THE EVOLUTION OF SCHOOL LIBRARY STANDARDS TO INCORPORATE TECHNOLOGY OVER THE PAST 25 YEARS

by

Kimberly R. Cullom

An Abstract
of a research paper submitted in partial fulfillment of the requirements for the degree of Master of Science in Library Science and Information Services in the Department of Educational Leadership and Human Development University of Central Missouri

August, 2013
ABSTRACT

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The changes in technology over the past 25 years have impacted the standards that regulate school libraries. These standards were written and established by various organizations such as the American Association of School Librarians, the Association for Educational Communications and Technology, the International Society for Technology in Education, and the National Board for Professional Teaching Standards. The school librarian is expected to incorporate the standards established by these organizations into their curriculum to ensure students are meeting the expectations. This paper explores how technology changes over the past 25 years have impacted the standards for school library media centers. Research of peer reviewed journals, articles, books, and Web pages was used to review the literature on the changes in school library standards over the last 25 years as related to technology changes. The research concluded that technology has had a lasting impact on school library standards and school libraries.
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CHAPTER 1
INTRODUCTION

School library standards define the expectations for school librarians and libraries. These standards have faced many changes over the past 25 years due to the rapid changes occurring in technology. Starting in 1988 when the American Association for School Librarians (AASL) and the Association for Educational Communications and Technology (AECT) released their first edition of *Information Power* standards through 2013 and the second edition of standards from the National Board for Professional Teaching Standards (NBPTS) for Library Media Centers, a great many changes occurred in this 25-year period.

In 1988 the AASL and AECT published *Information Power: Guidelines for School Library Media Programs* in order to ensure school libraries and librarians were preparing students for the twenty-first century (AASL and AECT, "Information" ix). These published standards demonstrated the increasing reliance on and incorporation of technology in the school library. The 1988 *Information Power* standards also established the library media center as central to the learning of all students and stated that it should be fully integrated in the school curriculum (AASL and AECT, *Information* 14-24). Finally these standards established requirements for the physical space of the library including designing school libraries with electrical power and network capabilities to meet the needs of a rapidly changing technological environment (AASL and AECT, *Information* 99).

In 1996 the AASL and AECT drafted a new set of standards to replace the 1988 *Information Power* standards. These new standards focused on teaching information literacy skills to students (AASL and AECT, “AASL”). These new standards, *Information Power: Building Partnerships for Learning*, were published in 1998 to replace the existing *Information
Power standards. The 1998 *Information Power* standards established information literacy to be the foundation of a school library program. This change made the library more than a place to store books; it became a learning environment full of technology with a librarian who has taken an active role in teaching information literacy skills to students in order to prepare them for the world outside education (AASL and AECT, *Information* 1-7).

The AASL and AECT were not the only organizations to release standards that affected school libraries and librarians. The International Society for Technology in Education (ISTE) also released standards for both students in 1998 and teachers in 2000 that outlined technology skills both students and teachers should master in relation to technology (ISTE, “ISTE NETS Student”). A second edition of both sets of standards was released in 2007.

Individual states began establishing their own standards for library media centers, incorporating the standards released by the AASL and AECT. These states included California, Illinois, Kansas, Kentucky, Massachusetts, Minnesota, Missouri, Oregon, and Texas (Houston, “Getting” 3). Some aspects from the AASL and AECT individual states included were collaborative learning, reading as the foundation for other literacies, collaboration between librarian and classroom teachers, and a focus on student learning and technology integration (Houston, “Measuring” 14-19).

In 2007 the AASL published new standards, *The Standards for the 21st-Century Learner*. These standards were written in order to define the future direction of school library media programs in a rapidly changing world due to technology advancement. It was the purpose of the *Standards for the 21st-Century Learner* to make the library a more fluid, flexible learning environment which promoted multiple literacies to students (AASL, “Empowering” 5-6). Not only did states establish their own standards in response to the 1998 standards released by the
AASL and AECT, but they also revised those same standards to incorporate the new skills outlined in the *Standards for the 21st-Century Learner* (Kentucky Department of Education).

Not only did the AASL incorporate evolving technology and twenty-first century skills into their new standards, but the NBPTS did also. In 2012 they published a second edition of standards for library media specialists, which partially focus on how technology can be integrated into school libraries along with the ethical use of information (NBPTS 51-54). In the 25 years since the AASL and AECT first published their *Information Power* standards, technology has been incorporated into the library at a quick pace in keeping with the changes going on globally.

**Statement of the Problem**

Rapid technological advances over the past several years have impacted the school library. One of the biggest questions has long been how to incorporate the new technologies with the curriculum to ensure students are prepared for the more global society they are entering due to the advancements in technology. These advances in technology are reflected in the published standards from both national organizations and state education departments. Librarians are expected to incorporate the established standards into the library media center to ensure all students are being taught similar skills across the country. Librarians are helping to prepare students for a technology rich global society by teaching critical thinking and information literacy skills (*AASL. Empowering* 7-11). These skills are necessary to be successful in a world that is quickly changing. How did school librarians reach the point where they were teaching such an invaluable skill set and not just holding the position of book custodian? Studying the evolution of library standards is one of the best ways to measure how
the library media center has changed to incorporate the new skills students are being expected to demonstrate upon leaving school.

**Purpose of the Study**

The purpose of this study is to examine literature related to how school library media center standards have changed over the past 25 years to incorporate technology. Literature was reviewed which contained various sets of standards from the past 25 years which were tied to the library. Some of the standards reviewed came from national organizations such as the AASL, AECT, and the ISTE; other standards reviewed came from individual states across the country.

The study begins with an exploration of the standards published from 1988 through 2000 which impacted school libraries. These standards showed a rapidly evolving technological library. Next, the study examined the evolution of library standards from 2001 to 2009. This period showed a marked change in the school library by demonstrating a focus on teaching critical thinking and information literacy skills. Finally, the study examined the standards from 2010-2013 and revealed how states were incorporating the critical thinking and information literacy skills established in the previous standards. This section also focuses on demonstrating the connections between standards published by different organizations. The findings of this study demonstrate how technological advances have impacted and been incorporated into the school library. The school library standards have evolved over the past 25 years to incorporate technology into the school library media center.

**Research Questions**

The school library has become more than just a storehouse for books; it has become an integral part of the school curriculum due to changes introduced by technological advancements. These changes have best been introduced to school libraries through published standards from
various national organizations and state educational agencies. Guiding questions were used during the review of the literature in relation to how these published standards have changed and impacted the school beyond the walls of the library.

1. How did the *Information Power* standards written by the AASL and AECT change from 1988 to 1998?

2. How have state library media standards changed in response to the standards published by the AASL and AECT jointly and the AASL individually?

3. What is the significance of the *Standards for the 21st Century Learner* beyond the library environment?

**Limitations of the Study**

This research paper was limited by the time frame allowed to collect and organize the information needed to analyze the evidence about how technology has impacted school library media standards over the past 25 years. Another limitation is that this study is based on existing literature and research covering the topic of how library standards have changed due to the implementation of new technologies. In addition the scope of data collection included journals, books, and articles dealing with library media standards over the past 25 years; some of the earlier published sources were difficult to obtain due to their availability being strictly in print and not in a digital format.

**Definition of Terms**

American Association of School Librarians (AASL): A division of the American Library Association (ALA) which focuses on the “needs of school librarians and the school library community” (AASL, “Membership”).
Association for Educational Communications and Technology (AECT): A professional organization for educators who desire to improve instruction through the use of technology (AECT).

Automate: The ability to use a computer program to maintain the library collection records.

Cyber-world: The virtual world of computers and communication.

Digital citizenship: The skills necessary to use technology appropriately and responsibly.

Disintermediation: The idea that advances in technology will make technology easier to use and that a mediator, such as a librarian, would no longer be needed (Lowe).

Information fluency: The ability to locate, evaluate, and ethically use digital information.

Information literacy: The ability to know what information is needed, how the information is organized, find the best sources of information, locate the sources of information, evaluate the sources of information critically, and share the information (Information Literacy Portal).

Information specialist: A person who specializes in information retrieval and maintains a collection of information; also responsible for teaching others how to find and access information.

Instructional technologies: The design, development, and use of technology in learning.

International Society for Technology Education (ISTE): A professional organization for educators trying to improve learning and teaching by advancing the use of technology in schools and teacher education (ISTE, “Profiles”).

Multiple literacies: The ability to assimilate information, not just from reading text, but also from video, the Internet, and other sources.
National Board for Professional Teaching Standards (NBPTS): A nonprofit organization that promotes excellence in education.


Nonlinear learning environment: Students take more control of their learning and learn at a self-appointed rate with the guidance of a teacher (Robberecht 61).

Productivity tools: Software and online tools, which can be used to make an individual’s life easier and more productive.

Twenty-first century learner: Students who are information driven and expect access to information at their fingertips and have not known a world without the Internet.

Research Design

The research study collected previously published information concerning library media standards from the past 25 years. No original research was conducted. Rather, existing literature relating to the topic was reviewed for the purpose of this study. At no time was there an effort to create new research.

Articles were retrieved from the following databases available through the James C. Kirkpatrick Library: ERIC; Library, Information Science & Technology Abstracts with Full Text; and Library Literature & Information Science Full Text (H.W. Wilson). The search for information was limited by the following search terms: “technology and the school library,” “technology and school library standards,” “school library standards,” “21st century learner,” “AASL and AECT standards,” “changes in school library standards,” “state school library standards,” and “standards and 21st century learner.” Upon obtaining articles that met the needs of the researcher, the bibliographies of those articles were consulted to find additional articles
and authors to search for. In addition to using databases, a Google online search was performed and a variety of resources were obtained from organizational websites. Print resources were obtained from the personal collection of local colleagues.

**Conclusion**

This study includes three chapters that focus on how school library standards have changed over the past 25 years in response to the rapid changes in technology. The first chapter includes an introduction to the topic along with definitions of key terms, and information regarding how the research was conducted. The second chapter contains a review of the information gathered on the topic. The final chapter explores the questions that guided the literature review along with the conclusions reached.
CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

This paper will explore the changes that have occurred in school libraries over the past 25 years due to the implementation of new library media center standards. One of the biggest forces behind these changes is the impact of technology and the necessary incorporation of the new skills students need to thrive in a global society. Each change in standards has impacted the way school librarians do their jobs. One of the ways to measure how much the library has changed is to assess the library standards that have been written and published over this 25 year time period.

In this research a closer look at the standards for the past 25 years will be taken to see just when and how technology became such a large part of the school library through changing standards. The driving force behind the changing standards is the American Association of School Librarians (AASL). The past 25 years can be broken down into three main periods: 1988 through 1999, 2000 through 2009, and 2010 to 2013. During each of these periods library standards were written and published at least once, if not twice. These standards are the backbone and driving force for the changes that have taken place in the school library.

Initial research on standards from the AASL and Association for Educational Communications and Technology (AECT) created between 1988 through 1999 explores how the new standards redefined the role of the school librarian. Next a draft of AASL standards written in 1996 was reviewed, which showed the growing trend of incorporating information literacy into the library curriculum. Finally, the International Society for Technology Education (ISTE) released technology standards for students in 1998 to further incorporate information literacy and technology changes into the library.
Additionally, research on standards created between 2000-2009 begins by exploring information regarding the first edition of the National Board for Professional Teaching Standards (NBPTS). Next it shows how the 1998 AASL standards were incorporated into school libraries through state standards and the updated standards from the ISTE, published in 2007. Then it explores the AASL *Standards for the 21st Century Learner*, published in 2007, which greatly impacted the school library curriculum.

Finally, the research on standards created from 2010 until 2013 focuses on how the AASL *Standards for the 21st Century Learner* have been incorporated into the curriculum of libraries throughout the country in state standards. It also explores the NBPTS for Library Media Specialists, published in 2012, and how they have changed since their initial publication in 2000. Lastly, it covers the correlation between NBPTS for Library Media Specialists and the AASL *Standards for 21st Century Learners*.

**Standards and Changes from 1988-1999**

From 1988-1999 the research shows how standards changed, technology was incorporated, and school library programs across the country were impacted. To begin with, the standards published by the AASL and AECT in 1988 will be addressed. Next the research explores how these standards began to be revised by looking at a draft of the new standards from 1996. Third, it shows how the *Information Power* standards were changed in the release in 1998. Lastly, it discusses how technology standards were first introduced by the ISTE in 1998 for students.

In 1988 the AASL and the Association for Educational Communications and Technology (AECT) released *Information Power: Guidelines for School Library Media Programs* to replace the existing standards, *Media Programs: District and School*, which were published in 1975.
Many changes and advances were made to redefine the role of the school library media specialist. The purpose of *Information Power: Guidelines for School Library Media Programs* was to help school librarians ensure they were preparing students for the twenty-first century (AASL and AECT “Information” ix). These guidelines demonstrated how the role of the school librarian was rapidly changing with the increasing reliance on and incorporation of technology.

In 1988 the AASL and AECT outlined seven objectives for school library media centers and five challenges that could prevent librarians from meeting the outlined objectives. The outlined objectives for school library media centers focus on providing access to information both physically and intellectually, ensuring students can create information, using informational technology, contributing to lifelong learning, functioning as the information center in the school, and providing diverse resources. These objectives are meant to show how the library media center should be fully integrated into the school’s curriculum by forming a partnership between teachers, administrators, and the school librarian (AASL and AECT “Information” ix).

The AASL and AECT, who partnered to author the standards, realized this process would not be as seamless as it sounds, so they pointed out five challenges most library media specialists of the time would face (AASL and AECT “Information” 1-13). The first challenge dealt with how to provide information in a rapidly changing environment. The increasing population diversity, rapid changes in technology, increase in women in the workforce, number of children living with only one parent, and transient American population were all cited as driving forces in the rapidly changing environment. With all of these various forces at work, schools and libraries are also tasked with preparing students for the twenty-first century (AASL and AECT “Information” 1-13).
The second challenge school library media specialists faced in this era was providing freedom of access to information. The evolving technology and use of more than just basic print and nonprint resources created new copyright issues. The guidelines for using print materials were well defined at this time, but those for audiovisual and computer resources were not. In addition, it became easier to reproduce documents, which created more copyright challenges. The technologies that made it easier to access information began to raise issues of student and teacher rights to privacy. The third challenge facing school library media specialists was reading and literacy promotion. This was an ongoing challenge because of the difficulties inherent in ensuring all students could read and comprehend literature. The fourth challenge was providing training in instructional technologies. All aspects of education have been impacted by technological advancements and library media specialists must keep ahead of this curve so they can be prepared to instruct others in technological use (AASL and AECT “Information” 1-13).

The final challenge outlined was providing access to resources located outside of the school. There were and are barriers to sharing resources such as legal restrictions, costs, and lack of time, all of which prohibit the availability of materials from outside sources. These challenges do not make the job of the library media specialist impossible; they are just presented to show that there is an awareness of the restrictions that might be placed on the library due to outside forces (AASL and AECT “Information” 1-13).

A major component of the 1988 standards is that the school library media center should be central to the learning processes of all students by becoming integrated into the school curriculum. All members of the school community responsible for students are expected to collaborate together to ensure meaningful learning is occurring throughout the library media center. The program should offer students and teachers a variety of materials for individual
learning styles and abilities. The library should be equipped for a variety of activities at one time, such as independent reading, a class working on a project in cooperation with the librarian, and students using the resources available to locate information for projects. The focus is on having resources available for student and teacher use in a variety of formats including books, periodicals, microfilm, computer software, film and video, and CD-ROM (AASL and AECT “Information” 14-24).

Library media specialists were being expected to fill three educational roles in these standards: information specialist, teacher, and instructional consultant. While each of these three roles has its own unique set of guidelines, the roles all intersect on the issue of incorporating technology. As information specialists, librarians are expected to make resources available to students and teachers effectively using the expanding functionality of computer technology (AASL and AECT “Information” 14-24).

As teachers the roles of librarians include providing access to information outside of the library through the use of new technologies, along with being able to demonstrate and teach how to use the new technologies. As instructional consultants, the librarians are expected to provide leadership in the implementation and evaluation of new technologies. So as early as 1988, it was obvious how technology was beginning to make its mark on both education as a whole and the library media center through its incorporation into all aspects of the role of the library media specialist (AASL and AECT “Information” 38-39).

The 1988 standards also placed focus on the physical library media center, resources, and equipment. It explained that library collections should consist of a variety of resources in various formats with the appropriate equipment to meet the needs of all students. In addition, if not already implemented, school libraries should be planning to fully automate the library’s
collection management system and provide online access to library catalogs (AASL and AECT “Information” 82-83). One of the biggest changes to the school facilities included designing them with the necessary electrical power and network capabilities to meet the needs of a rapidly changing technological environment (AASL and AECT “Information” 99).

*Information Power: Guidelines for School Library Media Programs* was a guiding force in school library programs for several years. Libraries and librarians were focusing on student academic success and adapting in the ever-changing world of technology. By 1996 the AASL and AECT began drafting new standards for information literacy that were student focused. A draft of the standards shows an understanding of how both students’ lives and education have been changed by the ready availability of information in a variety of formats. Their emphasis in this draft was on ensuring students become information literate, meaning they are able to access, read, evaluate, and use information notwithstanding the source. The second part of the draft indicates students should be able to learn independently. Students must have a sense of learning that extends beyond the bounds of the library or classroom and be able to learn or find information on their own interests. Finally, the third part of the draft focuses on the student’s responsibility to society by being information literate. Students who are information literate know how to use ethical behavior when using information, especially information obtained while using technology. These standards expect students to be able to collaborate with others both in person and through the use of the available technologies. This draft was published so AASL members could give their input and the standards could be fully evaluated and incorporated with the available technology of the time (AASL and AECT, “AASL”).

The AASL and AECT worked together to revise and rewrite the standards for libraries in order to keep up with the ever-changing world. Technology had been rapidly changing over the
past 10 years, and this change had a huge impact on education and libraries by providing new access to and sources of information. In 1998 the AASL and AECT published *Information Power: Building Partnerships for Learning*. This edition of standards had two main focuses: information literacy standards for student learning and building partnerships for learning (AASL and AECT, *Information* v-vii).

The information literacy standards for student learning from *Information Power* are revised from the 1996 draft, which the AASL and AECT released for input. Many of the ideas and guidelines set out in the 1996 draft are seen in the finalized information literacy standards published in 1998. According to the AASL and AECT “Information literacy—the ability to find and use information—is the keystone of lifelong learning,” (AASL and AECT, *Information* 1). This should be the foundation of a school library program. The library is no longer just a place to store books; it should be a learning environment full of technology. The role of the librarian has evolved from just sharing information to having an active role in teaching information literacy skills to students to ensure they are prepared for the world outside of education (AASL and AECT, *Information* 1-7).

There are nine standards in the information literacy standards for student learning. These are broken up into the three categories of information literacy, independent learning, and social responsibility. Each standard has various indicators to help librarians better incorporate them into the library curriculum. Much like the 1996 draft, the focus is on ensuring students are information literate. In fact, the backbone of the 1998 standards was seen in the 1996 draft. The main changes to the standards include revising some of the indicators to better reflect the ideas of the AASL and AECT regarding what a school library media center should be (AASL and AECT, *Information* 8-43).
The building partnerships section of Information Power: Building Partnerships for Learning outlines three basic ideas in librarianship: collaboration, leadership, and technology. Collaboration should be a driving force behind library media centers. It is necessary to work with various members of the educational community to make sure all learning outcomes are achieved. The leadership role of the librarian focuses on promoting information literacy standards to all teachers and administration. Technology shows the librarian as a technology leader for the school, and being knowledgeable about technologies helps solidify the role of the librarian in the educational field (AASL and AECT, Information 47-55).

The main focus of the building partnerships section is information access and delivery. This section outlines the principles of information access in the school library and focuses on providing access to information and resources while promoting learning. These resources can be physical books or information found via other sources such as hardware or software. It is essential that students have good information retrieval skills so they can use these skills as lifelong learners. When possible, students and teachers are able to access technology at any time; this includes remote access to collections after school hours (AASL and AECT Information 83-95).

The AASL and AECT outlined concrete standards in 1988 and again in 1998. These standards were not always easy to transfer into practice. Anne McCracken, the Library Program Specialist and Project Manager with Fairfax County Public Schools in Virginia, prepared a survey to determine if library media specialists were able to implement their roles as defined. In addition, the survey asked if it was important for librarians to take a leadership role in instructional technology. Respondents indicated school library media specialists had been unable to fully implement the roles of library media specialists as defined in the standards.
created by the AASL and AECT. The most common reasons for this failure included lack of time, staff, funding, interest, or support from classroom teachers, and having too many students to provide for (McCracken).

McCracken’s research indicated there were many misconceptions of the role of the school librarian during this time. This misconception was a barrier prohibiting librarians from fully implementing their roles as defined by the AASL and AECT. The factors the library media specialists who responded to the survey considered important in implementing and expanding their roles included supportive administration, supportive teachers, use of new technology, access to the Internet, professional development opportunities, their own attitudes and abilities, adequate funding, and clerical support. When their perceptions on the importance of technology instruction were addressed, the most common theme was that those who had technology felt it was crucial. Most school libraries had access to the Internet via computers for student use. In some schools, this was the extent of their technology access. However, high school library media centers often had access to more technology than middle and elementary school libraries. There were some respondents to the survey who felt the advances in technology use in the school library had a negative impact on their roles in relationship to books and literature. These librarians felt like technology in the library was being pushed with literature taking a backseat (McCracken).

The respondents to the survey were obviously trying to implement their roles as outlined by the AASL and AETC in both 1988 and 1998 but were facing challenges. Kathy Latrobe and Anne Masters worked together to study how one school district implemented *Information Power: Building Partnerships for Student Learning* into practice across the district. After publication of the standards, the school district began a three-semester process to introduce the
new guidelines into practice in the library with the assistance of library media specialists, teachers, and administrators. The hope of this district was that the implementation of these strategies would change the program and not just become a series of workshops (Latrobe and Masters).

The plan to implement these guidelines over three semesters was broken down into the following schedule: in the fall of 1998 the school district began sharing how information literacy standards were integrated across all grade levels, in the spring of 1999 library media specialists began meeting with principals to collaborate on the implications of the guidelines and created a collaborative assessment, and in the fall of 1999 information literacy standards were presented to the district teachers. This process of implementing the standards outlined by the AASL and AECT was beneficial since the district as a whole participated and teachers and administrators were made aware of the roles of the librarians in this process. The results of the study determined that higher levels of participation among teachers, administrators, and library media specialists working together to emphasize the collaborative nature lead to a higher level of approval and a more successful integration (Latrobe and Masters).

These new guidelines released by the AASL strongly focused on change. It was difficult to refute that technology greatly changed the way education, and thus the role of the school media specialist, is defined. The changes in standards worked toward preparing students for a future that is unknown (Pappas, “Changing” 26-29,32). Pappas recognized that students functioned in a nonlinear learning environment due to the ready access of electronic resources, which allows easier exploration of knowledge (“Library” 32-34). In a nonlinear learning environment students are responsible for taking more control of their learning, teachers provide guidance, but students are learning at their own self-appointed rate (Robberecht 61). It was easy
to lose sight of print materials in the wake of so many technological learning tools such as online databases, simulations, virtual field trips, and easy access to primary source documents. Reading is still the foundation for being able to use any information source, be it digital format or print. Just having access to software and the Internet is not enough to teach students, there still needs to be people there who can assist the students and teach them how to use the resources in an ethical manner. Technology will continue to change, so educators, especially library media specialists, must be adaptable and embrace the changes coming (Pappas, “Changing” 26-29,32). The new role of the library media specialist as outlined by the AASL and AECT was to teach information literacy skills; not only to students but also to assist the other teachers and administration in teaching and using information literacy. It is necessary to develop learners who can find information on their own using the various technology options available (Pappas, “Library” 32-34).

While the AASL and AECT were busy rewriting and evaluating their standards, the International Society for Technology in Education (ISTE) began to prepare its own set of standards for students, published in 1998, and teachers, published in 2000. These standards outlined skills both students and teachers should master in relation to technology. Librarians began to incorporate these skills into the library along with those already outlined by the AASL and AECT. In 1998 the ISTE expected a certain skill set for students in order to be considered technologically literate and ready for life using technology outside of school. The Technology Foundation Standards for Students outlines six areas students should master in relationship to using and incorporating technology in education (ISTE, “ISTE NETS Student”).

The ISTE standards began with the most logical and basic step of ensuring students know the basic operations and are proficient in the ability to use technology. The second standard
ensured students know how to use technology in an ethical and responsible manner. The third standard set out by the ISTE included making sure students were able to use productivity tools to enhance learning, collaboration, and production of works. The fourth standard pertained to using technology communication tools to collaborate and communicate ideas to numerous audiences. The fifth standard focused on the student’s ability to use technology research tools effectively. This standard focused on not only being able to locate information, but ensuring students had the ability to evaluate and process the data and information they found. The sixth and final standard from the ISTE involved problem solving and decision making with respect to using technology. This standard focused on the student’s ability to use information found through technology to make informed decisions and solve problems in the real world, not just the educational world (ISTE, “ISTE NETS Student”).

The ISTE also published a list of technology standards for teachers and how they were expected to use technology in their classrooms and professional lives; the first edition was copyrighted in 2000. There were also six standards given for teachers that somewhat mirrored those set out for students. The first standard for teachers focused on the teacher’s knowledge and ability to utilize basic technology skills. It also pointed out a need for teachers to continually keep up with the trends in technology. The second standard for teachers from the ISTE focused on the teacher’s ability to create lessons that supported and implemented technology. In this standard teachers were expected to find the most appropriate technology resources for the lesson and plan how to best incorporate them into the lesson. The third standard actually focused on the implementation of technology tools into the classroom to successfully teach students and prepare them to be able to meet the ISTE standards set for students. The fourth standard focused on assessment and evaluation of students and how they are using technologies. This is how teachers
ensured students were able to successfully meet their ISTE standards. The fifth standard focused on using technology as a tool to increase professional development and productivity. Finally, the sixth standard focused on the ethical issues associated with the use of technology in education. Here teachers ensured they were able to teach and use technology in an ethical way and promote the safe and responsible use of technology resources. School librarians began to adhere to these standards to ensure they were successfully preparing students for life in the real world after graduating (ISTE, “National”).

With so much information available online where anyone can access it, some were beginning to question the need for school librarians. The role of the librarian had to adapt and change to stay relevant to the era. As schools began to restructure themselves to keep up with the educational trends following the advancements in technology, librarians began venturing out of the library and collaborating more with other teachers and administrators. Library skills needed to incorporate instructing students on how to use the new sources of information and how to evaluate the information that was accessed. The advances in technology that led to offering more information in electronic formats impacted how librarians developed their collections. Resources were becoming more easily shared in a worldwide network (Simpson). These advances and changes created a need for updated standards, which promoted a more global and educational society.

As evidenced by the changes in standards from 1988 to 1998, technology had a huge impact on education and the library media center. There are specific trends that are obvious in the changing technology: increase in connectivity, customization to individual needs, and seamless integration of technology. These changes presented both challenges and rich opportunities for library media specialists, who should be involved in discussions involving
technology and curriculum resources for the school. The changing role of technology has increased the need for information literacy skills, which librarians are in place to teach. It was once believed that disintermediation, or the idea that advances in technology will make technology easier to use, would occur. In reality there has been an increase in the use of help because as the Internet becomes more complex, it is more difficult to find what is needed. The Internet and advances in technology have not yet taken the place of a person who can fix problems and help navigate the information available (Lowe).

**Standards and Changes from 2000-2009**

The research on school library standards created between 2000 and 2009 demonstrates how library standards continued to change and evolve to incorporate the teaching of technology and information literacy skills in the library. The research begins by exploring the first edition of the National Board for Professional Teaching Standards (NBPTS). Next it continues by showing how the 1998 standards were incorporated into school libraries through state standards. Then the research explores the updated ISTE standards published in 2007 for both students and teachers. Finally, the research explores the *Standards for the 21st Century Learner* published in 2007, which had an impact on the school library curriculum.

The NBPTS officially published their first edition of standards for library media specialists in 2000. NBPTS standards for any area, including *Library Media Specialists*, are written to reflect the five core ideas from the NBPTS including: teachers being committed to students and learning, teachers knowing the subject they teach and how to teach that subject, teachers being responsible for student learning, teachers learning from experience, and teachers are members of learning communities. These standards were written by working library media specialists who were considered knowledgeable about the best practices in the field at the time.
These new standards from the NBPTS helped validate that school library media specialists are and should be teachers (Coatney 24-25).

The first edition of NBPTS included ten standards divided into three categories including: what library media specialists know, what library media specialists do, and how library media specialists grow as professionals. The first category of what library media specialists know includes three standards, knowledge of learners, knowledge of teaching and learning, and knowledge of library and information studies. This category focuses on the knowledge library media specialists are expected to have in order to be among the most successful of their profession. The second category of what library media specialists do includes three standards such as integrating instruction, leading innovation through the library media program, and administrating the library media program. This category focuses on what skills each library media specialist is expected to have. The third and final category, how library media specialists grow as professionals, includes reflective practice; professional growth; ethics, equity, and diversity; and leadership, advocacy, and community partnerships. This last category focuses on what types of professional development library media specialists should be a part of (Sorensen).

The standards released by the AASL and AECT in 1998 had a profound impact on school library media centers. These changes are evidenced by the focus on information literacy standards in various state library media center standards. Some states that established standards for library media centers in response to the standards released by the AASL and AECT include California, Illinois, Kansas, Kentucky, Massachusetts, Minnesota, Missouri, Oregon, and Texas (Houston. “Getting” 3). For example, Illinois immediately began working on new standards in response to the 1998 standards from the AASL and AECT by forming a task force responsible for revising and updating the program guidelines from 1992. The goal was to release the
updated program standards in the fall of 1999. The new standards for libraries were named “Linking for Learning.” These standards were made up of 20 components that were believed necessary for libraries to impact student achievement. These 20 components were organized into the same three categories from *Information Power*: learning and teaching, information access, and program administration.

To help school librarians implement the new standards into practice in Illinois, the task force also created a set of implementation documents including job descriptions, program planning guide, facilities planning guide, intellectual freedom documents, and rubrics for each component. One of the program components included in “Linking for Learning” based on the *Information Power* standards focused on collaborative learning. The document explains how this impacts students, how it can be implemented in the school library, and what the library media specialist can do to ensure collaborative learning. Illinois went beyond just writing out the standards to helping library media specialists implement the standards with a background to defend each component (Kramer 23-25, 33).

In 2001 Kentucky published *Beyond Proficiency: Achieving a Distinguished Library Media Program* in response to the 1998 version of *Information Power* published by the AASL (cited in Houston, “Getting.”). The standards established by this document played a major role in Kentucky school libraries until 2010, when a new set of standards was published. *Beyond Proficiency* established 13 standards that were aligned with *Information Power* (Houston, “Getting” 3). Reading skills were still a predominate factor in school libraries in this document because reading is the foundation for most other literacies. Other aspects of this set of standards from Kentucky included: collaboration between the library media specialist and classroom teachers, student learning, a collection in a variety of formats that supports literacy and the
curriculum, technology integration, intellectual freedom, and accessibility (Houston. “Measuring” 14-19).

Another state focusing on information literacy was Louisiana. The *Guidelines for Library Media Programs in Louisiana Schools* from 2004 contain a section on information literacy skills spanning over half of the standards for the state (Louisiana State Department of Education). The guidelines from Louisiana demonstrate the belief that information literacy is a key factor in the learning environment of the twenty-first century. The implementation of information literacy was a key part of the standards released by the AASL and AECT in 1998. Students needed to be able to solve problems, think for themselves, and quickly adapt to a changing society in which they are preparing for jobs that may not exist in 2004 but exist at a future date (Louisiana State Department of Education 65-77).

Using their own state standards and the AASL standards, Louisiana came up with an “Information Literacy Model for Lifelong Learning” framework that has seven stages. These stages include defining and focusing, selecting tools and resources, extracting and recording, processing information, organizing information, presenting findings, and evaluating efforts. The document defines how these skills can be incorporated into each grade level. All skills are necessary for students to be able to navigate the information world they are facing in the twenty-first century (Louisiana State Department of Education 65-77).

In 2007 the AASL published a new set of standards, *The Standards for the 21st-Century Learner*, without the assistance of the AECT. By this time the AECT had downsized and no longer had the same financial base it did when the partnership with the AASL began (AECT). The new standards were created in order to define the future direction of school library media programs in the rapidly changing world as a result of technology advancement. The library was
no longer seen as one space within four walls, it was the goal of the new standards to make the library a more fluid, flexible learning environment that promoted multiple literacies to students. The purpose of the new standards was to ensure library media center programs went beyond the basics to provide effective library programs (AASL, “Empowering” 5-6).

The primary mission of the school library media center, instill a desire to learn while ensuring access to information for all, remained the same no matter what changes in technology occurred. However, over the past 20 years, technologies have emerged that have transformed the way information is gathered and used. Development of technological tools has created a global society where learning moves across physical boundaries and is taking place in a cyber-world. The skills school library media centers focus on are teaching students how to be good global citizens and how to best use information technologies to navigate the twenty-first century. Skills needed in the twenty-first century include, but are not limited to, global awareness, creativity and innovation skills, critical thinking skills, information literacy, media literacy, flexibility and adaptability, social and cross-cultural skills, leadership, and responsibility. These skills can best be taught in a twenty-first century learning environment rich with digital technologies. These technologies have opened a window for innovative teaching and learning that is unprecedented. These changes are necessary to keep pace with the twenty-first century learner. Students in the twenty-first century have grown up with technology at their fingertips. They are accustomed to having constant access to information and are often extremely tech-savvy. The combination of skills, learning environment, and the twenty-first century learner have created a perfect place to begin establishing the standards the twenty-first century learning should be able to meet (AASL. Empowering 7-11).
The AASL created the *Standards for the 21st-Century Learner* with a basis of nine common beliefs: reading is a window to the world, inquiry provides a framework for learning, ethical behavior in the use of information must be taught, technology skills are crucial for future employment needs, equitable access is a key component for education, the definition of information literacy has become more complex as resources and technologies have changed, the continuing expansion of information demands that all individuals acquire the thinking skills that will enable them to learn on their own, learning has a social context, and school libraries are essential to the development of learning skills. These beliefs recognize the importance of skills that lead to productive behavior (AASL, *Empowering* 12-13). These nine common beliefs outlined by the AASL have been summarized into four main sections: inquire, think critically, and gain knowledge; draw conclusions, make informed decisions, apply knowledge to new situations; create new knowledge, share knowledge, and participate ethically and productively as members of our democratic society; and pursue personal and aesthetic growth. These four sections are the backbone of the *Standards for the 21st-Century Learner*. Each section is divided into four strands of learning: skills, dispositions in action, responsibilities, and self-assessment strategies. Reading through the individual standards reveals the emphasis on using technology (AASL, “Standards”).

The new *Standards for the 21st Century Learner* were not created to replace the 1998 Information Power standards, but to enrich the impact of the library media program on student learning and achievement. These standards address the fact that libraries and librarians must embrace and teach multiple literacies. Information literacy has always been a fundamental part of the library media program in schools. The *Standards for the 21st Century Learner* address the concept of information literacy while adding other literacies, which must be taught in the current
educational setting. There are more than 80 specific benchmarks contained in the *Standards for the 21st Century Learner* and while it sounds daunting to address each benchmark individually all can easily be incorporated within the problem solving process (Needham 42-43).

The first decade of the new century brought more technological changes. These changes were reflected in all areas of education, including updating the ISTE’s technology standards for both students and teachers. Not only were librarians expected to incorporate the standards established by the AASL, but also to incorporate these new standards released by the ISTE. These new National Educational Technology Standards (NETS) were published for both students and teachers in 2007 to reflect the changes in technology and technology usage. The ISTE released these NETS because they recognized that technology had greatly impacted the way students learn. The 2007 edition of the NETS had six components: creativity and innovation, communication and collaboration, research and information fluency, critical thinking, problem solving and decision making, digital citizenship, and technology operations and concepts (ISTE, “ISTE NETS Student”).

The first component, creativity and innovation, established that students are expected to demonstrate creative thinking and develop innovation using technology. The second component, communication and collaboration, established that students should be able to use digital environments to communicate and work collaboratively. The third component, research and information fluency, established that students must be able to use digital tools to gather and evaluate information. The fourth component, critical thinking, problem solving, and decision making, established that students should be able to use critical thinking, problem solving, and decision making skills when using the appropriate digital tools. The fifth component, digital citizenship, established that students must have the necessary skills to be good digital citizens.
and practice ethical behavior. The sixth component, technology operations and concepts, established that students need to have a good understanding of technology concepts such as the use of online applications, understanding technology systems, the ability to troubleshoot applications, and the ability to apply current knowledge to new technologies (ISTE, “ISTE NETS Student”).

ISTE provided a set of profiles to help incorporate the NETS into practice in education. These profiles were broken down into age groups, such as ages 4-8, ages 8-11, ages 11-14, and ages 14-18. In each age group the appropriate “experiences with technology” were presented to help teachers, librarians, and administrators see how to incorporate the NETS into all levels of education (ISTE, “Profiles”).

The ISTE NETS for teachers has five components they are expected to model in order to improve learning. The components for teachers include: facilitate and inspire student learning and creativity, design and develop digital age learning experiences and assessments, model digital age work and learning, promote and model digital citizenship and responsibility, engage in professional growth and leadership. There is an emphasis across the five components for teachers incorporating technology and modeling the appropriate behavior for technology use to their students (ISTE, “ISTE NETS Teacher”).

Not only can the Standards for the 21st-Century Learner be correlated to the Information Literacy Standards of 1998; there is a direct connection to the NETS standards released in 2007. These connections help school library media specialists to incorporate all of the standards into their library curriculum. Striking similarities exist between what the AASL expects of students and what the ISTE has outlined in the NETS. These similarities include a focus on the inquiry process; the importance of thinking skills; an emphasis on collaborative learning; the ability to
gather, evaluate, and use information; the use of information to create new knowledge, solve problems, and for personal expression; a respect for diversity; and the ethical use of information. Obviously these two documents do not fully align, but the similarities help simplify both sets of standards and make them more easily understood (Pappas, “Standards” 19-26).

From 2000-2009 there were several changes to library media center standards from various sources: the NBPTS published a first edition of standards for library media centers, several states rewrote or updated their standards in response to the 1998 *Information Power* standards, the ISTE updated their technology standards, and the AASL released their *Standards for the 21st Century Learner*. All of these changes impacted school libraries across the country. A closer look at the standards shows how they can be aligned for easier implementation to the library media center.

**Standards and Changes from 2010 – 2013**

The research on school library standards created between 2010 and 2013 continues to explore how library standards have changed to incorporate technology. The focus of the research is how the *Standards for the 21st Century Learner* have been incorporated into the curriculum of libraries throughout the country. Furthermore, it explores the NBPTS standards for library media specialists published in 2012 and how they have incorporated technology. It also makes connections to the AASL *Standards for the 21st Century Learner*.

The 2007 *Standards for the 21st-Century Learner* published by the AASL had a profound impact on school library media centers. Individual states began rewriting their standards for library media centers to incorporate these new standards. In 2010 the Kentucky Department of Education released a new “Library Media Program Rubric” to be used in evaluating school library media programs. This rubric outlines a set of standards Kentucky library media
specialists should develop their programs to meet. These standards clearly show a connection to the *Standards for the 21st Century Learner*. The second demonstrator of the rubric, teaching for learning, focuses on building collaborative partnerships, the role of reading, addressing multiple literacies, effective practices for inquiry, and assessment in teaching for learning. The entirety of this section can be aligned with the *Standards for the 21st Century Learner*. The focus on creating lifelong learners is strongly seen in both documents. There is also a correlation between the two sets of standards in reading for personal growth, multiple literacies including technology, and inquiry driven learning (Kentucky Department of Education).

Another state that incorporated the *Standards for the 21st Century Learner* was Colorado. In 2012, the Colorado Department of Education released "Colorado's Highly Effective School Library Programs: An Evaluative Rubric for 21st-Century Colorado School Librarians and Their Library Programs." This rubric combines the *Standards for the 21st-Century Learner*, the NETS for students, and Colorado’s academic standards into a document school librarians can use to evaluate their library programs. The library media center is evaluated in five different areas: instruction and learning environment, leadership, staffing, program advocacy, and program resources and administration (Colorado Department of Education 4-15).

Many aspects of the instruction focus on the incorporation of twenty-first century skills. For example, one standard instructs librarians to “work with teachers to align 21st century skills instruction with content delivered in the classroom” (Colorado Department of Education 4) This standard states the expectation that the librarian assists teachers in incorporating twenty-first century skills in all lessons in the school. Colorado’s focus on ensuring students learn twenty-first century skills can be seen in almost all sections of "Colorado's Highly Effective School Library Programs: An Evaluative Rubric for 21st-Century Colorado School Librarians and Their
Library Programs.” This puts emphasis on the school librarian’s role in education in the state of Colorado (Colorado Department of Educaiton 4-15). Colorado is not the only state to have rewritten their library standards to incorporate twenty-first century skills; other states are following this trend in their library media standards as well.

In 2011 the state of Missouri published the final draft of “Missouri Standards for School Librarians” prior to being approved by the Department of Elementary and Secondary Education. This draft was based on several standards dealing with youth librarianship. The standards draw attention to the expectation that school librarians be continuously developing their knowledge and skills (Missouri Association of School Librarians). These standards were approved in 2012 and incorporate what school librarians of various levels of experience should be doing from a candidate school librarian to a distinguished school librarian. Each of the seven standards included in the “Missouri Standards for School Librarians” is broken down into various quality indicators. The standards include teaching for learning, reading and literacy, information and knowledge, leadership and advocacy, program management and administration, technology integration, and professional development. A connection to the Standards for 21st Century Learners can clearly be seen in the technology integration section of the “Missouri Standards for School Librarians.” This section focuses on the school librarian’s knowledge of technology and his or her ability to ensure students are effective digital citizens (“Missouri Standards”).

The NBPTS also incorporated the evolving technology and twenty-first century skills into their standards for national certification for library media specialists. It is noted that the twenty-first century forced great changes in library media programs due to the inclusion of information technologies and digital content. The librarian embraces the current learning
environment while using the opportunities inherent to help students succeed in the digital society. He or she assists students with seeing the world beyond their communities (NBPTS 16).

Upon deciding to update the NBPTS they created a committee of predominately library media specialists who had obtained certification through NBPTS since the first edition was published in 2000. The committee met and identified what they considered to be the most pressing issues in library management, including technology, teacher training, administrative issues, and professional issues. It was decided by the committee to maintain ten standards but that the content needed to be revised and few of the standards needed to be changed completely (Garry 9-11).

The most recent set of standards from the NBPTS, or the “Standards for Library Media Specialists,” second edition, was published in 2012. These standards have ten parts, including knowledge of students; teaching and learning; knowledge of library and information studies; leadership; administration; integration of technologies; access, equity, and diversity; ethics; outreach and advocacy; and reflective practice (NBPTS 22-23). Two standards from the 2000 edition were cut from the 2012 edition including integrating instruction and professional growth. It was argued that these aspects of librarianship were so integral to the profession that they were incorporated into each aspect and thus did not need to be included as separate standards. Ethics became a standard due to the growth of digital information and information found online. This has made teaching the ethical use of information much more crucial and the committee felt ethics should be a priority of all school librarians (Garry 9-11).

While all ten standards from the NBPTS are important, one standard can easily be aligned with the technology components of Standards for the 21st Century Learner. Standard VI of the NBPTS “Library Media Standards” focuses on the ways technology can be integrated into
the libraries. The main point of this standard is: “library media specialists use technologies effectively and creatively to support student learning and library media program administration” (NBPTS 51). Technologies include text, sound, video, and other digital content. Frequently new technologies appear first in the library, so library media specialists are encouraged stay on the cutting edge of technology to help other educators learn to incorporate technology into lessons and curriculum. Library media specialists encourage students not only to access information using technology, but also to use technology tools to create projects that support creative thinking. The library media specialists who meet the NBPTS standards instruct in the ethical use of information while assisting students in finding and understanding information. They can best instruct students and other educators on strategies and techniques that make searches for information more effective (NBPTS 51-54).

The *Standards for the 21-st Century Learner* also focus on skills that will help students in and out of school. These skills include inquiry, critical thinking, ethical use of information, the importance of technology skills, and a more complex definition of information literacy (AASL, “Standards”). These skills all directly correlate to what the NBPTS expects of library media specialists in the NBPTS standards. Library media specialists are responsible for teaching students the best ways to find information while considering inquiry and critical thinking. The NBPTS makes it clear that students need to know how to ethically use information they find no matter what the format (NBPTS 51-54).

Several states updated their library media standards to incorporate the *Standards for the 21st Century Learner* that the AASL published in 2007. These new standards focused on various literacies, especially information literacy and technology integration. The NBPTS followed this
example when they published their second edition of library media standards. In addition the 
NBPTS also focused on critical thinking and the ethical use of information.

Conclusion

Numerous changes over the past 25 years have impacted the standards for school library 
media centers and school librarians. AASL has made three major changes, which were the 
driving force behind many of the states making their own changes in standards. In the past 25 
years technology standards have also been added to the mix due to the increasingly technological 
society students are expected to live and work in. Currently teachers and school librarians are 
preparing students for a future that cannot be foreseen. Students must be prepared to be critical 
thinkers and to be adaptable to a more globally aware society.
Published standards have been leading change in school library media centers for many years. Over the past 25 years there have been significant changes to the standards due to the rapid advances in technology. Starting in 1988 with the Information Power standards released jointly by the American Association of School Librarians (AASL) and the Association for Educational Communications and Technology (AECT), a shift in the direction of school libraries began to occur. The role of the librarian expanded to entail more than just being the keeper of the books; librarians began to take a more active role in the curriculum and education of students.

Advances in technology and changes in education caused the AASL and AECT to begin revising their Information Power standards to incorporate information literacy as a foundation for instruction in the library. In 1998 a newly published set of Information Power standards was published with the vision of a library rich in technology and librarians ready to teach students skills they would need after graduating from school. In 2007 the AASL published a new set of standards called the Standards for the 21st Century Learner. These new standards challenged librarians to help students become critical thinkers with the ability to interpret information from a variety of sources and to maintain ethical behavior.

During this time period the International Society for Technology in Education (ISTE) released standards for students and teachers focusing on skills both should master in regards to technology. Librarians across the country quickly began to incorporate these standards into their curriculum along with the standards published by the AASL and AECT. These standards were
first published in 1998 for students and 2000 for teachers. The standards were updated and a second edition for both students and teachers was published in 2007.

Not only were standards released by the AASL, AECT, and ISTE, but the National Board for Professional Teaching Standards (NBPTS) also released their own standards for school library media specialists in 2000. These standards outlined the necessary skills school librarians needed in order to achieve national certification from the NBPTS. The standards released by the NBPTS were updated and a second edition was published in 2012. The second edition changed some of the standards and focused more on technology integration and addressing multiple literacies.

The standards released by the AASL and AECT, and later the AASL alone, caused many states to reevaluate their standards and publish new standards, which incorporated those laid out by the national organizations. These new state standards incorporated more technology usage and multiple literacies. They emphasized information literacy and the ethical use of information as information became more readily available in multiple formats.

Questions arose during the course of the research, which helped guide the information search process. These questions focused on the changes in standards and how they have impacted not only school libraries and librarians but also classroom expectations for students over the past 25 years. These questions were as follows: How did the Information Power standards written by the AASL and AECT change from 1988 to 1998? How have state library media standards changed in response to the standards published by the AASL and AECT jointly and the AASL individually? What is the significance of the Standards for the 21st Century Learner beyond the library environment?
**Information Power Standard Changes from 1988 to 1998**

Changes naturally occur over the course of ten years in any area. Library standards are the same. In 1988 the AASL and AECT published *Information Power: Guidelines for School Library Media Programs* to replace the existing standards in place. These standards established the role of the library as a fully integrated part of the school curriculum, not just a storage place for books and information.

By 1988 the world was becoming increasingly reliant on technology and this trend also appeared in the *Information Power* standards by establishing that school library catalogs should be automated and showing an increasing need for electronic capabilities in the library as it became a more technological environment. The standards published in 1988 emphasized that information should be available in a variety of formats, such as books, periodicals, microfilm, computer software, film (video), and CD-ROM. The 1988 *Information Power* standards outlined seven objectives: providing access to information, giving students the ability to create information, teaching them to use informational technology, and promoting lifelong learning, establishing the role as school information center with a collection of diverse resources.

In 1998 the AASL and AECT published *Information Power: Building Partnerships for Learning*. This was an update of the 1988 publication *Information Power: Guidelines for School Library Media Programs*. This version of *Information Power* established that the foundation of school library programs should be information literacy. This put information literacy skills at the forefront of what librarians were expected to teach their students along with ensuring that students had the skills to be successful outside of school. The library was also expected to be a learning environment full of technology and library media specialists leaders in technology integration.
In many ways the 1998 version of *Information Power* built from what was established in 1988 by the AASL and AECT. In 1988 school libraries were expected to offer more electronic capabilities in order to prepare for a more technological environment. In the 1998 standards the library is expected to be a learning environment full of technology. The 1988 standards provided an objective of promoting lifelong learning while the 1998 standards established that students be prepared for a world outside the school environment. These changes followed the trends in education and technology in the ten year span between 1988 and 1998.

**Changes in State Library Media Standards in Response to Nationally Published Standards**

Following the standards released by the AASL and AECT many states began to rewrite their library standards in response to the changes made on a national level. Some of the states that made changes to their standards for library media centers in response to the 1998 *Information Power* standards from the AASL and AECT and the 2007 *Standards for the 21st Century Learner* from the AASL include: California, Illinois, Kansas, Kentucky, Massachusetts, Minnesota, Missouri, Oregon and Texas. These states incorporated various aspects of the nationally released standards into their own standards for library media centers. The 1998 standards released by the AASL and AECT were used as a backbone and guide for the state standards released across the country.

One of the aspects which was most commonly incorporated into state standards from those released nationally was a focus on multiple literacies, especially information literacy. This was a skill that is considered vitally important for students to master. Another portion of the national standards incorporated by many states was an emphasis on creating lifelong learners through reading for personal growth and teaching skills for the twenty-first century. Aspects
taken from the 2007 AASL standards and incorporated into individual state standards include: collaborative learning, teaching inquiry skills, critical thinking skills, and technology integration.

Lasting Impact of the Standards for the 21st Century Learner

While the Standards for the 21st Century Learner were published by the AASL for school librarians to use in the school library, these standards have an impact far beyond the library doors. The skills taught in the library can be incorporated and used in any subject taught in school. It is expected that school librarians collaborate with teachers to integrate the Standards for the 21st Century Learner and library resources into lessons taught in the classroom.

The main idea behind the Standards for the 21st Century Learner is that reading is the foundation of all learning. This makes it a skill necessary for all subjects taught in school. There is also a focus on inquiry driven learning and ensuring students have the ability to learn on their own. There is also a significant emphasis on technology skills and recognizing the social context in learning. Finally all the skills recognized by the Standards for the 21st Century Learner add together to help students apply knowledge to new situations. All of these skills added together will help students achieve success in any subject in school. These are not skills that are specific to the library.

Conclusion

Over 25 years there have been major changes in the standards for school library media centers and for school librarians. These changes follow the trends in society such as advances in technology. There were significant changes in the standards published by the AASL and AECT just from 1988 to 1998. Many of those changes involved recognizing that the advances in technology were impacting the way current and future generations of students were learning. The changes in standards from the AASL and AECT caused states across the nation to rewrite
and update their standards for school library media centers and school librarians to reflect the new expectations. These standards were far reaching and not only affected what the expectations for the library were but were incorporated into all school subjects since reading was established as the foundation for learning and there was a focus on inquiry driven learning.

The current standards hold up well when facing an uncertain future. They are more about teaching students how to learn and solve problems than “traditional” library skills. It will be interesting to note how standards continue to change in an uncertain future full of technology and advancements.
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