



Jersey Roots, Global Reach

School Libraries, Now More Than Ever:

A Position Paper of The Center for International Scholarship in School Libraries

Dr. Ross J. Todd, Director

Dr. Carol A. Gordon, Co-Director

Every child needs a school library --Mary Gaver

School Libraries and Student Achievement

The Center for International Scholarship in School Libraries (CISSL) at Rutgers University holds the belief, substantiated by five decades of research, that school libraries help young people learn. School libraries are learning laboratories where information, technology, and inquiry come together in a dynamic that resonates with 21st century learners. School libraries are the school's physical and virtual learning commons where inquiry, thinking, imagination, discovery, and creativity are central to students' information-to-knowledge journey, and to their personal, social and cultural growth. School librarians understand that children of the Millennium generation are consumers and creators in multi-media digital spaces where they download music, games, and movies, create websites, avatars, surveys and videos, and engage in social networking (National School Boards Association, 2007). They know that the world of this young generation is situated at the crossroads of information and communication. School librarians bring pedagogical order and harmony to a multi-media clutter of information by crafting challenging learning opportunities, in collaboration with classroom teachers and other learning specialists, to help learners use the virtual world, as well as traditional information sources, to prepare for living, working, and life-long learning in the 21st century. Schools without libraries minimize the opportunities for students to become discriminating users in a diverse information landscape and to develop the intellectual scaffolds for learning deeply through information. Schools without libraries are at risk of becoming irrelevant.

It seems self-evident that children who have access to books and a school librarian read and learn more, but in 1959 conducting research to support this claim was an innovative idea. Mary Gaver, a professor in the Graduate School of Library Services at Rutgers University, led a major research study, *Effectiveness of Centralized School Library Services, Phase* (1963), involving 271 schools in thirteen states. She compared the test scores of students in three learning environments: schools with classroom libraries, schools with centralized libraries run by non-librarians, and schools with centralized libraries run by librarians. Students in schools with centralized libraries managed by qualified librarians tended to score higher than students without

centralized libraries or qualified librarians. Gaver's pioneering study blazed a trail for school library impact studies. She held the strong belief that:

With the school library literally the heart of the educational program, the students of the school have their best chance to become capable and enthusiastic readers, informed about the world around them, and alive to the limitless possibilities of tomorrow (Gaver, 1958).

An extensive body of research has grown from Gaver's vision and research. It consistently shows that there is a positive correlation between student achievement on standardized tests and school libraries (Scholastic, 2008). Students' higher test scores correlate with: 1) The size of the school library staff (Lance, et al., 1999; Baumbach, 2002; Lance, et al., 2001; Lance, et al., 2000; Smith, 2001); 2) Full-time/certified school librarians (Lance, et al., 1999; Callison, 2004; Rodney, et al., 2003; Baxter & Smalley, 2003; Todd, et al., 2004; Lance, et al., 2000); 3) The frequency of library-centered instruction (Lance, et al., 1999) and collaborative instruction between school librarians and teachers (Lance, et al., 2000; Lance, et al., 2005; Lance, et al., 2001); 4) Size or currency of library collections (Burgin & Bracy, 2003; Lance, et al., 2000; Smith, 2001); 5) Licensed databases through a school library network (Lance, 2002); 6) Flexible scheduling (Lance, et al., 2005; Lance, et al., 2003); and 7) School library spending (Lance, et al., 2001; Baxter & Smalley, 2003). These correlation studies use regression analysis to isolate the effect of variables such as varying socio-economic status of students.

A study conducted by CISSL in Ohio reports that 99.4 percent of students in grades 3 through 12 believe school libraries and their services help them become better learners (Todd, et al., 2004). The Ohio Study, the largest study conducted on the effectiveness of school libraries, surveyed 13,123 students and 879 teachers. Their voices clearly tell us that an effective school library, led by a credentialed school librarian, plays a critical role in facilitating student learning and knowledge building. This study was replicated in Delaware with 5,733 students and 408 teachers (Todd, 2006), and in Australia (Hay, 2006) with 6,728 students and 525 teachers. These studies convey a strong and consistent message: School libraries are powerful agents of learning, central to engaging students in the transformation of information into deep knowledge and understanding, and providing them with life skills to continue living, learning and working in an information- and technology-intense world.

So, how do school libraries help students learn?

Inquiry is the Framework for Learning

CISSL's research builds on the foundational model of the Information Search Process (Kuhlthau, 1986) which has been validated by extensive, rigorous research (Kuhlthau, 1988; Kuhlthau, 1989; Kuhlthau, Turock, George & Belvin, 1990; Kuhlthau, 2004) The ISP is the instructional framework that school librarians use to guide students through the complex and essential stages of inquiry. These six stages explain the thoughts, feelings, and behaviors students commonly experience in the process of learning from a variety of information sources. Instruction and guidance are provided in the form of strategic interventions that enable students to activate prior knowledge and experiences, build background knowledge, select a viable topic, explore a wide variety of information sources, formulate a focus, collect, evaluate, analyze, and synthesize information, and present a learning outcome that represents new understandings in innovative,

meaningful and creative ways. This approach to learning across the curriculum is known as Guided Inquiry (Kuhlthau, Maniotes & Caspari, 2007). Embedded in the guidance provided by the school librarian are interventions that build competency in locating, evaluating and using information to construct ideas through a combination of reflection strategies, social networking, and application of Web 2.0 tools. School librarians have the state-of-the-art technical and pedagogical expertise to engage 21st century learners through Guided Inquiry. School library instruction fosters ethical behavior that acknowledges intellectual property rights as well as intellectual freedom. In a knowledge-centered school, inquiry through school libraries provides an arena for discovery, knowledge-building, innovation and creativity. The instructional role of the school librarian as guide and facilitator is supported by the *Standards for 21st Century Learners* (AASL, 2007) which emphasize reading, inquiry, information literacy, critical thinking, and knowledge construction.

School libraries are centers for discovery, inquiry, thinking and creativity. Inquiry in the school library challenges the 21st century learner to be curious, innovative, and creative in academic contexts. The school librarian collaborates with an instructional team of teachers and other learning specialists (such as reading, literacy, special needs and ICT leaders) to help students learn how to think critically, solve problems, make decisions, and be reflective through their engagement with diverse and often conflicting sources of information (Todd, 2006). Embedded in authentic learning tasks that simulate real-life challenges are formative assessments such as rubrics, journal blogs, and reflection sheets that track student progress and promote reflection through self- and peer evaluation (Gordon, 2000). Web 2.0 tools provide interactive opportunities for self-regulation and self-monitoring as learners achieve metacognitive levels as they learn how to learn (Gordon, 2009). School librarians offer students authentic research (Gordon, 1999) opportunities as well, as they collect data through interviews and surveys, for example. The infusion of authentic research motivates students to interact with their own data, rather than relying solely on someone else's. In the school library the educators apply evidence-based practices (Todd, 2001) to their teaching, so that they are using tools such as action research (Gordon, 2006) that model the use of evidence as part of doing inquiry.

Reading is the Key to Understanding

There is a considerable body of research dating from the 1930's that explores how dimensions of reading are enhanced when school librarians provide access to reading materials, promote reading, and integrate literacy with their instruction. The importance of access to reading materials is demonstrated by Cleary's study (1939) which reported that students in a school with no school library averaged 3.8 books read over a four-week period while students from a school with a library averaged 7.6 books. Gaver (1963) found that students with access to school libraries read more than those who only had access to centralized book collections without librarians, and read more than children who only had access to classroom collections. Her findings showed a strong correlation between the size of the library collection and the amount the students reported reading. This finding is supported by Lowe (1984) who found that students in schools with libraries read and enjoy reading more than students in schools without centralized libraries. Research by Allington (2002), Gottfried, Fleming & Gottfried (1998), McQuillan, (2001), and Pack (2000) provide further evidence that ample access to books and magazines predicts higher reading achievement. Collective evidence suggests that the number of books per

student in a school library is a significant predictor of reading achievement. In addition, students who read more have more books available at home (Morrow, 1983; Neuman 1986; Greaney & Hegarty, 1987). In recent years, important reading research has been undertaken by Krashen (1985, 1988, 1989, 1993, 1995, 1997, 2001). Collectively these studies explicate further the contextual and instructional dimensions of reading development fostered by the school library. The evidence indicates that students get a large portion of their reading materials from libraries. Students read more when they have a quiet, comfortable place to read. In addition, the free voluntary reading promoted by access to reading materials has a positive impact on reading comprehension, vocabulary, spelling ability, grammar usage and writing style. In turn, access to books and magazines predicts higher reading achievement. An ample supply of books is key to the fostering of independent and engaged readers, particularly English Language Learners. Students who read more typically have higher literacy development, as well as overall higher student achievement. Rutter's study of high-achieving schools in London (1979) found that such schools invested substantial budget and effort to ensure libraries were open after school as well as during the day, a finding later supported by Alexander (1992).

Ample access to books fosters more borrowing of reading materials, and is particularly enhanced with the presence of a school librarian to guide the choice and to encourage motivation and enjoyment of reading. Von Sprecken, Kim and Krashen, (1998) found that explicit attention from a librarian or other helper can get students interested in books and help them to discover a "home run" book. According to Didier (1982), the intervention by a professional school librarian increased use of newspapers and access to the library and achievement in reading by elementary school students. Thorne (1967) found that augmented library services, with attention to reading literacy programs, resulted in greater gains in reading comprehension, with boys gaining most. In addition, the school librarian supports reading for entertainment and personal growth by championing free choice (Gordon & Lu, 2008), and validating the reading of alternative media such as magazines and websites (Gordon & Lu, 2008). This is a critical element in reading engagement. Programs that promote reading throughout the school year, as well as during the summer, are critical to maintaining reading levels. Research reports that students who do not read during the summer typically lose one to three months on standardized reading tests scores from June to September. The cumulative effect of reading loss causes an achievement gap as children from lower socio-economic backgrounds experience the greatest reading losses. Researchers conclude that the achievement gap in our schools is a summer reading gap (Cooper, 2003). The role of the librarian in providing free choice and reader's advisory beyond the scope of curriculum is especially critical for low-achievers and struggling readers. These students are seeking reading experiences that are relevant to their own lives and that provide emotional and psychological benefits (Gordon & Lu, 2008). This points to the need to provide materials and structures that help students grow, not only cognitively, but psychologically, emotionally, and socially, through their reading experiences (Lu & Gordon, 2007).

Within the scope of school curriculum school librarians also play a role in developing emergent literacy across diverse academic contexts. When students are engaged in Guided Inquiry school librarians build reading comprehension by raising their consciousness about their comprehension. As students experience the stages of the Information Search Process, reading for

understanding strategies are woven into the fabric of instruction. For example, when students activate prior knowledge, use mind mapping to take notes, or question the author they are improving reading comprehension. School librarians are situated to help students at the convergence of reading, information, and thinking.

In addition to helping students read in traditional print environments, school librarians help them negotiate digital text. Library collections are no longer static and fixed, nor is it possible to mediate them. All students are eventually challenged by texts they retrieve from subscription databases, Internet web sites, and electronic books. Reading sources, whether informational or fictional, can no longer be leveled, labeled, and packaged for consumption by students. This is especially true of electronic resources. More than half of respondents to a survey believe reading will be different in ten years (The Pew Internet & American Life Project, 2010). There will be a new fluidity in media creations, with visual representations and storytelling emerging as important to “screen” literacy. In addition, recent research indicates students read digital text differently. Rowlands and Nicholas (2008) report that young information searchers in digital environments skim, scan and squirrel, or hoard information, but do not read it. New “forms” of reading are emerging, such as ‘power browsing’ horizontally through titles, contents pages and abstracts. (Rowlands & Nicholas, 2008).

Extensive reviews by Lonsdale (2003) and Haycock (2003) agree with the findings reported in this paper that situate school libraries and school librarians in literacy development. These researchers conclude that well stocked libraries, managed by a qualified school librarian, who actively promotes literacy and coordinates resources, provide the essential infrastructure for developing literacy.

Information Literacy is the Key to Discovering Knowledge

CISL research recognizes the importance of the information to knowledge connection that evolves from information literacy. Information literacy, or the ability to search, retrieve, evaluate and use information to build deep knowledge and understanding, is even more critical in today’s increasingly digital environment. A CISL research study (Todd, 2006) involved 574 New Jersey students, grades 6 to 12, in inquiry learning units, and found that students who were given explicit instruction in analyzing and synthesizing information and constructing deep knowledge were the ones who engaged actively in transforming information rather than transporting it. In addition, CISL developed the Student Learning Impact Measure (SLIM) for the Ohio study (Todd & Kuhlthau, 2004; Todd, 2006), which is an instrument available to school librarians that tracks changes in knowledge during the inquiry process, and to provide evidence of students’ engagement in learning and meeting curriculum standards.

The fallacy that the Millenium generation have the information skills to be successful in 21st century learning and working environments underestimates the sophisticated skills needed for increasingly complex information tasks. Despite the apparent facility with which the “Google Generation” uses the Internet, today’s learners are not more information literate than previous generations. Rowlands & Nicholas (2008) found that students have difficulty performing information tasks. They tend to use simple search strategies that reflect an unsophisticated mental map of the Internet. They do not review information retrieved from online databases for relevance and they perform unnecessary searches after they obtain the needed information. They

spend little time in critical appraisal of this information for appropriateness and quality. There is little improvement in evaluating the authority of sources, yet 93 percent are very satisfied with their results. The study also found that 21st century learners demand instant gratification at a click as they look for THE right answer (Rowlands & Nicholas, 2008). Such a simplistic view of “inquiry” is not adequate for the challenges for 21st century learning. Information literacy has developed from finding information to the concept of using and interacting with information to build knowledge. Multiple literacies, including digital, visual, and technological literacy, are critical to surviving in a fast-paced, high tech world. More than ever before, in the increasing complexity of the information landscape, today’s learners need systematic and explicit help in developing these literacies to make sense of the store of information, disinformation, and misinformation they encounter every day. The instructional role of the school librarian is critical to this transformative, sense-making process.

Will they be ready?

The challenges of the 21st century cannot be met behind the closed doors of classrooms. Instead, these challenges call for a collaborative effort to bring information and technology to the expertise of the classroom teacher. Just as it is not possible to teach effectively in isolation, it is not possible to isolate curriculum from the real world where there is a natural synergism of information, technology, and reading. This synergy is synonymous with 21st century learning.

American prosperity has long rested on how well we educate our children. But this has never been more true than it is today. In the twenty-first century, when countries that out-educate us today will out-compete us tomorrow, there is nothing that will determine the quality of our future as a nation and the lives our children will lead more than the kind of education that we provide them. Nothing is more important.

President Barack Obama, “Remarks on Strengthening America’s Educational System,” November 4, 2009.

Will our children be ready for the challenges of their future? Are our schools ready to prepare them for those challenges today? CISSL takes the position that schools without school libraries cannot educate this generation in a way that prepares them for 21st century study and work, and being part of the increasingly digital, global society. Cutting school libraries is not the solution: School libraries, now more than ever, are integral to quality learning and teaching in 21st century schools.

Works Cited

American Association of School Librarians (2007) *Standards for the 21st-Century Learner*.

Available at:

<http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/standards.cfm>

Alexander, K.G. (1992). *Profiles of four exemplary school media specialists*. Unpublished doctoral dissertation, Boston College.

- Allington, R. (2002). "What I've learned about effective reading instruction: From a decade of exemplary elementary classroom teachers." *Phi Delta Kappan*, 83(10), 740-747.
- Baumbach, D. (2002). *Making the grade: The status of school library media centers in the Sunshine State and how they contribute to student achievement*. Spring, TX: Hi Willow Research and Publishing. <http://www.sunlink.ucf.edu/makingthegrade/>
- Baxter, S.J. & Smalley, A.W.. (2003). *Check it out! The results of the school library media program census, Final Report*. St. Paul, MN: Metronet.
- Burgin, R. & Bracy, P.B. (2003). *An essential connection: How quality school library media programs improve student achievement in North Carolina*. Spring, TX: Hi Willow Publishing and Research. <http://www.rburgin.com/NCschools2003/>
- Callison, D. (2004). *Survey of Indiana school library media programs: A collaborative project between the Association for Indiana Media Educators & Indiana University-Indianapolis, School of Library and Information Science*. Presented at the 2004 AIME Conference, Indianapolis, IN, November 2004.
- Cleary, F. (1939). "Why children read." *Wilson Library Bulletin*, 14, 119-126.
- Cooper, H. (2003). "Summer reading loss: The problem and some solutions." *ERIC Digest*, May 2003. ED475391, 1-7.
- Didier, E. (1982). *Relationships between student achievement in reading and library media programs and personnel*. University of Michigan, Unpublished doctoral dissertation.
- Elley, W. (1992). "Acquiring literacy in a second language: The effect of book-based programs." *Language Learning*, 41(3), 375-411.
- Gaver, M. (1963). *Effectiveness of centralized library service in elementary schools*. New Brunswick, N.J: Rutgers University Press.
- Gaver, M. (1958). "Every child needs a school library." Opening Address at *School Libraries, Information Literacy*. Chicago, IL: American Library Association.
- Gniewek, D. (1999). *School Library Programs and Student Achievement: A Review of the Research*. Available at: <http://www.libraries.phila.k12.pa.us/misc/research-sum.html>
- Gordon, C. A. (2009). "Raising active voices in school libraries: Authentic learning, Information processing and Guided Inquiry." *SCAN*. 28(3).
- Gordon, C. A. (2008). "I hate to read, or do I? Low achievers and their reading." *School library media research online*, (11) Available at: http://www.ala.org/ala/mgrps/divs/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume11/ALA_print_layout_1_522467_522467.cfm.

Gordon, C. A. (2006). "A study of a three-dimensional action research model for school library programs." *School Library Media Research*, 5. Available at:
<http://www.ala.org/ala/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume9/actionresearch.cfm>

Gordon, C. A. (2000) "Putting the learner in charge. Are information literacy skills enough?" *SCAN* 19(1), pp. 32-8.

Gordon, C. A. (1999). "Students as authentic researchers: A new prescription for the high school research assignment." *School Library Media Research*, 2. Available at:
<http://www.ala.org/ala/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume21999/vol2gordon.htm>

Gottfried, A., Flemming, J. & Gottfried, A. (1998). "Role of cognitively stimulating home environments in children's academic intrinsic motivation: A longitudinal study." *Child Development*, 69(5), 1448-60.

Greaney, V. & Hegarty, M. (1987). "Correlations of leisure time reading." *Journal of Research in Reading*, 10, 3-20.

Hay, L. (2005) "Student learning through Australian school libraries Part 1: A statistical analysis of student perceptions." *Synergy*, 3(2), 17-30. Available at:
<http://www.slav.schools.net.au/synergy/vol3num2/hay.pdf>

Haycock, K. (2003). *The crisis in Canada's school libraries: The case for reform and reinvestment*. Toronto: Association of Canadian Publishers. Available at:
<http://www.peopleforeducation.com/librarycoalition/Report03.pdf>

Krashen, S. D. (2001). *Text and tech: The two-way bridge to learning*. Presented at at the American Library Association Conference, San Francisco, CA.

Krashen, S. D. (1997). "Bridging inequity with books." *Educational Leadership*, 55(4), 18-22.

Krashen, S. D. (1995). "The reading hypothesis, the expanded reading hypothesis, and the greatly expanded reading hypothesis." *School Library Media Quarterly*, 23(3), 187-192.

Krashen, S. D. (1993). *The power of reading: Insights from the research*. Englewood, CO: Libraries Unlimited, Inc.

Krashen, S. D.(1989). "We acquire vocabulary and spelling by reading: Additional evidence for the Input Hypothesis." *Modern Language Journal*, 73, 440-464.

Krashen, S.D. (1988). "Do we learn by reading? The relationship between free reading and reading ability." In D. Tannen (Ed). *Linguistics in context: Connecting observation and understanding*. Norwood, NJ: Ablex.

- Krashen, S. D. (1985). *Inquiries and insights*. Menlo Park, CA: Alemany Press.
- Kuhlthau, C. C. (1989) "Information Search Process: A summary of research and implications for school library media programs." *School Library Media Quarterly*, 18(1): 19-25.
- Kuhlthau, C. C. (1988). Longitudinal case studies of the Information Search Process of users in libraries." *Library and Information Science Research*, 10(3): 257-304.
- Kuhlthau, C. C. (1986). *Facilitating information seeking through cognitive modeling of the search process: A library studies research project*. ERIC Document Reproduction Service. ED328268.
- Kuhlthau, C. C. (2004). *Seeking meaning: A process approach to library and information services*, 2nd ed. Westport, CT: Libraries Unlimited.
- Kuhlthau, C. C., L. K. Maniotes, and A. K. Caspari. (2007). *Guided inquiry: Learning in the 21st century*. Westport, CT: Libraries Unlimited.
- Kuhlthau, C. C., B. J. Turock, M. W. George, and R. J. Belvin.(1990). "Validating a model of the search process: A comparison of academic, public and school library users." *Library and Information Science Research*, 12: 5-32.
- Lance, K. C. (2001). *Proof of the power: Recent research on the impact of school library media programs on the academic achievement of U.S. public school students*. ERIC Digest. EDO-IR-2001-05 October 2001. Syracuse, NY: ERIC Clearinghouse on Information & Technology.
- Lance, K.C., M.J. Rodney. & C. Hamilton-Pennell. (2005). *Powerful libraries make powerful learners: The Illinois study*. Canton, IL: School Library Media Association.
<http://www.islma.org/pdf/ILStudy2.pdf>
- Lance, K. C., M.J. Rodney & C. Hamilton-Pennell. (2002). *How school librarians improve outcomes for children: The New Mexico study*. Santa Fe, NM: New Mexico State Library.
<http://www.stlib.state.nm.us/files/MNStudyforDistribution.pdf>
- Lance, K.C., M.J. Rodney, & C. Hamilton-Pennell. (2001). *Good schools have school libraries: Oregon school librarians collaborate to improve academic achievement*. Terrebonne, OR: Oregon Educational Media Association. http://www.oema.net/Oregon_Study/OR_Study.htm
- Lance, K.C., M.J. Rodney & C. Hamilton-Pennell. (2000). *Measuring up to standards: The impact of school library programs & information literacy in Pennsylvania schools*. Greenburg, PA: Pennsylvania Citizens for Better Libraries.
- Lance, K., C. , C. Hamilton-Pennell, M.J. Rodney, L. Petersen, & C. Sitter. (1999). *Information empowered: The school librarian as an agent of academic achievement in Alaska schools*. Anchorage, AK: Alaska State Library. <http://www.library.state.ak.us/pdf/anc/infoemxs.pdf>

Lipscomb, L.A. (1993). *Recreational reading and its effects on the reading achievement of first through third graders*. Unpublished doctoral dissertation, University of Texas at Austin.

Lonsdale, M. (2003). *Impact of school libraries on student achievement: A review of the research report for the Australian School Library Association*. Melbourne: Australian Council of Educational Research. Available at: <http://www.asla.org.au/research/index.htm>

Lu, Y.L. & Gordon, C.A. (2008). "The effects of free choice on student learning: A study of summer reading." *School Libraries Worldwide*, 14(1), 38-55

Lu, Y.L. & Gordon, C.A. (2007). "Reading takes you places: A study of a web-based summer reading program." *School library media research*, 10. Available at: http://www.ala.org/ala/aasl/aaslpubsandjournals/slmrb/slmrcontents/volume10/lu_reading.cfm

McQuillan, J. L. (1997). *Access to print and formal instruction in reading acquisition*. Unpublished doctoral dissertation, University of Southern California.

Morrow, L. (1983). "Home and school correlates of early interest in literature." *Journal of Educational Research*, 76, 221-230.

National School Boards Association. (2007). *Creating & connecting: Research guidelines on online social and educational networking*. Alexandria, VA: NSBA. <https://wwwnsba.org/site/docs/41400/41340.pdf>

Neuman, S. (1986). "The home environment and fifth grade students' leisure reading." *Elementary School Journal*, 86, 335-343.

Pack, S. (2000). "Public library use, school performance and the parental x-factor: A biodocumentary approach to children's snapshots." *Reading Improvement*, 37, 161-72.

Pew Internet and American Life Project. (2010) *A review of the responses to a tension pair about the impact of the Internet on reading, writing, and the rendering of knowledge. Part 2*. Retrieved March 12, 2010. <http://pewinternet.org/Reports/2010/Future-of-the-Internet-IV/Part-2Reading/Reading.aspx?r=1>

Rodney, M.J., K.C. Lance & C. Hamilton-Pennell. (2003). *The impact of Michigan school librarians on academic achievement: Kids who have libraries succeed*. Lansing, MI: Library of Michigan. http://www.michigan.gov/documents/hal_lm_schllibstudy03_76626_7.pdf

Rodney, M.J., K.C. Lance & C. Hamilton-Pennell. (2002), *Make the connection: Quality school library media programs impact academic achievement in Iowa*. Bettendorf, IA: Mississippi Bend Area Education Agency. <http://www.aea9.k12.ia.us/04/statewidelibrarystudy.php/>

Rowlands, I. & Nicholas, D.. (2008). *Information behaviour of the research of the future. A CIBER briefing paper*. Commissioned by British Library & Joint Information Systems

Committee. Centre for Information Behaviour & the Evaluation of Research (CIBER), University College of London (UCL), 11 January, Retrieved 2 February 2008, <http://www.bl.uk/news/pdf/googlegen.pdf>

Rutter, M., B. Maughan, P. Mortimer, J. Ouston & A. Smith. (1979). *Fifteen thousand hours: Secondary schools and their effects on children*. Cambridge, MA: Harvard University Press.

Scholastic. (2008). *School libraries work! Research foundation paper*. New York: Scholastic Library Publishing. Available at http://www2.scholastic.com/content/collateral_resources/pdf/s/slw3_2008.pdf

Smith, E. G. (2001). *Texas school libraries: Standards, resources, services, and students' performance*. Austin, TX: Texas State Library and Archives Commission.

Thorne, L. (1967). *The influence of the Knapp school libraries project on the reading comprehension and on the knowledge of library skills of the pupils at the Farrer Junior High School, Provo, Utah*. Brigham Young University. Unpublished doctoral dissertation.

Todd, R. J. (2006). "From information to knowledge: Charting and measuring changes in students' knowledge of a curriculum topic." *Information Research*, 11(4). Available at: <http://www.informationr.net/ir/11-4/paper264.html>

Todd, R. J. "Transitions for preferred futures of school libraries: Knowledge space, not information place-connections, not collections-actions, not positions-evidence, not advocacy." International Association of School Librarianship Conference, Auckland, New Zealand, July 10, 2001.

Todd, R. J. & Kuhlthau, C. (2004). *Student learning through Ohio school libraries: Background, methodology and report of findings*. Columbus, OH: OELMA. <http://www.oelma.org/studentlearning.htm>

Von Sprecken, D., J. Kim, & S. D. Krashen. "The home run book: Can one positive reading experience create a reader?" *California School Library Journal*, 23(2), 8-9.

Yetter, C.L. (1994). *Resource-based learning in the information age school: The intersection of roles and relationships of the school library media specialist, teachers, and principal*. Seattle University. Unpublished doctoral dissertation.

Contact

Dr Ross J Todd

School of Communication & Information, Rutgers, The State University of New Jersey
4 Huntington Street, New Brunswick, New Jersey USA 08901

Tel: 732 932 7500 Ext 8223, Fax: 732 932 6916

School Library Specialization in MLIS ranked #1 (USA News & World Report, April 2010)