response 303 responses

How Media Specialists Would Spend Extra Money in Budget

Only 7.1% of elementary media specialists prefer additional SERs if they possessed extra money in their library media center budgets (Table 4-6). This low percentage

Table 4-6 How media specialists would spend extra money in budget

Table 4-6 How media specialists would spend extra money in budget
Survey question 9:

Survey question 9: How media specialists would spend extra money in budget (n=267) (12 non responses)	Percentage of respondents
Spend more on more or better subscription electronic resources	7.1 (n=19)
Spend more on print materials	62.9 (n=168)
Spend more on other non-subscription electronic resources	10.5 (n=28)
Spend more on media center equipment	22.5 (n=60)

implies that selecting additional SERs is not a priority for most elementary media specialists. Either SERs are sufficient in library media center collections, or the SERs are not being utilized effectively therefore limiting their use and need. Print materials (62.9%) are the preferred response from media specialists for additional materials to be selected and acquired into library media center collections. Elementary library media center collections still prioritize the selection of print materials above all other options. Additionally, 10.5% of the respondents would select and acquire other non-SERs and

22.5% of elementary media specialists would select and acquire more equipment if they had extra money allocated in their library media center budgets.

Materials Bought or Planned to Buy that Specifically Supplement Subscription Electronic Resources

A strong majority (82.8%) of elementary media specialists do not possess and will not select materials that specifically supplement the use of SERs in their library media center collections (Table 4-7). The data reveals that the majority of elementary media specialists do not select print materials that specifically supplement SERs. This also suggests that the educational use of SERs by teachers and students does not necessarily coincide with the educational use of print materials in elementary library media centers.

Table 4-7 Materials bought or planned to buy that specifically supplement subscription electronic resources

Survey question 10:

Materials bought or planned to buy that specifically supplement subscription electronic resources (n=267)	Percentage of respondents
Yes	17.2 (n=46)
No	82.8 (n=221)

Amount of Materials that Have Been Superseded by Superior Information Found in Subscription Electronic Resources

Only 11.9% of elementary media specialists believed that the presence of SERs, that contain more valid and reliable information, affected removing “many” other materials in their library media center collections (Brooks, 2001, Heinich et al., 2002, Sweetland, 2000) (Table 4-8). Elementary media specialists generally do not have to change many selection practices for other materials based on the presence of SERs found in library media center collections. A majority of 70.0% of respondents report that “a few” materials have been superseded by superior information found in SERs. Only 18.1% feel that no materials have been superseded by superior information found in SERs. Consequently, a larger majority of 88.1% including “none” and “a few” materials

have been superseded by information found on SERs and would not have a major impact on overall selection practices for other materials in the collection.

Table 4-8 Amount of materials that have been superseded by superior information found in subscription electronic resources

Survey question 11:

Amount of materials that have been superseded by superior information found in subscription electronic resources (n=243) (24 non responses)	Percentage of respondents
None	18.1 (n=44)
A few materials	70.0 (n=170)
Many materials	11.9 (n=29)

Research Question 2

- To what extent are subscription electronic resources in elementary library media centers being effectively utilized by teachers and students?

Subscription Electronic Resources Accurately Support School Curriculum

Elementary media specialists believe strongly that SERs accurately support school curriculum (Table 4-9). A very high percentage (93.9%) of respondents agreed that SERs accurately support school curriculum and 60.3% believe that SERs do a better than average job of supporting the school curriculum. Only 6.1% of those surveyed felt that SERs do not support school curriculum (Table 4-9). However, in 98.9% of responses, the

Table 4-9 Subscription electronic resources accurately support school curriculum

Survey question 12:

Subscription electronic resources accurately support school curriculum (n=244) (23 non respondents)

	Percentage of responses
(1) Not at all	0.8% (n=2)
(2)	5.3% (n=13)
(3) Somewhat	33.6% (n=82)
(4)	41.0% (n=100)
(5) Very much so	19.3% (n=47)

data indicates that school districts and not individual media specialists are responsible for making selection decisions for SERs (Table 4-1). Although media specialists are not

active in selecting SERs for their collections, they feel that the SERs accurately support school curriculum (AASL/AECT 1988, Prostano & Prostano, 1999).

Teachers Effectively Understanding and Using Subscription Electronic Resources

Of media specialists surveyed, 56.6% believe that teachers effectively understand and use SERs (Table 4-10). However, media specialists do not feel that teachers are doing a superior job in effectively understanding and using SERs. Only 9.8% believe that teachers are doing a “better than somewhat” job of understanding and using SERs. Media specialists do not have an overwhelming belief that teachers understand and utilize SERs very effectively in library media centers as exhibited in the overwhelmingly low response of 0.4% for the “very much so” category.

Table 4-10 Teachers effectively understanding and using subscription electronic resources

Survey question 13: Teachers effectively understanding and using subscription electronic resources (n=246) (21 non respondents)	
Percentage of responses	
(1) Not at all	12.6% (n=31)
(2)	30.9% (n=76)
(3) Somewhat	46.8% (n=115)
(4)	9.4% (n=23)
(5) Very much so	0.4% (n=1)

Students Effectively Understanding and Using Subscription Electronic Resources

Of the surveyed media specialists 66.7% believe that students effectively understand and use SERs (Table 4-11). However, 33.3% of respondents feel that students did not effectively understand and use SERs found in library media centers. It is an interesting phenomenon that when comparing average percentages; elementary media specialists feel that students understand and use SERs slightly better than teachers do (Table 4-10). These data suggest that there is much room for improvement for educators

to instruct students on the effective use of educational technology such as SERs in library media centers.

Table 4-11 Students effectively understanding and using subscription electronic resources
Survey question 14:

	Students effectively understanding and using subscription electronic resources (n=246) (21 non respondents)
Percentage of responses	
(1) Not at all	7.7% (n=19)
(2)	25.6% (n=63)
(3) Somewhat	48.0% (n=118)
(4)	16.3% (n=40)
(5) Very much so	2.4% (n=6)

Media Center Having Computer Technology That Can Access Subscription Electronic Resources Effectively

Elementary media specialists surveyed revealed that 91.9% of library media centers possess “somewhat” to “very much so” effective computer technology that can access subscription electronic resources. Only, 8.1% of those surveyed that possess SERs in their collections believed that their library media centers do not have adequate computer technology to access SERs. Therefore, the data suggests that most elementary media specialists feel their library media centers possess adequate to superior hardware technology in order to operate SERs. This data implies that computer hardware does not significantly impede media specialists’ selection decisions to add SERs to collections.

Table 4-12 Media center having computer technology that can access subscription electronic resources effectively
Survey question 15:

	Media center having computer technology that can access subscription electronic resources effectively (n=247) (20 non respondents)
Percentage of responses	
(1) Not at all	1.6% (n=4)
(2)	6.5% (n=16)
(3) Somewhat	19.8% (n=49)
(4)	30.0% (n=74)
(5) Very much so	42.1% (n=104)

Media Center Having the Technology Support for Hardware (Computers) and Software to Access Subscription Electronic Resources

Of the surveyed media specialists, 87.5% believe that their library media centers possess the technology support personnel that “somewhat” to “very much so” services the computers that operate SERs (Table 4-13). Only 12.5% of the respondents feel that they have inadequate technological support. This data implies that the technical support personnel in library media centers generally are not a decisive factor in media specialists’ selecting and acquiring SERs to library media center collections.

Table 4-13 Media center having the technology support for hardware (computers) and software to access subscription electronic resources

Survey question 16:

Media center having the technology support for hardware (computers) and software to access subscription electronic resources (n=247) (20 non respondents)

Percentage of responses

(1) Not at all	1.6% (n=4)
(2)	10.9% (n=27)
(3) Somewhat	22.3% (n=55)
(4)	35.2% (n=87)
(5) Very much so	30.0% (n=74)

Summary

Research Question 1

- To what extent does the presence of SERs in elementary library media center collections effect media specialists’ selection decisions?

The data revealed that 88.4% of elementary library media center collections possess SERs. Of the library media centers that have SERs, 98.9% were selected by school districts and not individual media specialists. This data indicated that there is little consensus about whether media specialists believed that SERs were effecting available money for other materials. The results generally indicated that most media specialists (71.4%) believe that there is adequate spending on SERs, and 8.4% believed that there is

“better than average” money being spent on SERs in library media center collections.

However, 20.3% felt that there was not sufficient spending for SERs.

With the additional presence of SERs in elementary library media centers, media specialists have altered the purchases of other materials in collections. The largest group of respondents (44.6%) has spent less on non SERs in their collections. Another group (29.2%) of respondents has spent less on print materials, A third group of (29.2%) believed that SERs had no effect and indicated that there were no changes in material purchases. A small percentage of respondents (6.4%) believed that media specialists have spent less on equipment. Only 4.1% of elementary media specialists’ survey felt that they have spent more on newer SERs due to the information found on previous SERs.

Although the presence of SERs in elementary media centers has impacted other materials in collections, significant data was revealed in how elementary media specialists would spend additional money if provided. The largest percentage (62.9%) of media specialists believed that they would select and purchase more print materials. The second largest percentage (22.5%) of media specialists desired to purchase extra equipment if the resources were available. A smaller percentage (10.5%) of respondents would like to select and add non-SERs to their collections. However, only 7.1% of respondents would use extra money selecting and acquiring more or better SERs to elementary library media center collections.

The data has shown that 82.8% of media specialists do not possess and will not select and acquire print materials that specifically supplement SERs. Of those respondents that answered to the amount of materials that have been superseded by

superior information found in SERs 18.1% answered “none”. The majority response of 70.0% of elementary media specialists answered that “a few materials” have been superseded by superior information found on SERs. Only 11.9% of the respondents answered that “many” have been superseded by superior information found on SERs.

Research Question 2

- To what extent are subscription electronic resources in elementary library media centers being effectively utilized by teachers and students?

In elementary schools, media specialists generally believe that SERs accurately support school curriculum (Table 4-9). However, elementary media specialists feel that teachers only somewhat effectively understand and use SERs, and there exists considerable room for improvement (Table 4-10). Respondents had similar feelings for students understanding and using SERs, but students have shown slightly higher percentages than teachers in understanding and utilizing SERs in library media centers (Table 4-11). Elementary media specialists also believe that there is a high level of sufficient computer technology hardware to operate SERs (Table 4-12). They also feel that there is ample technological support available in library media centers to successfully insure the successful operation of SERs (Table 4-13).

CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

This study was designed to determine the extent of which the presence of subscription electronic resources (SERs) affects the selection of other library media center materials and to determine if subscription electronic resources are being effectively utilized by teachers and students in elementary library media centers. This chapter presents important conclusions and recommendations for future studies drawn from the data presented in Chapter 4 and a section for other recommendations for further studies. The conclusions and recommendations for future studies provide summaries for the two research questions posed in Chapter 1.

Research Question 1

- To what extent does the presence of subscription electronic resources in elementary library media center collections effect media specialists' selection decisions?

In Research Question 1, media specialists' selection decisions for collection development determine the materials found in elementary library media centers and schools. As a result, selection decisions made by media specialists can have an impact on student learning (Krashen, 2004, Lance 2002). The presence of SERs in library media center collections creates the potential for significant changes to occur in selection decisions (Davis, 1997, Evans, 2000, Gregory, 2000, Miller, 2000, Stewart, 2000, Weber, 1999). Due to limited library media program budgets, media specialists' selection decisions for SERs may affect selection decisions for other materials in elementary media center collections.

Findings for Research Question 1

The presence of SERs in elementary library media center collections does not have considerable effects on media specialists' selection decisions in elementary library media centers. Subscription electronic resources are selected at the school district level and not by individual media specialists. It is not a priority for media specialists to add additional SERs with existing SERs in library media center collections. Subscription electronic resources generally do not have a noteworthy influence on the addition of many materials specifically designed to supplement the use of SERs in elementary library media centers. Also, information found in SERs is not considerable enough to supersede many materials found in elementary library media centers collections.

Research Question 2

- To what extent are subscription electronic resources in elementary library media centers being effectively utilized by teachers and students?

In the second research question SERs need to follow three criteria posed in chapter one in order to successfully be utilized by teacher and students in elementary library media centers. The first criterion is that SERs need to support the school curriculum (AASL/AECT 1988, Eisenberg & Berkowitz 1988, Evans, 2000, Prostano & Prostano, 1999). The second criterion is that there must be meaningful and effective use of SERs by teachers and students in library media centers (Dede, 2000, Jonassen, Peck, & Wilson, 1999, Roblyer, 2003, Trotter, 1998). The third criterion is that SERs must possess adequate technology in terms of both computer hardware and technological support (Lockard & Abrams, 2004, Picciano, 2006, Trotter, 1999, US Congress, 1995).

Findings for Research Question 2

Subscription electronic resources are effectively utilized by teacher and students, but not to a great extent. The SERs that are selected at the school district level support school curriculum very effectively. However, SERs are only marginally used and understood by teachers and students in elementary library media centers. Elementary library media centers adequately possess the technological hardware and support personnel to successfully operate SERs. Therefore, the effective use of SERs is sufficient for educational operation, but significant opportunity for effective use improvement exists for teachers and students in elementary library media centers.

Conclusions and Recommendations for Future Studies

In elementary library media centers that possessed SERs, media specialists did not select SERs to add to collections. Selection decisions for SERs were overwhelmingly performed at the school district level. This method of selection practice by school districts over individual media specialists should be examined in order to help determine if school district selection policies have an impact upon the overall effective utilization of SERs in elementary library media centers.

Although some of the surveyed elementary media specialists do not feel that enough money is being spent on SERs, very few of them have spent resources to acquire more or better SERs. Furthermore, very few elementary media specialists would spend more on SERs if extra resources were provided. This data indicates that the selection of SERs is not a selection priority for media specialists in library media center collections. Elementary media specialists chose the option of more or better SERs last after print materials, equipment, and other non-subscription electronic resources (non-SERs). Overall utilization of SERs by teachers and students was adequate, but considerable room

for improvement exists. Therefore, one implication made from the data is that teacher training programs need to include technology integration of materials such as SERs in library media centers. Although teachers and students are using SERs in library media centers, training should be emphasized to improve and focus teaching and learning strategies that will enhance the effective utilization of SERs.

The extent of SERs having an impact on the selection of other materials in elementary library media centers was not considerable. Media specialists do not possess or will not possess materials that specifically supplement SERs. The presence of SERs in library media center collections does not have a substantial influence on the selection and acquisition of other materials found in those collections. The information found in SERs has only a marginal impact upon superseding other materials found in elementary library media center collections. These implications, coupled with media specialists not actively selecting SERs, support the notion that SERs are not priority materials that are utilized in elementary library media centers. It would be advantageous to determine the qualitative extent of educational value that elementary media specialists place on utilizing SERs.

Although selection decisions for SERs are not made by individual elementary media specialists, media specialists believe that SERs significantly follow school curriculum. School districts have succeeded in providing SERs to elementary schools and that follow the design of school curriculum. However, these SERs may not be specifically the curricular materials desired by many teachers and this may contribute to the average understanding and use of SERs by teachers and students in elementary library media centers. Studies should be conducted that reveal to what extent teachers desire the SERs found in elementary library media centers.

Media specialists feel that teachers and students only marginally understand and use SERs in elementary library media centers. They feel that there exists significant room for teachers and students to improve effective utilization of SERs. Media specialists perceive students actually as being slightly more adept at understanding and using SERs in elementary library media centers. A possible reason for these moderate conclusions of integrating educational technology should be studied through an explanation and analysis of Rodgers' Diffusion Theory (Rodgers, 1995).

Elementary media specialists consider elementary library media centers to possess adequate or better computer hardware. They also believe elementary library media centers have adequate or better access to technology support personnel. However, some media specialists may see these technological factors as change barriers to effective utilization of SERs (Ely, 1990). Future studies should be performed to determine to what extent technological barriers versus other change barriers pose to the successful technological implementation of SERs in elementary library media centers.

Other Recommendations for Future Studies

This study produced several statements that may be of interest to future researchers, and the statements are presented below as other recommendations for future studies.

First, results are limited to what extent does the presence of subscription electronic resources have on media specialists' selection decisions in elementary library media center collections and to determine to what extent subscription electronic resources are being effectively utilized by teachers and students in elementary library media centers. Therefore, results are limited to the K-5 and pre-K-5 elementary school level. Future research should be conducted to determine selection decision and effective use results at the middle and high school levels.

Second, selection and utilization of research done in elementary library media centers should be conducted and correlated with data on the media specialists themselves. Studies done would be beneficial to determine to what extent the education level or years of experience of individual media specialists has on the utilizing of educational technology in library media centers. Research done that focuses on technology integration in library media program is lacking from the educational field.

Third, it would be beneficial for studies to include successful integration of library media program educational technology, such as SERs, into elementary school curriculum. Although much research has been done examining the integration of educational technology into teaching and learning strategies, studies should be conducted that reveal media specialists' and teachers' preferences of utilizing various SERs.

Last, it could be beneficial to understand the impact SERs have on specific school districts' library media center collections. Differences in the location of individual school districts and resources allocated to those school districts could reveal results that reveal information on to what extent SERs affect media specialists' selection decisions and how SERs are utilized by teachers and students. Research done on the variations between school district criteria and their resources could also expose discrepancies and inequities of implementing innovative educational technology in library media programs.

APPENDIX A
SPEARMAN'S RANK CORRELATION COEFFICIENTS

Table A-1. Spearman's rank correlation coefficients of interest comparing survey questions 6, 7, 8, and 9.

		Q8A	Q8D	Q9A	Q9B	Q9C	Q9D
Correlation	Q6	0.15761		0.13136	-0.18183		
P-Value		0.0114		0.0353	0.0034		
N		257		257	257		
Correlation	Q7		0.01975			0.02031	
P-Value			0.7503			0.7435	
N			262			262	
Correlation	Q8B			0.01559			
P-Value				0.7999			
N				267			
Correlation	Q8C					0.00661	
P-Value						0.9144	
N						267	

APPENDIX B
SURVEY

This survey is important because it is designed to determine how subscription electronic resources in elementary media centers affect media specialists' selection decisions and their effective usage by teachers and students. Thank you for your help with this dissertation.

- 1 How many years have you worked as a media specialist? _____
- 2 Are you a certified media specialist in the State of Florida? () Yes () No
- 3 What is your highest educational degree?
 () High School () Bachelors () Masters () Doctorate

Subscription electronic resources are programs found on the Internet that contain specialized educational information and are subscribed to for a contracted time. Examples of subscription electronic resources include Grolier Online, Tumblebooks, Net Trekker, and Brain Pop.

- 4 Do you have subscription electronic resources in your elementary school?
 () Yes () No

If you answered no you do not need to answer any more questions. Please follow directions on the bottom of the next page of this survey to mail back the survey.

- 5 What funding sources are used to purchase subscription electronic resources in your media center? **Check all that apply.**
 () Media center budget
 () School district () Outside donations or other school funds not from media center

- 6 To what degree does paying for subscription electronic resources affect having money available to purchase materials in your media center?

Not at all Somewhat Very much so
 () 1 () 2 () 3 () 4 () 5

- 7 Based on your opinion, how adequate is the funding for subscription electronic resources in your media center? **Check the one that best applies.**

() 1 Not enough spent on subscription electronic resources
 () 2 Less spent on subscription electronic resources than should be
 () 3 Appropriate amount being spent on subscription electronic resources
 () 4 A little bit more than should be spent on subscription electronic resources
 () 5 Too much is being spent on subscription electronic resources

- 8 How has the purchase of other materials in your media center changed as a result of the information found in your subscription electronic resources? **Check all that apply.**

() have spent less on print materials (books, periodicals, etc.)
 () have spent less on other non-subscription electronic resources (software, DVD's, etc.)
 () have spent less on equipment (overheads, computers, etc.)
 () have spent more on other subscription electronic resources (to complement the use)

9 Based on your opinion, if you had enough extra money in your media center budget how would you best like to spend it? ***Check the one that best applies.***

- () Spend more on more or better subscription electronic resources
- () Spend more on print materials (books, periodicals, etc.)
- () Spend more on other non-subscription electronic resources (software, DVD's, etc.)
- () Spend more on media center equipment (overheads, computers, etc.)

10 Have you or do you plan to buy any materials that specifically supplement your subscription electronic resources? () Yes () No

11 How many materials (print and electronic) in your collection have been superseded by superior information found in your subscription electronic resources making those titles irrelevant? () None () A few materials () Many materials

12 To what degree do you feel that your subscription electronic resources accurately support the curriculum of your school?

Not at all Somewhat Very much so
 () 1 () 2 () 3 () 4 () 5

13 To what degree do you feel that teachers effectively understand and use the subscription electronic resources in your media center?

Not at all Somewhat Very much so
 () 1 () 2 () 3 () 4 () 5

14 To what degree do you feel that students effectively understand and use the subscription electronic resources in your media center?

Not at all Somewhat Very much so
 () 1 () 2 () 3 () 4 () 5

15 To what degree does your media center have computer technology that can access subscription electronic resources effectively?

Not at all Somewhat Very much so
 () 1 () 2 () 3 () 4 () 5

16 To what degree does your media center have the technology support for the hardware (computers) and software used to access subscription electronic resources?

Not at all Somewhat Very much so
 () 1 () 2 () 3 () 4 () 5

Thank you very much for completing this survey! I hope this information can assist in understanding subscription electronic resources.

APPENDIX C
COVER LETTER

Seamus Eddy
School of Teaching and Learning
University of Florida
seamuseddy@hotmail.com
352-275-7786

Dear Prospective Participant,

My name is Seamus Eddy and I am a doctoral candidate at the University of Florida in the School of Teaching and Learning. I am conducting a research project to examine how the presence of subscription electronic resources affects media specialists' selection decisions and how subscription electronic resources are being used by teachers and students in elementary library media centers.

Please take a few minutes to complete the included survey. Please do not put your name or any identifying information on the survey and return it by mail with the envelope provided. All surveys are completely confidential. There is no risk or compensation involved in this research project. Your participation will contribute to a body of knowledge that will help media specialists better understand educational technology such as subscription electronic resources in library media centers. I appreciate your participation. If you would like more information about this project, please do not hesitate to contact me.

For questions about your rights as a research participant contact the University of Florida IRB office at (352) 392-0433.

Supervisor information:
Dr. Jeff Hurt Ph.D.
College of Education
University of Florida
(352) 392-9191, ext.258
jhurt@coe.ufl.edu

Sincerely,

Seamus Eddy

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BIOGRAPHICAL SKETCH

Seamus Eddy was born on June 2, 1973 in Larkspur, California. Seamus' family moved to Stockton, California when Seamus was 5 years old. There Seamus attended Lincoln High School and the University of the Pacific and graduated with his Bachelor of Arts degree in economics in 1996.

As Seamus began his career in education, he again attended the University of the Pacific and graduated with his Master of Education degree in curriculum and instruction in May of 2001. During this time he became a licensed multiple subjects teacher in the State of California and taught 5th grade for Stockton Unified School District. In the fall of 2001, Seamus pursued his interest in the field of Educational Technology and attended the University of Florida in Gainesville, Florida. At this time he became a licensed K-12 media specialist in the State of Florida.

In May, 2007, Seamus received a Doctorate of Education in Curriculum and Instruction with an emphasis on educational technology from the School of Teaching and Learning, College of Education, of the University of Florida. In 2007 Seamus plans to broaden his education by pursuing an Education Policy and Administration Certificate from the University of South Florida in Tampa, Florida.