A young child with blonde hair is sitting at a table in a library, reading a book. The child is wearing a plaid jacket over a white shirt. The background shows bookshelves filled with books.

The Crisis in Canada's School Libraries

The Case for Reform and Re-Investment

A report by
Dr. Ken Haycock

funded by
Association of Canadian Publishers
and the Department of Canadian Heritage

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A report for the
Association of Canadian Publishers

June 2003

ASSOCIATION OF
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The report has been written by Dr. Ken Haycock from the University of British Columbia, with the support of a review committee from the Canadian Coalition for School Libraries (CCSL). The members of the review committee are from the following organizations:

- Association of Canadian Publishers
- Canadian Children's Book Centre
- Ontario Library Association
- People for Education
- The Association for Teacher-Librarianship in Canada

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Toronto, June 9, 2003.

Executive Summary

"The heart of a school." That's the phrase Roch Carrier, the renowned Canadian author and National Librarian, has used to describe school libraries, those special places where students can find the space they need for storytelling, study and even reflection. At its best, a school library can provide a child the opportunity to find that first "home run" novel or stumble across a science book teeming with the sorts of experiments that spark a budding imagination. By offering some key clues on researching a project or navigating the Internet, the teacher-librarian is an educator who plays a crucial role in a teenager's eventual success at college or university. School libraries are so much more than rooms dedicated to storing books.

But mounting empirical and anecdotal evidence indicates that Canada's school libraries are not at their best; far from it. Across the country, teacher-librarians are losing their jobs or being reassigned. Collections are becoming depleted owing to budget cuts. Some principals believe that in the age of the Internet and the classroom workstation, the school library is an artifact. In a growing number of Canadian schools, in fact, the libraries are shuttered all or part of the time, with well-meaning parents scrambling to fill the void. Through neglect, too many school libraries are now little more than storage rooms.

There's a sad irony about this state of affairs: the neglect of Canadian school

libraries comes precisely at a time when many countries around the world are aggressively investing or reinvesting in these very facilities. The World Bank, East Asia Bank, International Development Agency and European Union are all increasing support for school libraries and teacher-librarians to promote economic development, while philanthropic foundations are funding school libraries and teacher-librarians to further cultural development. Even the U.S. Congress weighed in 2002 with US \$250 million of dedicated funding for school library materials to get its school libraries back on track. The reason: Because policy-makers have been heeding a mounting body of research evidence showing a strong and compelling link between student achievement and the presence of well-stocked, properly funded and professional-developed school library programs and services. Why are Canadian policy-makers neglecting a cost-effective investment?

Two leading U.S. researchers in the field offer this arresting conclusion:

"In research done in nine states and over 3300 schools since 1999, the positive impact of the school library program is consistent. [They] make a difference in academic achievement. If you were setting out a balanced meal for a learner, the school library media program would be part of the main course, not the butter on the bread."

(Lance and Loertscher, 2003)

Recent state-wide studies of the relationship between school libraries, teacher-librarians and student achievement – sponsored by groups as diverse as the State Library in Alaska, the Department of Education in Colorado, the school library media association in Oregon, a citizens' coalition in Pennsylvania, the Area Education Agencies in Iowa, the State Library of New Mexico, the Board of Regents of New York and the State Library and Archives in Texas – have all come to the same finding: in schools with well-stocked, well-equipped school libraries, managed by qualified and motivated professional teacher-librarians working with support staff, one can expect:

- ✓ capable and avid readers;
- ✓ learners who are information literate;
- ✓ teachers who are partnering with the teacher-librarian to create high-quality learning experiences.

Standardized scores tend to be 10 to 20% higher than in schools without this investment (Lance & Loertscher, 2003).

But as this report will demonstrate, educators and researchers have been able to show evidence of these relationships for decades. Here are just some of their conclusions:

School Library Collections

- ◆ Larger collections of materials for students, including books, periodical subscriptions and electronic subscriptions, mean higher achievement.

- ◆ Increased access to networked computers providing access to Internet and library resources, including licensed databases, correlates with higher achievement levels.

- ◆ Higher spending on books and other materials – both for recreational reading and curriculum assignments—

correlates with increased reading scores.

- ◆ In schools where teacher-librarians exploit the resources of the local public library, student achievement tends to be higher than in those that don't.

School Library Staffing

- ◆ In all cases, library staffing levels correlate with test scores – students benefit from more access each week to a qualified teacher-librarian.

- ◆ Improvements are even more dramatic when teacher-librarians play a leadership role by collaborating with classroom colleagues, teaching information literacy skills and participating in technology management within the school.

School Library Programs

- ◆ In schools where teacher-librarians have longer hours, there tends to be greater collaboration with teaching staff, more visits by students and thus higher reading achievement.

- ◆ Increased student visits to the library correlates with higher test scores.

- ◆ Student achievement is higher in schools where the library is open all day and the teacher-librarian is on duty full-time.

- ◆ Teacher-librarians and libraries play an important role in providing enrichment to students from economically disadvantaged backgrounds by providing access to books that may not otherwise be available to them.

- ◆ At the high school level, school library programs and qualified teacher-librarians are linked to student success in post-secondary education.

School Library Funding

- ◆ High-achieving schools tend to assign a greater priority to school library funding from the many program choices available to them.

◆ In schools that offer improved funding for school library services, there tend to be greater gains in reading comprehension; in some studies boys improve most.

◆ The relationship between library resource levels and increased achievement is not explained away by other school variables (e.g., per student spending, teacher-pupil ratios) or community conditions (e.g., poverty, demographics).

In fact, no fewer than forty years of research – conducted in different locations, at different levels of schooling, in different socioeconomic areas, sponsored by different agencies and conducted by different, credible researchers – provides an abundance of evidence about the positive impact of qualified teacher-librarians and school libraries on children and adolescents.

There are, remarkably, no comparable Canadian province-wide studies of school libraries and achievement in Canada. This knowledge gap may explain the accumulation of troubling Canadian trends, e.g., that only 10% of Ontario elementary schools have a full-time teacher-librarian, compared with 42% twenty-five years ago; that Alberta's roster of teacher librarians half-time or more has dropped from 550 to 106 since 1978; or that in British Columbia, local school board funding levels now reveal dramatic inconsistencies in annual budgets for library resources, with the figures ranging from 80¢ to \$35 per student per year, the latter providing for maintenance only, not growth. For many jurisdictions, moreover, parent fundraising has become the norm in a majority of schools, a trend that exacerbates the social disparity between have and have-not neighbourhoods.

The decline in Canada's school libraries is almost certainly linked to the erosion of research skills among students at the post-secondary level. This neglect comes with a worrisome cultural cost. Studies show that qualified teacher-librarians have systematically sought out Canadian books and other media to ensure that the Canadian experience forms a significant part of each child's education. But as teacher-librarians decline in number, there's been a drop in the proportion of Canadian books, magazines, videos and electronic resources in school library collections. We are giving up our children's heritage without even realizing it.

It seems somehow strange to have to prove the self-evident benefits of a library, one of human civilization's greatest and more enduring institutions. But this is the daunting task confronting parents, educators and advocates for Canadian school libraries and teacher-librarianship as they face steady and troubling disinvestment. Their challenge grows even more perplexing when policy-makers grope around for novel tactics to solve literacy concerns, e.g., the deployment of school-based "literacy coordinators" – when there's a tried-and-tested solution close at hand.

Nor is the empirical evidence all that surprising. No one should be shocked to learn that if children have access to a wide range of relevant books and library materials, they will be more likely to use them,

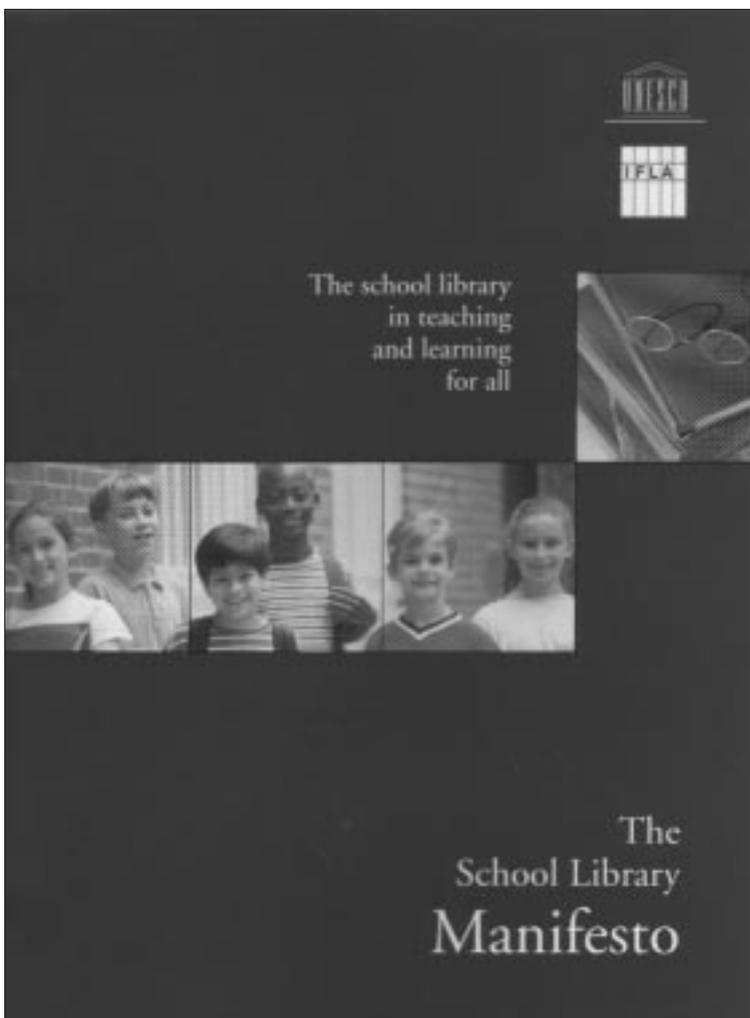


Dr. Ken Haycock, Former Director, School of Library, Archival and Information Studies, University of British Columbia.

both for learning and pleasure. No one should be astonished to discover that if students and teachers can take advantage of the guidance provided by a qualified teacher-librarian, young people will be more likely to learn the sort of critical thinking skills that are increasingly important in an information-saturated society. Lastly, no one should be taken aback to discover that when children are introduced to books and other learning materials that tell them about their own society and its values, they will begin to soak up what that culture has to offer.

Yet if Canadian politicians demand hard evidence of the utility of school libraries and teacher-librarians, they can refer to the myriad studies cited in this report. Taken collectively, these studies demonstrate, with great clarity, that an investment in school libraries and teacher-librarians provides the sorts of dividends that educators now seek from public school funding: better student achievement, improved literacy and reading skills, and enhanced readiness to succeed in a post-secondary environment. Canadian young people surely deserve to see the revival of a resource for which this country was internationally renowned for so many years. But beyond the moral argument, the research overwhelmingly supports the case for revitalizing Canada's school libraries. The question is, Are the policy-makers prepared to listen and then act?

Dr. Ken Haycock,
University of British Columbia
Haycock and Associates



The Current Context

Today's children and teenagers, contrary to conventional wisdom, like to read and understand how reading benefits them. Stephen Krashen, a linguistics professor at the University of Southern California, has conducted extensive research that has led him to conclude that school libraries and teacher-librarians are essential to student success in reading. "Most teenagers like to read and know it is good for them," he writes (2000). "Therefore, the first priority of reading promotion campaigns should be to help make reading possible by providing access to books."

In fact, decades of research demonstrate that school libraries and qualified teacher-librarians go well beyond provid-

The East Asia Bank is supporting the training of thousands of teacher-librarians in Sri Lanka to support economic development. The Open Society/Soros Foundation is building school libraries to develop national culture in Eastern Europe. The Bertelsmann Foundation is funding school libraries and collaborative projects with public libraries in Germany and Sweden. Closer to home, the DeWitt-Wallace Readers' Digest Foundation has invested US \$43 million in the revival of school libraries in the inner cities of America. The list of agencies, countries and projects is lengthy, but the message is the same: school libraries and teacher-librarians contribute to achievement, literacy and culture.

"The state of our school libraries can only be described as desperate in almost every province."

**Roch Carrier,
National Librarian of Canada, 2002**

ing young people with access to reading materials. They also have a positive effect on reading proficiency, educational attainment overall and academic achievement in subject content areas.

There is mounting evidence that countries around the world are translating such findings into practice. The World Bank and the European Union are funding the development of thousands of school libraries—with qualified staff, resources, facilities—in Spain and Greece.





In recognition of this renewed global interest in school libraries, in fact, the U.S. Congress last year approved US \$250 million of dedicated funding for library books and technology to provide current information and replace outdated stereotypes and reference material. They labelled it only a beginning. In a district committed to school-based management, the City of Chicago has nevertheless chosen to make school libraries a priority, with centralized services, support and direction. The "Chicago model" has been replicated in Philadelphia, where teacher-librarians will become a district, rather than school, direct cost.

So where does Canada fit into this picture? Ironically, while the federal government invests in international education aid projects through agencies such as the World Bank, provincial support for Canadian school libraries and teacher-librarians is in serious decline. Indeed, in order to bring its school libraries to a minimum standard, the province of Quebec recently announced an infusion of \$100 million.

Statistics tend not to be collected on school libraries in Canada, although the National Library is beginning to gather data through the next Statistics Canada survey. Yet a number of provincial groups have become sufficiently alarmed to col-

lect their own evidence. For example:

◆ People for Education has tracked school libraries in Ontario for six years. Even in that short period of time, the number of elementary schools with a teacher-librarian has decreased from 80% to 59%, and only 10% of schools had a full-time teacher-librarian (People for Education, 2003). In 1976, by comparison, 42% of schools had a full-time teacher-librarian (Ellis & Knight, 1976).

◆ In B.C., provincial funding for teacher-librarians has been reduced from 1:400 students, with paid clerical assistance, to 1:700 with no clerical assistance

Between 1994 and 2000, Saskatchewan Education offered 311 summer training courses for teachers. None were offered for teacher-librarians between 1994 and 1999 and only two in 2000.

Saskatchewan Education

specified, to no specified teacher-librarian time. According to the BC Teacher-librarians' Association, budgets for materials have dropped by more than 50% in ten years and vary sharply across the province, from 80¢ per student per year in one district to \$35 in another (2003), the latter providing for maintenance but not growth of the collection of materials.

◆ In Alberta, there were 550 teacher-librarians half-time or more in 1978, 252 in 1998 and just 106 in 2000, according to Alberta Learning. The chair of the department of Elementary Education at the University of Alberta estimates the provincial ratio is now 1:3,000 students.

At the same time, Canadian student achievement in reading, literacy and the ability to use information effectively is

also declining. In New Brunswick, according to the government, student performance in reading is rock bottom in the country; support for N.B. school libraries is also dead last in the country. In Ontario a disturbing percentage of students do not reach government standards on mandated literacy assessments, yet support for school libraries is still declining. And in B.C., reading proficiency and student ability to access and use information effectively are declining, as is support for school libraries. Are there connections?

The primary victims of this neglect are children, who depend on the adults in society to prepare them for life with a proper education. But teachers, too, indicate that the quality of their teaching experience is seriously hampered by the erosion of support for school libraries and teacher-librarians (Haycock, 2001). Parents are sufficiently concerned that at 59% of the schools in Ontario, they raised money for library books (McDonald, 2002). In Vancouver, parents at almost every school raised funds for library books, equalling the amount provided by the school district (Haycock, 2001).

The related point from an educational equity perspective is that school libraries expose children from low-income neighbourhoods to reading materials they may not otherwise have access to. Children in middle- and higher-income neighborhoods are likely to be deluged with a wide variety of reading materials, while children from poor neighborhoods have to seek them out aggressively and persistently. As one might expect, students whose home environments fostered reading had higher reading achievement (Foertsch, 1992). While these studies took place in other countries, the result is no different in

In one year (1998-1999) in Ontario, more schools reported losing teacher-librarians (22%) than any other specialist teacher.

People for Education

Canada, where higher-income neighbourhoods provide a wide range of opportunities for reading by children and adults, and parents in those neighbourhoods raise more funds and demand better support for school libraries.

California offers a cautionary tale about the long-term neglect of school libraries. There, student reading ability and motivation declined with the erosion of support for school libraries. For two decades, reading scores followed school library support until they both reached 50 out of 50, rock bottom among the American states. Since the late 1990s, the State Superintendent for Public Instruction (minister of education) has made the revival of school libraries and the provision of qualified teacher-librarians a priority for her term, in order to



improve student achievement across the state. The state legislature provided targeted funding of \$43 per student for each of three years to bring school libraries back to a minimum standard. School districts are adding full-time staff to their libraries. And this is in tight financial times for the state.

The following report provides incontrovertible, well-documented evidence that school libraries and teacher-librarians have a positive effect on student achievement and on reading. It also outlines best practices to ensure that maximum effect is realized from dollars invested. Most of the research is American only because U.S. agencies have been willing to fund such studies. Interestingly, American literature often points to Canadian practice as models to follow.

"Teacher-librarians have nurtured and watered school libraries. Not as many are doing the watering and nurturing now and, like plants, our libraries are slowly dying."

Robert Munsch, children's author

Paradoxically, there is scant substantial Canadian research investigating correlations between school libraries, teacher-librarians and student learning. But the international evidence provided here cannot be easily dismissed: with the decline of support for quality school libraries and qualified teacher-librarians, student achievement has similarly fallen off.

Other factors are obviously important. Yet scores of independent researchers, university faculty and

departments of education, in many states and countries, have regularly isolated school libraries and teacher-librarians as significant and consistent predictors of student learning.

Our schools, our children, deserve support for a resource that greatly benefits students throughout the world, and has benefited their parents and siblings in the past. Reading, and the ability to use information effectively, are the very foundations of a well-educated democracy, a healthy economy and a robust national culture. The research clearly demonstrates that school libraries and teacher-librarians are a key part of this equation. So why are they being neglected in one of the richest countries in the world?



Impact on Student Learning

Studies connecting teacher-librarians and school libraries with achievement in reading have been available for more than 50 years. Indeed, it was university, foundation and government research studies in the United States and Australia that led to the massive infusion of federal funds for school libraries. Although there has been only limited research undertaken in Canada, provincial governments followed suit and began to support school libraries and teacher-librarians in earnest in the late 1960s and early 1970s.

School libraries and teacher-librarians have a positive effect on student achievement

Research dating back to the 1930s has demonstrated that school libraries and teacher-librarians have a positive effect on student achievement. By the 1960s schools with libraries and qualified teacher-librarians were performing better in overall reading proficiency than those without libraries and qualified teacher-librarians. More recent research has

In 1998, Alberta had 1,668 schools and 252 teacher-librarians assigned half-time or more. In 2000, there were only 106 assigned half-time or more – one teacher-librarian per 3,000 students.

Diane Oberg, University of Alberta



demonstrated significant and consistent correlations between school libraries, subject learning and information literacy, that is, the ability to access, evaluate and make effective use of information.

Here is but a sampling of more than 200 of those studies:

From the 1960s

✓ Students who attend schools with centralized libraries and certified teacher-librarians demonstrate superior gains between the fourth and sixth grades in general educational gain, reading achievement and reference skills, as measured by the Iowa Test of Basic Skills; these students also have access to a

greater variety and quantity of learning materials and reference-skill learning experiences (Willson, 1965).

✓ Twelfth-grade students using extensive library services for independent study under a teacher-librarian's supervision compared with incidental services experience greater learning and academic achievement, including verbal scores on the Scholastic Aptitude Test (Hale, 1969).

From the 1970s

✓ The presence of a library and the functions of a teacher-librarian exert significant influence on information-gathering skills and reading charts and graphs (Becker, 1970).

✓ Students at all levels of ability who have professional library services perform at a higher level of academic achievement than those students who have not received this service (McConnaha, 1972).

✓ There is a positive relationship between the level of library service and student scholastic achievement; the number of volumes in the school library is a predictor of success (Greve, 1974).

✓ Tenth-grade students attending schools with expanded libraries and qualified teacher-librarians show greater motivation than do the students who do not attend such schools; improved facilities and services benefit students (Campbell, 1974).

✓ Other than socioeconomic status of the community, the school accreditation variables that are positively related to student achievement are student-teacher ratio, level of teacher certification and expenditure for library books per student (Saterfield, 1974).

From the 1980s

✓ The presence of library media

programs is related to overall achievement, and achievement in specific subject areas and of specific types of skills. Knowledge of information literacy is related to the improvement of student achievement, performance on standardized tests and grade-point average. The level of library media service is related to the improvement of elementary and secondary students' knowledge of information literacy and overall educational achievement (Didier, 1984).

✓ School Match, an executive placement service, found that "of all expenditures that influence a school's effectiveness—including those for facilities, teachers, guidance services and others—the level of expenditures for the library and media services has the highest correlation

In 1990, there were 103 teacher-librarians in Nova Scotia; in 2002, there were 9 (and these could be working in district offices or teacher's centres and not necessarily in schools).

Nova Scotia Department of Education

with student achievement" (Baldrige & Broadway, 1987).

✓ Eighth-grade students who receive instruction enhanced by contributions to the subject curriculum by the teacher-librarian perform better on the Metropolitan Achievement Test in eight of eleven sections (Broadway & Baldrige, 1987).

From the 1990s

In a landmark study for the Colorado Department of Education, Lance, Welborn and Hamilton-Pennell (1993) analyzed the impact of libraries on academic achievement in 221 Colorado public schools during the 1988–89 school year and found:

- ✓ academic achievement is higher where libraries are better funded, whether their schools and communities are rich or poor and whether adults in the community are well or poorly educated;

- ✓ better funding enhances academic achievement by providing students with access to more library staff and larger and more varied collections;

- ✓ the size of the staff and collection is second in predictors of academic achievement only to the absence of at risk conditions, particularly poverty and low educational attainment among adults;

- ✓ library expenditures and staffing tend to rise and fall with total school expenditures and staffing;

- ✓ academic achievement is higher where teacher-librarians participate in the instructional process.

Teacher-librarians play three critical roles in the learning community: teacher, information specialist and administrator. In each of these roles they empower students and teachers to meet higher standards of academic achievement. The positive relationship between teacher-librarians and test scores could not be explained away entirely by differences in school

size, funding and teacher staffing levels (Lance, Hamilton-Pennell & Rodney, 1999).

Similarly, there is a significant increase in the scores of students who are taught through curriculum-integrated teaching methods in the library over those who are not (Bingham, 1994). Evaluation of the achievement levels of students in the top 50 and bottom 50 Ohio school districts in terms of amount spent per pupil on instruction and the proportion of instructional expenditures committed to school libraries indicates a positive correlation between commitment to the library through funding and student achievement levels (Bruning, 1994) and overall critical thinking skill (Lewanski, 1998).

Excellent teacher-librarians are essential to ensure that all young people have access to reading materials that will help them become literate, and school libraries must be the centre of any plan to improve reading and literacy. The size of a school's library staff and collection is a strong predictor of academic achievement, and increased funding is needed to provide these resources (Yoo, 1998).





And today

In a review of the Colorado Student Assessment Program, reading scores increase with increased library media program development, information technology, teacher/teacher-librarian collaboration and individual visits to the library. At the elementary school level, library media program development (staffing, collections and expenditures) and technology are strong predictors of each other as well as of test scores (Lance, Rodney, & Hamilton-Pennell, 2000a).

In the Pennsylvania System of School Assessment, reading scores increase with increases in staffing, information technology and integration of information literacy into the curriculum. In addition, as library staffing, information resources and information technology rise, so too does the involvement of teacher-librarians in helping students and teachers find and assess information. The relationship between staffing and test scores is not explained away by other school or community conditions (Lance, Rodney & Hamilton-Pennell, 2000b).

In the Massachusetts Comprehensive Assessment System, there is a direct link between scores and school libraries. At each grade level, schools with library programs have higher scores; students score higher on tests when there is a higher per pupil book count and students score higher on tests in schools where the libraries are open longer. At the elemen-

In Manitoba, the level of provincial funding for school libraries (staff, operating, collections) for 2003-2004 is the same as it was in 1993-1994.

Manitoba Department of Education

tary and middle/junior high school levels, students score higher when there is a library program; at the elementary and middle/junior high school levels, average scores are higher in schools with larger per pupil expenditures for library materials; at the elementary and high school levels, students who are served by a full-time teacher-librarian have higher scores than those in schools without a full-time teacher-librarian. Library staff assistance (nonprofessional help) for the teacher-librarian has a positive impact on average scores (Baughman, 2000).

In Oregon, reading test scores rise with the development of school library media programs. The relationship is not explained away by other school or community conditions (Lance, Rodney & Hamilton-Pennell, 2001). In Texas, library variables were more important to explain the differences in achievement than any other factors in the school (Smith, 2001).

“...there is a good body of research to indicate that good teacher-librarians can make a great difference in the life of a school and help to improve student achievement...”

**Education Improvement Commission
Ontario 1997**

Overall, school library media programs with a full-time teacher-librarian, support staff and a strong computer network resulted in higher student achievement in statewide studies (Hamilton-Pennell, Lance, Rodney & Hainer, 2000). Library programs integrated with classroom instruction positively affect student achievement. Collaboration between the teacher-librarian and classroom teacher is essential to maximize student achievement and school success. This collaboration cannot occur if the role of the teacher-librarian is to cover preparation periods for other teachers in the school.

In summary, during the past five years, state-wide studies have been completed in Alaska, Colorado, Indiana, Iowa, Massachusetts, Minnesota, New Mexico, New York, Oregon, Pennsylvania and Texas, and in Scotland. Different researchers found the same results and reached the same conclusions. One can safely conclude that there is ample evidence of the school library's importance as an academic investment.

School libraries and teacher-librarians have a positive impact on student achievement in English, language arts and social studies

English, language arts and social studies curricula emphasize reading and the use of reading materials and other media; social studies specifically incorporates models of “inquiry” and the effective use of information.

Studies dating back to the early 1960s have demonstrated the relationship of library staffing to student academic achievement in these subjects, most recently in the area of language arts at the high school level (Martin, 1996).

School libraries and teacher-librarians have a positive impact on student achievement in mathematics and science

Occasionally, decision makers confuse library use with English, language arts and social studies alone. Several studies make it clear, however, that the positive impact of a school library and teacher-librarians extends beyond the humanities and social studies and into subject areas such as math and science.

For example, a full-time teacher-librarian collaborated in an experimental team-teaching unit, resulting in marked improvement in mathematics. The experimental group scored higher than the control group on the Metropolitan Achievement Test by the end of the year (Aaron, 1975). Integrated information skills instruction has a significant positive impact on students' mastery of prescribed science content and on their ability to use a range of techniques to solve problems. There is value in both a process approach

and an integrated approach to information skills instruction (Todd, 1995). Through collaborative program planning and teaching between science teacher and teacher-librarian, student learning outcomes and academic achievement improve (Callison, 1979).

In fact, in a study of achievement in mathematics and science in China, Korea and Hungary (Chen, 1996), only four school-level variables had significant relationships with student achievement, one of which was the availability of a school library.

School libraries and teacher-librarians have a positive impact on student proficiency in information skills and research strategies

In a knowledge-based society, the ability to handle information effectively is essential to student success in school and beyond. All provinces have incorporated specific information skills and strategies into subject curricula, where it most appropriately taught, while some have also developed separate curricula, for example, in information and communications technology or as resource documents for teachers. Educators and business leaders (U.S. Secretary of Labor, 1991) have identified these abilities as fundamental to workplace success and a thriving economy.

Teacher-librarians have been shown to play a critical role in the development of student proficiency in accessing and using information, whether through print, audio, video or electronic resources. Educators have understood this aspect of the teacher-librarian's mandate for decades.

In the 1960s, Columbia University researcher Frances Henne asserted that it is far more important to teach students what to do with learning materials than simply how to find them (Henne, 1966). But it wasn't until the 1970s that many school districts began changing the role of the teacher-librarian to reflect this key insight.

Today, teacher-librarians work with teachers to help students to define information-based problems, develop information-seeking strategies, locate the material, gather and assess it and then synthesize the findings into a presentable form (Brock, 1993). Emphasis is also

Ontario provides funding for one teacher-librarian for every 769 elementary students and 909 secondary students. Only 2% of elementary schools have sufficient enrolment to generate funding for a full-time teacher librarian.

Ontario Library Association

placed on the ethical use of information. Because information overload is a very real issue for students, such instruction is invaluable in the teaching of subject content areas.

Such contributions are essential to student achievement and most successful when the teacher-librarian works collaboratively with the classroom teacher. Recently, the Calgary Board of Education (1999) determined that student learning in information literacy is most effective when integrated with classroom instruction through collaborative planning/team teaching; in other words, the school library extends beyond its walls as an integral part of every classroom experience.



Pre-task planning by teachers and teacher-librarians enables students to understand the research process. Student satisfaction levels, in turn, are related to their mastery of the skills involved (Garland, 1995). Is this new information? No, studies have consistently demonstrated that teacher-librarians and teachers working together can best develop student problem-solving abilities (e.g., Gengler, 1965). Developing this culture of collaboration is not easy, however.

In one of the few Canadian doctoral studies in this area, resource-based instruction was the most effective model for acquiring information skills not only compared with no information skills instruction but also compared with non-integrated instruction, such as rigidly scheduled “library classes” (Hara, 1996).

Students learn more and produce better research products following planned, integrated information skills instruction by the teacher and teacher-librarian together (Haycock, 1997).

Technology alone is not the answer

Technology can support school libraries and reading as access to electronic library resources and networks further enhances reading achievement. Reading scores were higher in Colorado schools (Lance, Rodney & Hamilton-Pennell, 2000) where there was, for example:

- ✓ a district-wide catalogue of all library materials;
- ✓ access to on-line databases for quality sources of information;
- ✓ student access to the World Wide Web;
- ✓ access to a state-wide network for library and information services;

and where

- ✓ resources were accessible via a local area network.

One of the unfortunate myths of the digital age is that libraries and print resources are becoming obsolete in the age of the Internet. The fact is that stu-

dents from elementary school to university find the use of electronic resources challenging – more so than many teachers and administrators realize.

Students are also hindered by their limited reading skills, with limited ability to assess information critically. Some believe that classroom teachers alone can address these problems. But there is substantial evidence that teacher-librarians affect student achievement regardless of the medium – print, audio, video or electronic.

Indeed, newer technologies need to be integrated with older technologies (books, videos) to create hybrid libraries focusing on information and ideas, not on the delivery channel.

While most school districts write well-meaning accountability contracts... and while school councils across British Columbia create earnest school growth plans..., schools and districts are also quietly implementing budgets that chip and hack and gouge away at school libraries.

**BC School Trustees Association
Education Leader, April 24, 2003**

About the Web

Gaining accurate and in-depth understanding from on-line resources is a complex process for young learners. It is folklore that young people are naturally adept at using the Internet (Levy, 2002). Teacher-librarians support students by helping them engage in all phases of the information-seeking process, locate useful information with prescreened resources, build background understanding with off-line instruction and process new information deeply through conversation (Hoffman, 1999).

Students use the Web with limited ability (Ebersole, 1999). Middle and high school students, for example, have surprisingly low levels of success using the Web as a search tool, despite their stated confidence in using the Internet (Broch, 2000). The same applies to CD-ROM products like encyclopedias (Branch, 2001). Adolescents lack competence in locating “trustworthy” information, being able to assess the veracity of site information and dealing with conflicting information. Strategies need to be taught in K-12 contexts by both classroom teachers and teacher-librarians (Fitzgerald, 1997).

About Databases

Again, with regard to licensed databases, students are enthusiastic but experience difficulty: they use neither tutorials nor help screens (Hindes, 1990). Students often lack a clear search focus and need to develop search strategies. Evidence suggests that if the teacher and teacher-librarian incorporate formal planning into the research process, students can receive additional instruction, be more successful and produce better products (Bland, 1995). (Of course, students need licensed electronic databases to access in the first place, but only Alberta and Saskatchewan provide province-wide licences enabling all students equal opportunity to quality electronic information.)

About Library Catalogues

Such difficulties extend also to the use of electronic library catalogues (Solomon, 1991). When teacher-librarians taught students the concepts and terminology of online searching, they were more able to form their own information searches (Craver, 1987). The situation does not change for university students: they encounter problems if they have not

been taught a structured approach to the research process (Kuntz, 1999). At the same time, there are students throughout the country in schools with library “card catalogues,” something students will not encounter in the community at public libraries or in colleges and universities. Hardly a preparation for “real life.”

Implications for success in university

For decades, educators have recognized the connection between secondary school library programs and student success in college and university. In the 1960s, the relationship between students’

“Libraries that focus on learning outcomes and that have the ability to impact a student’s success will be vital in the school.”

**Michael Bloom,
Conference Board of Canada 2002**

ability to use books and libraries and their performance in college were positive, consistent and strong (Snider, 1965). By the 1970s, students who had had formal instruction in the use of secondary school libraries scored significantly higher on a test of library skills for college students (McDowell, 1977). Come the 1980s, university programs had also broadened their focus beyond “library skills” to the full range of information skills and strategies.

When teacher and teacher-librarian teams taught such skills to high school seniors, their research abilities helped them succeed at the college level (Goodin, 1987). The skills taught were reflected in the students’ research papers. Indeed, learning to use the librarian as a resource

is one of the most transferable skills acquired by students.

Regrettably, by the 1990s, university library staff (Gorman, 1995) began to note the decline of skills demonstrated by first-year college and university students—this was the downstream consequence of increasingly inadequate school library programs. Universities across the country are now hiring “information literacy librarians.”



Impact on Reading

The positive correlation among teacher-librarians, libraries and reading – ability to read, motivation to read, quantity read, results on reading assessments – has been true across grade levels, socioeconomic class, urban/rural areas, and across several decades. Several predictors of higher reading proficiency and scores – whether standardized or local, norm- or criterion-referenced – emerge from the research.

More reading is done where there is a school library and a qualified teacher-librarian;

Twenty-seven countries participated in the International Association for the Evaluation of Educational Achievements Reading Literacy Study. Some of the variables examined included students' reading interests; the number of books, magazines and newspapers in the school and classroom library, and frequency of borrowing books. As Canadian researcher Victor Froese noted (1997) "...students in classrooms that have access to school libraries achieve higher than those who don't." Scores of studies in different countries have reached the same conclusions.

Virginia Gaver, a researcher at the Rutgers University, produced a landmark analysis in 1963, in which she examined student achievement in 271 elementary schools in 13 states. Gaver compared schools with classroom library collections

only, those with centralized collections cared for by teachers or other non-library professionals and those with school libraries directed by qualified teacher-librarians. The results were clear: reading achievement, in terms of both quantity and quality, was substantially higher in the schools with libraries and teacher-librarians. More-over, the study found that test scores were lower in schools with rigid library schedules than in those with flexible schedules and collaborative teacher and teacher-librarian planning.

This finding has been replicated consistently ever since.

In 1990 in Nova Scotia, one-third of school principals allocated less than \$1,000 a year to library materials, with many boards reporting \$6 per student.

Nova Scotia Department of Education

From the 1950s and 1960s

✓ Reading ability improves with improved library services. The activity of a library program as opposed to mere book exposure is a strong factor in the reading program (Masterson, 1953).

✓ The quality of reading is better in a school with a centralized library that is professionally staffed than in one with only classroom libraries (Monahan, 1956).

✓ Augmented library services result in greater gains in reading comprehension, with boys gaining most (Thorne, 1967).

From the 1970s and 1980s

✓ Elementary school student achievement in reading, and the use of newspapers and access to the library, is increased with a professional teacher-librarian (Didier, 1982).

✓ Students in schools with libraries read and enjoy reading more than students in schools without centralized libraries (Lowe, 1984).

From the 1990s

✓ In a study of the time sixth-grade students spent reading and their level of reading achievement, researchers found that there is a significant difference between those who borrowed and read more books from the school library and those who didn't (Farris & Hancock, 1991).

✓ Attention from a librarian or other helper can get children interested in books and help them to discover a "home run" book (Von Sprecken, Kim & Krashen, 1998). Teacher-librarians typically place the right book in the right hands at the right time and encourage a lifelong love of reading (Barlup, 1991). This role of the teacher-librarian, connect-



ing young people with books that interest them, has been underestimated.

✓ The single most important library feature for students in schools deemed outstanding by the U.S. government was assistance from the teacher-librarian (Gehlken, 1994).

✓ There is a direct correlation between teacher-librarians employed and the amount of voluntary reading done by students. These results are derived from analyses of fourth-grade scores on reading comprehension tests (Krashen, 1995).

And from today

✓ Better school libraries are related to higher achievement in reading. Children who attend schools with school libraries with better collections and superior staffing do better on tests of reading (Krashen, 2002).

✓ Reading proficiency is linked with student achievement overall. Weak reading skills are linked with dropout rates. In order to reduce high school dropout rates, the school library is one place where school districts can ensure that all students have access to current materials for independent reading (Humphrey, 2002).

If reading were a priority, then every school would improve its library through more accessible reading material and qualified staff (Krashen, 2002b). The school library would be staffed by a qualified teacher-librarian who was involved not only in identifying materials suitable for school curricula, but also in collaborating with teachers and others in developing curricula. These activities require that the teacher-librarian have adequate support staff (Lance, Welborn and Hamilton-Pennell, 1993).



In one school district in Alberta, there were 14 teacher-librarians (FTE) in 1992 and 8.5 in 2002. More than half of the schools have no teacher-librarian.

Alberta Learning Resources Council

Access to reading materials in school libraries predicts motivation to read and reading achievement

It should come as no surprise that if reading is valued and promoted, young people will need interesting and relevant material to read. Access to these materials becomes critical. Further, the larger the library collection, the larger the impact on reading and achievement.

Consider these research findings:

✓ Access to books and magazines predicts higher reading achievement (see, for example, Allington, 2002; Gottfried, Fleming & Gottfried, 1998; Krashen, 1995, 2002a; McQuillan, 1996, 1997, 2001; Pack, 2000), even when controlling for socioeconomic status, teacher-pupil ratios and the amount of formal instruction (McQuillan, 1997).

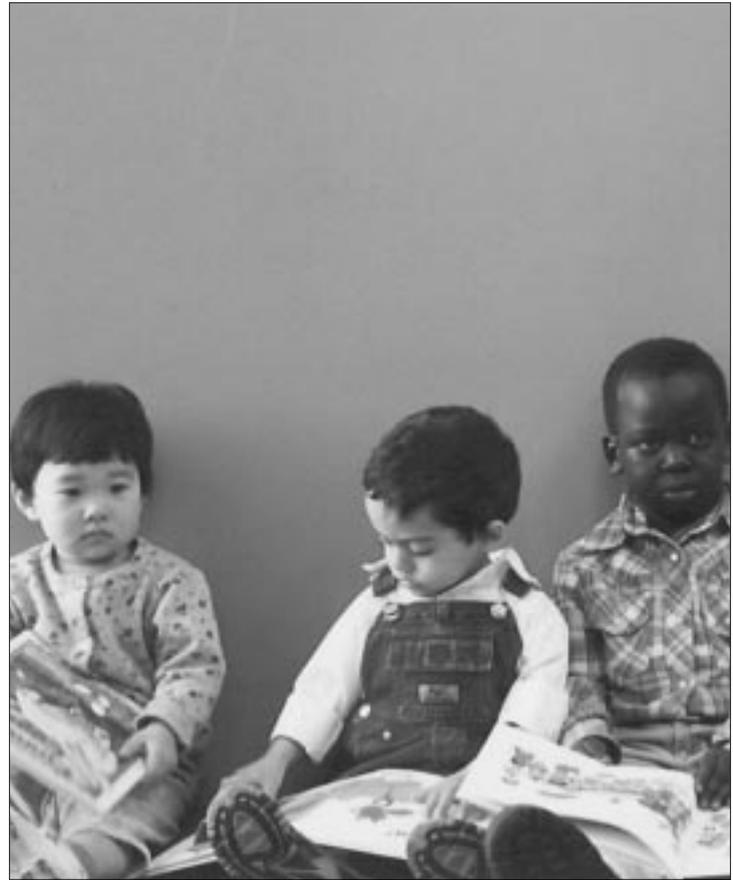
✓ Long-term development of reading interest and grade-level achievement is more assured through “print-rich environments” (lots of interesting, relevant books and magazines). If students are to become independent, efficient readers, they need a rich supply of books (Allington, 2002). This is particularly important for ESL children (Krashen, 1993).

✓ Several researchers have found that the number of books per student in the school library and public library circulation were significant predictors of reading achievement. School library quality and public library use were the most reliable predictors of reading achievement at the high school level (McQuillan, 1996).

School libraries, of course, don't have a monopoly on school collections. In 1995, Canadian researcher Ray Doiron examined three models of classroom collections based on different relationships with the teacher-librarian and library: independent, seeking self-sufficiency; interactive, operating as a cooperative collection with the library; and integrated, working as one collection with the library. Doiron concluded that the integrated collection reflected a collaborative approach to resource development. This collaborative approach made most effective use of available funds to improve student interest in reading and academic achievement. In other words, classroom collections should not be seen as a substitute for centralized school libraries.

More flexible access to the school library and free voluntary reading results in increased interest in books, more enjoyment of reading and improved learning

Opportunities to read require the availability of reading materials that young people want to read. A well-stocked school library, managed by a qualified teacher-librarian, promoting literacy and coordinating resources throughout the school, provides the most cost-efficient means of ensuring access to a wide range of relevant books and other reading materials.



Though no one disputes the importance of reading, time is rarely provided for students to select reading materials and have time to read them in school. Educators have long understood that even 15 minutes of free voluntary reading time in school has a powerful effect on student learning. What's more, flexible library scheduling—i.e., allowing students to use the library in conjunction with class projects and providing easy access throughout the day—serves to increase student motivation and use. Indeed, library programs build literacy experiences that have a lasting effect on language growth, reading development and scholastic achievement.

Providing time for free voluntary reading in schools has a positive impact



on reading comprehension, vocabulary development, spelling, written style, oral/aural language and control of grammar (Krashen, 1993).

A good reading environment, including comfort and quiet, as well as larger library collections, affect reading, literacy development and reading scores

The physical ambience of the school library is a relevant factor in terms of the library program's overall impact on student achievement and literacy. In "outstanding" schools, library facilities were consistently welcoming and included informal areas for free voluntary reading and browsing (Gehlken, 1994); teacher-librarians also provide access before, during and after school (Alexander, 1992; Shorey, 1996). A study of high-achieving inner-city schools in London (U.K.) similarly found that such schools went to considerable effort and expense to keep their libraries open after hours as well as throughout the day (Rutter, 1979). In the

late 1980s, the school library reform project funded by the DeWitt-Wallace Readers' Digest Foundation insisted on refurbished facilities accommodating more users with different kinds of activities and flexible scheduling. Teacher-librarians, in turn, need to develop an orderly, inviting environment with relevant displays, discard antiquated and

"With a library program...there are many important instructional responsibilities (e.g. research skills and effective access to information) that are best delivered by a certified teacher-librarian."

The Road Ahead: The First Report of the Education Improvement Commission, Ontario. 1997

ragged-looking materials and provide staff development opportunities for teachers. All this requires adequate resources.

The evidence for school libraries and teacher-librarians is solid. Why neglect a cost-effective investment?

Impact on Cultural Identity

The value of Canadian sources

Canadian publishers can provide ample evidence of teacher-librarians selecting and promoting Canadian books for Canadian children. They have noticed reduced attention to Canadian books in schools, commensurate with the reduction in teacher-librarians. Further, qualified teacher-librarians know the sources for Canadian materials to a far greater extent than do teachers assigned to the library without additional qualifications (Cavill, 1997).

It seems preposterous to have to make a case for Canadian books and other materials for Canadian young people. Would we stock our schools predominantly with books and videos from Germany or Brazil? Of course not. Yet the need to develop national identity and social cohesion is more challenging with resources that reflect the American experience and viewpoint.

School libraries represent an opportunity for Canadians to learn about one another. By cutting school libraries and teacher-librarians, we are detracting not only from the richness of our children's experiences but also from their budding sense of their own culture.

Affirming a democratic society

As David Cameron concludes in his

assessment of Canadian studies in the nineties: "In a democratic society, the importance of a citizenry equipped with a good understanding of the country and a refined appreciation of its character can hardly be overestimated" (1996). The adequacy of schools in preparing students for active participation in Canadian society is questionable, however (Cameron, 1996).

Influencing Socialization

There are "powerful commonplaces in our culture and identity—shared values that most Canadians can identify with—and the school is an important place to explore, discuss and debate these commonplaces" (Diakiw, 1997). Children's literature is a medium of enrichment and socialization, and it acts as the child's introduction to the philosophy, social and cultural norms, values, aspirations and hopes of his or her society. "Every nation has a set of values, cultures, systems, and so on that are particular to its people and which it must preserve in order not to lose its identity" (Udoh, 1998).

Canadian children's books reveal more than content and style; they show what Canada and Canadians are like, what values we respect and how we look at ourselves today and in our past (Egoff, 1975). The school library has, until recently, played an important role in promoting a national perspective. These spiritual

and cultural values are so central to learning that they cannot be measured easily.

Canadian publishing for Canadian schools

With budget reductions and a decreasing roster of teacher-librarians, fewer Canadian materials find their way into our elementary and secondary schools. It is hard for publishers to market to high schools (Canada Council for the Arts, 2002), and the decline in teacher-librarians is linked to depleted collections. Moreover, there's a serious dearth of professional journals that comprehensively review Canadian children's books, which, in turn, makes it more difficult for Canadian publishers to market their titles. Indeed, a recent study of the teach-

"So we have a sixteen-year-old who has the technical skills to use the Internet but doesn't have the validation skills to understand the structure of the information he finds on the Internet... [t]he technical skill is trivial compared to the critical thinking skills needed.

Alan November, 1998

ing of Canadian literature in secondary schools recommended that incentive programs and dedicated funding were necessary for Canadian books and school libraries (Writers' Trust, 2002).

There is only one national subscription publication that evaluates and promotes Canadian learning materials in all media for schools. *Resource Links: Connecting Classrooms, Libraries and Canadian Learning Resources* is published by the nonprofit Council for Canadian Learning Resources and has subscribers in every province and territory, but these



subscribers are primarily qualified teacher-librarians and public libraries, and a minority of them at that. (CM: *Canadian Review of Materials*, sponsored by the Manitoba Library Association and the University of Manitoba, also serves this purpose but as a free access electronic journal tracking of individual subscribers is not possible.)

Canadian children seem to understand intuitively the need to learn about their own culture. In one survey, grade three students, when asked to comment on the various Canadian children's books they had read, mentioned specific landscapes, experiences, geography, regions, symbols such as flags and historical elements (Pantaleo, 2000). They get it. Do we?

Best Practice

The advocacy for improved resources for Canadian school libraries must be accompanied by a discussion of what constitutes “best practice” in terms of library programs and professional development. The following summarizes some of the research in this area:

Clarify and promote the role of the library program and teacher-librarian

Provincial policy documents are strikingly consistent in their view of the role of the school library (Doiron, 1994). Regrettably, these policies have languished over the past 10 years, with the result that policy hasn’t translated into practice. Many resource documents for primary education, for example, encourage creative and flexible use of the school library and teacher-librarian participation, yet emerging family literacy programs appear to be promoting parallel programs with parallel collections. We cannot afford this bifurcation of attention and resources.

Further, funding and policy don’t always overlap. For example, Saskatchewan recommends full-time teacher-librarians in schools of more than 200 students with more than one in schools over 500 (Saskatchewan, 1987). Unfortunately, the funding reality has never been anywhere near that standard.

In 1997, the Association for Teacher-librarianship in Canada and the Canadian School Library Association embarked on

a research-based, collaborative project to define the role and competencies of successful teacher-librarians; administrators, school board members and teachers were consulted (Haycock, 1998b). Both professional competencies and personal qualities were detailed.

Professional competencies relate to the teacher-librarian’s knowledge and skill in the areas of collaboration and leadership, curriculum and instruction, collaborative program planning and teaching, information resources, information access, technology, management and research, and the ability to apply these abilities as a basis for providing library

Many schools paper over the problem by keeping the teacher-librarian part time but assign so much prep time that [there is] little time to be a teacher-librarian. The job goes from leadership to baby-sitting.

**BC School Trustees Association
Education Leader, April 24, 2003**

and information services. Personal competencies represent a set of skills, attitudes and values that enable teacher-librarians to work efficiently and effectively, be good communicators, focus on continuing learning throughout their careers, demonstrate the value-added nature of their contributions and thrive in the new world of education.

The teacher-librarian’s role reflects current policy articulated by provincial

The Role of the Teacher-librarian

Professional Competencies

The teacher-librarian:

- ✓ places a priority on staff relationships and leadership in the implementation of change;
- ✓ provides leadership in collaborative program planning and teaching to ensure both physical and intellectual access to information and commitment to voluntary reading;
- ✓ knows curriculum programs mandated by the province, district and school;
- ✓ understands students and their social, emotional and intellectual needs;
- ✓ has expert knowledge in evaluating learning resources in different formats and media, both on-site and remote, to support the instructional program;
- ✓ develops and promotes the effective use of informational and imaginative resources in all formats through cooperative professional activities;
- ✓ provides appropriate information, resources or instruction to satisfy the needs of individuals and groups;
- ✓ uses appropriate information technology to acquire, organize and disseminate information;
- ✓ manages library programs, services and staff to support the stated educational goals of the school;
- ✓ evaluates program and services.

ministries of education but is not reflected in the education, recruitment, selection and evaluation of teacher-librarians. Such qualifications are essential for success, according to the research evidence.

Encourage collaboration with classroom teachers

Collaboration is the key to getting the most out of a school library. Teacher-librarians who plan and work closely with other teachers, integrating information skills and strategies with classroom instruction through flexible scheduling and innovative teaching approaches, enhance student learning. Positive collaborative relations with teachers, administrators and students contribute to the success of a literature-based reading program (Bishop, 1992). Where the principal expects team planning, team planning occurs (Haycock, 1998a).

Insist on flexible scheduling

Flexible scheduling of the library is an essential prerequisite to collaboration with classroom teachers, and the resulting improvements in academic achievement in the content areas; student attitudes toward reading and schooling are also more positive (Barlup, 1991; Bishop, 1992; Kreiser, 1991; van Deusen, 1991). It is also crucial that students who are reading for pleasure have ready access to the school library. Flexible scheduling means that classes of students are not booked into the library on a regular, rigid schedule, such as every Tuesday morning at 9:40; rather, individual and small groups have access throughout the day, and classes are booked following collaborative planning by the teacher and teacher-librarian.

Engage exemplary teacher-librarians

Exemplary teacher-librarians are proactive and demonstrate a commitment to meeting student needs, including improved access to technology, collections of materials built on curriculum needs and student interests, an invitation-al atmosphere with informal reading areas and positive assistance to students. They are also risk-takers, prepared to collaborate with colleagues and to educate teachers in resource-based learning. These teacher-librarians know the school curriculum, have a broad knowledge of their collections, of the availability of information, of the teaching/learning process and how to apply their knowledge to a variety of situations (Alexander, 1992; Christensen, 1986; Gehlken, 1994; Shorey, 1996).

Encourage staff development and change agent roles

The best teacher-librarians exemplify the traits of exceptional teachers while adding value by offering informal staff development activities (Brown & Sheppard, 1997).

Canadian researcher Dianne Oberg determined that the staff development and in-service training role of the teacher-librarian is critical in bringing about a more collaborative relationship between the teaching staff and the school library (Oberg, Hay & Henri, 2000).

The reasons should be obvious: first, teachers and administrators have no direct exposure to the role and responsibilities of the teacher-librarian in their preparatory programs; second, teacher-librarians need to share their expertise in developing inquiry-based learning, pro-

The Role of the Teacher-librarian

Personal Competencies

The teacher-librarian:

- ✓ is committed to program excellence;
- ✓ seeks out challenges and sees new opportunities both inside and outside the library;
- ✓ sees the big picture;
- ✓ looks for partnerships and alliances;
- ✓ creates an environment of mutual respect and trust;
- ✓ has effective communications skills;
- ✓ works well with others in a team;
- ✓ provides leadership;
- ✓ plans, prioritizes and focuses on what is critical;
- ✓ is committed to lifelong learning;
- ✓ is flexible and positive in a time of continuing change.

The competent teacher-librarian is committed to

- ✓ the principles outlined in the Student's Bill of Information Rights;
- ✓ implementing curriculum with colleagues;
- ✓ initiating collaboratively planned and taught programs to integrate information literacy in the context of the curriculum; and
- ✓ the effective use of information technologies.



moting Canadian learning resources and using technology effectively.

The teacher-librarian must also be willing, and have the skills, to act as a change agent (Farwell, 1998). Interestingly, this has been a research-based priority for more than 20 years.

Require relevant education for teacher-librarianship

Throughout the research on the impact of teacher-librarians and school libraries on academic achievement and student learning, reference is made to “credentialled” or “certified” or “qualified” teacher-librarians being essential. Canada has been a leader in developing guidelines and standards for the role of the teacher-librarian and education for teacher-librarianship; these guidelines are honoured and followed where programs of education are offered but unlike in the United States and other countries, expectations are minimal and basic qualifications not required; indeed, an increasing number of teacher-librarians are more properly called “teachers-in-charge” of

the school library, as they have no particular additional expertise.

Insist on teaching qualifications and classroom experience

It has been long understood that teacher-librarians are more successful when they have teaching qualifications and classroom experience. This is the case in every province except Quebec, New Brunswick and Nova Scotia, coincidentally the jurisdictions with the weakest school library programs.

Place an emphasis on collaborative program planning and team teaching: what gets taught gets done

Over the course of 60 years researchers have investigated and confirmed the obvious: what is taught is what is done. In a national sample of Canadian elementary schools, teacher-librarians with training in collaborative program planning and team teaching worked more closely with classroom colleagues than those who did not have this training (Haycock, 1998a).

Offer education at the graduate level

Specialized education is key. Where programs of education for teacher-librarianship are offered, in eight provinces, they are given as university courses at the post-baccalaureate and graduate levels. The sole exception is Ontario, which offers only short continuing education courses in teacher-librarianship, for teachers by teachers.

Provide continuing education following basic qualifications

In-service education results in the development of specific skills or abilities and a change in attitude. Studies tell us that teacher-librarians are intrinsically motivated in obtaining new knowledge and skills (Dumas, 1994).

EDUCATION FOR TEACHER-LIBRARIANSHIP The Canadian Situation

The Canadian experience in education for teacher-librarianship, and its decline, has been well documented. A few examples: the University of British Columbia had four faculty members; today it has one position. Alberta had two, now has one. Memorial and Manitoba have maintained one position each. Prince Edward Island has added a position. And these are the bright spots. Dalhousie has reduced from one to zero; Montreal from one to zero; Regina from one to zero. In institutions where the head of the university's Education Library was also a leader in teacher-librarianship (for example, Victoria, Calgary, Saskatchewan), credible programs were coordinated with adjunct faculty. These are now gone.

Ontario has drastically cut eight tenured positions at four universities to zero. It is bad enough that access to education for teacher-librarianship is severely limited (Amey, 1992) but education in Ontario has devolved from professional education offered through universities to practitioner-led workshops. Worse, a national body of researchers has been eliminated. And we wonder why we rely on U.S. research.

Of course, even where there are outstanding programs, there is no requirement for school districts to engage qualified teacher-librarians. For the first time in more than 20 years, for example, fewer than half of the teacher-librarians in British Columbia are fully certified with 15 university credit hours in teacher-librarianship—and that is half the requirement of 20 years ago (Harkess, 2002). Nevertheless, the term teacher-librarian or librarian is used by anybody in the library, making role clarification and high expectations difficult.

In summary, the steady erosion of qualifications runs directly counter to the results of a large and growing body of research, which clearly indicates that for a school to fully realize the myriad opportunities afforded by a library, qualified teacher-librarians need to be at the very heart of the program.

Recommendations

THE CURRENT CONTEXT

1. In order to ensure accurate data:

THAT Ministries of Education collect and make available data that reflects accurately current levels of qualified professional and support staff in school libraries, as well as spending on library books, licensed databases and other media.

2. In order to ensure provincial leadership:

THAT Ministries of Education provide at least one specialist in teacher-librarianship and resource-based learning to provide guidance and support across the Ministry and province, across curricular areas and types of libraries and to school districts.

IMPACT ON STUDENT LEARNING

3. In order to make decisions based on evidence:

THAT Ministries of Education fund research investigating the effect of school libraries and teacher-librarians on student achievement, literacy and culture.

4. In order to ensure responsible business and fiscal practises:

THAT Ministries of Education develop consistent and coordinated approaches to funding and management, recognizing the pivotal role of school libraries and qualified teacher-librarians.

5. In order to foster equity of access and bridge the digital divide:

THAT Ministries of Education provide leadership for connected learning communities similar to Saskatchewan's multi-type library (academic, public, school) system, enabling citizens of all ages and geographic areas to access information in all formats.

IMPACT ON READING

6. In order to foster reading and achievement:

THAT Ministries of Education review and redress the deteriorating condition of school library collections.

7. In order to maintain current and relevant resources:

THAT Ministries of Education develop standards and dedicated funding for the maintenance and enhancement of school library collections.

IMPACT ON CULTURAL IDENTITY

8. In order to recognize the essential role of schools and libraries in developing Canadian identity:

THAT Ministries of Education dedicate resources for the selection of Canadian books and other learning resources for school libraries.

BEST PRACTICE

9. In order to provide guidance for best practice:

THAT Ministries of Education review and revise policies on school libraries and teacher-librarians based on best practice models.

10. In order to gain greatest return on investment:

THAT Ministries of Education review and revise the role of the teacher-librarian and mandate minimum qualifications.

11. In order to foster change across the school:

THAT Ministries of Education and school boards recognize the key elements of effective school libraries and their effect on achievement: clear program and role definition; collaboration with colleagues; flexible scheduling; emphasis on literacy and information problem-solving; required training.

12. In order to encourage modelling of school practice:

THAT Ministries of Education work with Faculties of Education to ensure at least one tenure-track position in teacher-librarianship wherever teachers are being educated.

13. In order to encourage appropriate collaboration and supervision:

THAT Ministries of Education work with Faculties of Education to ensure preparation of teachers and administrators in the effective use of teacher-librarians and school libraries.

CURRENT PROVINCIAL GUIDELINES

NEWFOUNDLAND AND LABRADOR

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PRINCE EDWARD ISLAND

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NOVA SCOTIA

Nova Scotia school libraries: Standards and practices. Nova Scotia Teachers Union, 1987.

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Standards and practices for New Brunswick school libraries. New Brunswick Teachers Association Library Council, 1989.

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ALBERTA

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- Teacher-librarians sought to place the right book in the right hands to promote a continuing enjoyment of the reading experience. Opportunities for involvement in the total reading process increased through whole language and literature-based instruction.
- Baughman, J. C. 2000. "School libraries and MCAS scores." Symposium sponsored by the Graduate School of Library and Information Science, Simmons College, Boston, Massachusetts. October 26, 2000. <http://web.simmons.edu/~baughman/mcas-schoollibraries/Baughman%20Paper.pdf>. Accessed 2003/04/16.
- At each grade level, schools with teacher-librarians, library programs and more books had higher Massachusetts Comprehensive Assessment System (MCAS) scores.
- Baxter, S., and A. W. Smalley. 2003. Check it out! The results of the school library media program census. St. Paul, MN: Metronet. <http://www.metronet.lib.mn.us/survey/index.cfm/>. Accessed 2003/04/16.
- The skill and training of the teacher-librarian, level of professional and support staff, size of the collection and budget, support of the principal and size of the school determine the effectiveness of the program. Schools with higher reading scores had more TL time and larger budgets.
- Becker, D. E. 1970. "Social studies achievement of pupils in schools with libraries and schools without libraries." University of Pennsylvania. Unpublished doctoral dissertation.
- The presence of a library and the functions of

a teacher-librarian exerted significant influence on information-gathering skills and reading charts and graphs.

Bingham, J. E. M. 1994. "A comparative study of curriculum integrated and traditional school library media programs: Achievement outcomes of sixth-grade student research papers." Kansas State University. Unpublished doctoral dissertation.

There was a significant increase in the scores of students who had been taught through teacher/teacher-librarian collaboration.

Bishop, K. 1992. "The roles of the school library media specialist in an elementary school using a literature-based reading program: An ethnographic case study." Florida State University. Unpublished doctoral dissertation.

The most significant changes in roles occurred when the teacher-librarian moved to flexible scheduling and curriculum-integrated instruction. See also: Bishop, K., and R. D.

Blazek. 1994. The role of the elementary school library media specialist in a literature-based reading program. *School Library Media Quarterly* 22, no. 3: 146-50.

Bland, K. P. 1995. "CD-ROM utilization in the high-school student research process." University of Memphis. Unpublished doctoral dissertation.

Students lacked a clear search focus and tended to allow the minimum requirements to drive their research plans. Students needed to develop search strategies for translating topics to keywords or subjects used in the databases. If the teacher and teacher-librarian were to incorporate formal planning into the research process students would receive additional instruction in how to plan the research and CD-ROM utilization.

Branch, J. L. 2001. "Information-seeking processes of junior high school students: A case study of CD-ROM encyclopedia use." *School Libraries Worldwide* 7, no. 1: 11-27.

Students used search terms only from the original question, had difficulty selecting articles and topics from those retrieved and did not read long articles as carefully as short articles. Instruction and practice should focus on generating search terms, selecting topics

from a retrieved list and skimming and scanning through text to find answers.

British Columbia Teacher-librarians' Association. 2003. Working and learning conditions: 2002/2003. (Working and learning conditions annual survey since 1985.) Vancouver, BC: British Columbia Teacher-librarians' Association. <http://www.bctf.ca/BCTLA/wlc2002.wlc.pdf>. Accessed 2003/04/16.

Details comparative levels of staffing, budget and services by school district.

Broadway, M. D., and S. W. Baldrige. 1988. "Prescription for excellence in instruction." *Clearing House* 61: 277-279.

One group of eighth-grade students received instruction enhanced by contributions to the subject curriculum provided by the teacher-librarian; on the Metropolitan Achievement Test this group outperformed the control group in eight of eleven sections.

Broch, E. 2000. "Children's search from an information search process perspective." *School Library Media Research* 3. [http://www.ala.org/Content/NavigationMenu/AASL/Publications_and_Journals/School_Library_Media_Research/Contents1/Volume_3_\(2000\)/childrens.htm](http://www.ala.org/Content/NavigationMenu/AASL/Publications_and_Journals/School_Library_Media_Research/Contents1/Volume_3_(2000)/childrens.htm). Accessed 2003/05/13.

Middle and high school students had surprisingly low levels of success using the World Wide Web as a search tool although many students reported their expertise in using the Internet as good or better.

Brock, K. T. 1993. "Developing information literacy through the information intermediary process: A model for school library media specialists." Georgia State University. Unpublished doctoral dissertation.—

The planned instructional activities conducted by teacher-librarians and the unplanned assistance they gave individual students could be systematically described within the framework of a Information Intermediary Process Model. The model has potential for informing TL role descriptions and programs addressing the development of information skills. See also: 1994. "Developing information literacy through the information intermediary process: A model for teacher-librarians

and others." *Emergency Librarian* 22, no. 1: 16-20.

Brown, J., and B. Sheppard. 1997. "Teacher-librarians in learning organizations." Information rich but knowledge poor? Emerging issues for schools and libraries worldwide; Research and professional papers presented at the 26th annual conference of the International Association of School Librarianship held in conjunction with the Association for Teacher-librarianship in Canada at the University of British Columbia, Vancouver, British Columbia, Canada, July 06-11, 1997. ed. Lynne Lighthall, and Ken Haycock, 195-214. Seattle, WA: International Association of School Librarianship.

Successful teacher-librarians exhibit the traits of exemplary teachers but add value from their role as a teacher-librarian, "mirror plus," particularly through staff learning.

Bruning, M. 1994. "Is money spent on libraries a wise investment?" *Ohio Media Spectrum* 46: 18-20.

Evaluation of the achievement levels of students in the top 50 and bottom 50 Ohio school districts in terms of amount spent per pupil on instruction and the proportion of instructional expenditures committed to school libraries. A positive correlation existed between commitment to the library through funding and student achievement levels.

Calgary Board of Education. 1999. *School libraries: Supporting quality learning*. Prepared by the Future of School Libraries Task Force. Calgary, AB: Calgary Board of Education. <http://www.qualitylearning.org/qldocs/library.pdf>. Accessed 2003/04/13.

Delineates best practice based on research and guidelines for quality learning.

Callison, H. L. 1979. "The impact of the school media specialist on curriculum design and implementation." University of South Carolina. Unpublished doctoral dissertation.

With collaborative program planning and teaching, secondary school science teachers changed their attitude toward services and resources and student learning outcomes improved.

Cameron, D. 1996. *Taking stock: Canadian studies in the nineties*. Montreal, PQ: Association for Canadian Studies.

Primary and secondary education touch all Canadians and "in a democratic society the importance of a citizenry equipped with a good understanding of the country and a refined appreciation of its character can hardly be overestimated." The adequacy of schools in preparing students for active participation in Canadian society was questioned.

Campbell, W. J. 1974. "The effect of Commonwealth libraries upon academic motivation." *The Australian Journal of Education* 18, no. 2: 113-23.

Improved staffing, facilities and collections enhanced student motivation.

Canada Council for the Arts. 2002. "English-language Canadian literature in high schools: A research study commissioned by the Canada Council for the Arts." *Impact* 11, no. 2: 20. See also: Writers' Union of Canada. (Fall, 2003). "Canadian literature in high schools." *Impact* 11, no. 3: 3-5.

Decline in teacher-librarians has affected access and depleted collections in school libraries. Marketing to schools is problematic for the publishing industry

Cavill, P. 1997. *Transition: Changes in the public and school library market*. Toronto, ON: Association of Canadian Publishers. More budget money was being allocated to newer media and technologies and thus book spending was decreasing. Qualified teacher-librarians selected more Canadian titles than did teachers in charge of libraries without those additional qualifications.

Chen, X. 1996. "Quality schooling with limited resources: An international comparison of mathematics and science education in China, Korea and Hungary." *Stockholms Universitet*. Unpublished doctoral dissertation.

At the school level, it was found that availability of a school library and laboratories, school size and class size had significant relationships with student achievement.

Christensen, P. M. 1986. "Profiles of eighteen

Washington state high school library media specialists with exemplary programs." Brigham Young University. Unpublished doctoral dissertation.

Among many common characteristics, exemplary TLs were actively involved in the curricular affairs of the school, respected by colleagues, well educated in teacher-librarianship and committed to continuing education, and gave of their own time. See also: 1991. Characteristics of library media specialists who have exemplary high school media programs: Basis for the current revisions of standards in the state of Washington. *School Library Media Quarterly* 20, 247-252.

Craver, K. W. 1987. "The influence of the availability of an academic online catalog on the use of academic libraries by college-bound high school seniors." University of Illinois at Urbana - Champaign. Unpublished doctoral dissertation. Students with access to an academic online catalogue in their school library resource center made greater use of the academic library, used more resources, cited more periodical articles and made less use of the public library.

Diakiw, J. 1997. "Children's literature and Canadian national identity: A revisionist perspective." *Canadian Children's Literature* 23: 36-49.

There are "powerful commonplaces in our culture and identity-shared values that most Canadians can identify with - and school is an important place to explore, discuss and debate these commonplaces." There is a connection between Canadian cultural identity and Canadian literature, children's literature can play an important role in affirming Canadian culture and identity, and the school has always had and will continue to play an important role in promoting a national perspective.

Didier, E. K. M. 1982. "Relationships between student achievement in reading and library media programs and personnel." University of Michigan. Unpublished doctoral dissertation.

The presence of library media were related to overall achievement, and achievement in specific subject areas or of specific types of skills. See also: 1984. Research on the impact of

school library media programs on student achievement—Implications for school media professionals. *School Library Media Annual*, vol. 2. eds. S. L. Aaron, and P. R. Scales, 343-61. Vol. 2. Englewood, CO: Libraries Unlimited. And: 1985. An overview of research on the impact of school library media programs on student achievement. *School Library Media Quarterly* 14, no. 1: 33-36.

Doiron, R. G. 1994. "School library policies in Canada: A shared vision from sea to sea to sea." *School Libraries in Canada* 14, no. 1: 15-19. See also: Doiron, R. (1998). School library resource centre policies in Canada: Re-viewing a shared vision. *School Libraries Worldwide* 4, no. 1: 1-14. Analysis of policy documents from each province and territory reveals common elements and priorities

———. 1995. "The relationship between elementary classroom collections and the school library resource centre program." University of British Columbia. Unpublished doctoral dissertation. Each model for classroom collections reflected a different concept of the collection, its role in the literacy program and its relationship with the school library program. Indications were that a collaborative approach to trade book provisioning emerged in schools where the school library program was more fully integrated into the school curriculum.

Dumas, J. A. 1994. "Continuing education and job performance of school library media specialists." Georgia State University. Unpublished doctoral dissertation. Teacher-librarians have strong preferences for certain continuing education delivery systems, such as meeting with colleagues. These preferences also seem to be consistent with their perceptions of the systems that influence job performance. Before teacher-librarians participated in continuing education, topics they perceived as important to job performance dealt primarily with using computers for managerial tasks; after participation, the topics were primarily in the area of providing services to clients. Teacher-librarians identified obtaining new knowledge and skills, an intrinsic motivational factor, as the

most influential reason to participate in continuing education.

Ebersole, S. 1999. "Adolescents' use of the World Wide Web in ten public schools: A uses and gratification approach." University of Southern Colorado. Unpublished doctoral dissertation.

Students use the Web for different reasons, depending on age, gender and grade-point average; typically, half of them believe that they are skilled searchers but they select inappropriate sites for academic information

Egoff, S. 1975. *The republic of childhood: A critical guide to Canadian children's literature in English*. Second edition. Toronto, ON: Oxford University Press.

There exists a group of children's books that can be identified as Canadian. Canadian children's books reveal more than content and style: they show what Canada and Canadians are like, what values we respect and how we look at ourselves today and in our past.

Ellis, D. and Knight A. 1976 *A survey of school libraries in Ontario: A project of empirical research undertaken for the Ontario Teachers' Federation*. Toronto: Ontario Teachers' Federation.

School principals surveyed were not dissatisfied with library staff, resources and facilities, although there was some concern that budget restrictions would hinder improvements or cause a decline in services.

Farris, P. J., and M. R. Hancock. 1991. "Library use and reading achievement of rural sixth graders." *School Library Media Annual*, 142-46. Vol. 9. Englewood, CO: Libraries Unlimited.

Library circulation and reading achievement was found to be significant. The results suggest the importance of the teacher-librarian in promoting reading and assisting with elementary student selection of books.

Farwell, S. M. 1998. "Profile of planning: A study of a three-year project on the implementation of collaborative library media programs." Florida International University.

These factors affected the success of collaborative planning: the individuals involved, school climate, time for planning, the organi-

zation of the school, the facility, the collection and training, the characteristics and actions of the people involved. The teacher-librarian was the pivotal player and must be willing to act as a change agent.

Fitzgerald, M. A. 1997. "Critical thinking: Tools for Internet information evaluation." In *Information rich but knowledge poor? Emerging issues for schools and libraries worldwide; Research and professional papers presented at the 26th annual conference of the International Association of School Librarianship held in conjunction with the Association for Teacher-librarianship in Canada at the University of British Columbia, Vancouver, British Columbia, Canada, July 06-11, 1997*, eds. L. Lighthall, and K. Haycock, 39-51. Seattle, WA: International Association of School Librarianship.

The researcher presents a detailed description of a range of misinformation devices and strategies to detect them; she offers suggestions for adapting, applying and teaching these strategies in K-12 contexts.

Foertsch, M. 1992. *Reading in and out of school: Factors influencing the literacy achievement of American students in grades 4, 8, and 12 in 1988 and 1990*. Washington, DC: U.S. Department of Education.

The factors most closely related to reading performance were the amount of reading that students do in and out of school, home environments that fostered reading and frequency of library use.

Froese, V. 1997. "The relationship of school materials and resources to reading literacy: An international perspective." In *Information rich but knowledge poor? Emerging issues for schools and libraries worldwide; Research and professional papers presented at the 26th annual conference of the International Association of School Librarianship held in conjunction with the Association for Teacher-librarianship in Canada at the University of British Columbia, Vancouver, British Columbia, Canada, July 06-11, 1997*, eds. Lynne Lighthall, and Ken Haycock, 283-303. Seattle, WA: International Association of School Librarianship.

Twenty-seven countries participated in the International Association for the Evaluation of Educational Achievements (IEA) Reading Literacy Study: "The data does suggest that countries with higher per student expenditures do have more school and classroom libraries, that students in classrooms that have access to school libraries achieve higher than those who don't and that students who have many books in their homes achieve at higher levels than those who don't."

Garland, K. 1995. "The information search process: A study of elements associated with meaningful research tasks." *School Libraries Worldwide* 1, no. 1: 41-53.

Teacher and teacher-librarian intervention can alleviate students' feelings of uncertainty and apprehension; students need to understand the research process and how to manage the steps. Students' outcome satisfaction level is related to their mastery of the skills involved.

Gaver, M. V. 1963. Effectiveness of centralized library services in elementary schools. Second edition. New Brunswick, NJ: Rutgers University Press.

Student achievement was compared in 13 states. Reading achievement was substantially higher in schools with libraries and librarians and student skills were measurably better. The study also found that test scores were lower in schools with rigid library schedules compared with those with flexible schedules and collaborative teacher-librarian planning.

Gehlken, V. S. 1994. "The role of the high school library media program in three nationally recognized South Carolina blue ribbon secondary schools." University of South Carolina. Unpublished doctoral dissertation.

Commonalities included: principal support, teacher-librarian proactivity, student access to technology, collections based on curriculum needs and student interests, an invitational atmosphere enhanced with comfortable informal areas, access, both before, during and after school, Students identified the single most important service as help from the teacher-librarian.

Gengler, C. R. 1965. "A study of selected problem solving skills comparing teacher

instructed students with librarian-teacher instructed students." University of Oregon. Unpublished doctoral dissertation.

Teacher-librarians and teachers working together could best develop student problem-solving abilities.

Goodin, M. E. 1987. "The transferability of library research skills from high school to college." Rutgers, The State University of New Jersey. Unpublished doctoral dissertation.

Students taught library research skills by the secondary teacher-librarian scored significantly higher on tests to measure these skills than did those not taught, and they used these skills in college to meet course requirements. The TL also became a linking agent between high school and college libraries and made librarians more approachable. See also: 1991. "The transferability of library skills from high school to college." *School Library Media Quarterly* 20, no. 1: 33-41.

Gorman, M. 1995. "The domino effect, or why literacy depends on all libraries." *School Library Journal* 41, no. 4: 27-29.

Increasing numbers of college and university students seem to have come from schools with inadequate library programs, depriving them of the necessary library skills for academic success.

Gottfried, A. E., J. Fleming, and A. W. Gottfried. 1998. "Role of cognitively stimulating home environments in children's academic intrinsic motivation: A longitudinal study." *Child Development* 69, no. 5: 1448-60.

Higher SES families had home environments more conducive to intrinsic motivation, access to print was a significant predictor even when SES was held constant and poor children had very little access to print materials.

Greve, C. L. 1974. "The relationship of the availability of libraries to the academic achievement of Iowa high school seniors." University of Denver. Unpublished doctoral dissertation.

There was a positive relationship between the level of library service and the students' scholastic achievement.

Hale, I. W. 1969. The influence of library services upon the academic achievement of twelfth-grade students at Crestwood Senior High School, Chesapeake, Virginia. Athens, GA: Georgia State University Department of Library Education.

One group of twelfth-grade students used extensive library services for independent study under a librarian's supervision while in the other group library services were incidental. Scores on the Scholastic Aptitude Test were compared before and after the study; scores improved more for the group using library services. See also: 1970. "October inspiration: School libraries work!" *Wilson Library Bulletin* 45: 127.

Hamilton-Pennell, C., K. C. Lance, M. J.

Rodney and E. Hainer. 2000. "Dick and Jane go to the head of the class." *School Library Journal* 46, no. 4: 44-47.

School library media programs with a full-time teacher-librarian, support staff and a strong computer network resulted in higher student achievement as shown from standardized achievement test scores in three statewide studies.

Hara, K. 1996. "A study of information skills instruction in elementary school: Effectiveness and teachers' attitudes." University of Toronto. Unpublished doctoral dissertation.

Resource-based instruction was the most effective model for acquiring information skills not only compared with no-information skills instruction but also compared with non-integrated instruction.

Harkess, G. 2002. "2001/2002 Working and learning conditions report." *The Bookmark* 44, no. 1: 37-40.

Highlights of professional and clerical staffing, budget allocations per students, electronic services and district resource centre survey.

Haycock, K. 1997. "What works: Integrated information skills instruction [research column]." *Teacher Librarian* 25, no. 2: 39.— Students learn more and produce better research products following planned, integrated information skills instruction by the teacher and teacher-librarian together.

———. 1998a. "The impact of scheduling on

cooperative program planning and teaching (CPPT) and information skills instruction." *School Libraries in Canada* 18, no. 3: 20-24.

In a national sample of elementary schools, teacher-librarians planned, taught and assessed more units with teachers in schools with flexible schedules; planning occurred where the principal expected it; teacher-librarians with training in collaborative program planning and team teaching worked more closely with classroom colleagues.

———. 1998b. "Students' information literacy needs: Competencies for teacher-librarians in the twenty-first century." *Education for all: Culture, reading and information; Selected papers of the 27th annual conference of the International Association of School Librarianship*, eds. S. Shoham, and M. M. Yitzhaki, 81-89. Seattle, WA: International Association of School Librarianship.

Describes the development of Canadian guidelines for the role of the teacher-librarian, including professional and personal competencies.

———. 2001. A review of the role of the teacher-librarian and school library resource centre in School District #39 (Vancouver): Reconceptualization and reconfiguration of expectations and service delivery models. Vancouver, BC: Vancouver School Board.

Reviews the current status of school libraries, including their historical development in Vancouver, and suggests six strategic directions to improve service delivery in a time of fiscal restraint: (1) clarify the role and responsibilities of the teacher-librarian; (2) identify essential elements of an ongoing professional development plan; (3) review resource selection and management practices; (4) specify coordinated approaches to information technology and use; (5) articulate inherent roles and responsibilities of partners in program development and delivery; (6) identify mutual roles, expectations and responsibilities with other agencies, specifically the Vancouver Public Library.

Henne, F. E. 1966. "Learning to learn in school libraries." *School Libraries* 15: 15-23.

Henne asserted that it is more important to teach students what to do with information (the skills and processes of interpretation, critical evaluation, thinking, reflection and appreciation of resources, research and materials) than simply teaching them how to locate materials.

Hindes, M. A. 1990. "The search processes and attitudes of students accessing CD-ROM resources: A case study of two high school media centers." University of Georgia. Unpublished doctoral dissertation.

Students were comfortable and enthusiastic about using CD-ROM technology but experienced difficulty: they used neither tutorials nor help screens.

Hoffman, J. L. 1999. "Information-seeking strategies and science content understandings of sixth-grade students using on-line learning environments." University of Michigan. Unpublished doctoral dissertation.

Gaining accurate and in-depth understandings from on-line resources was a complex process for young learners. Teachers can support students by helping them engage in all phases of the information-seeking process, locate useful information with prescreened resources, build background understanding with off-line instruction and process new information deeply through extending writing and conversation.

Humphrey, J. W. 2002. "There is no simple way to build a middle school reading program." *Phi Delta Kappan* 83, no. 10: 754-57.

Weak reading skills were linked with dropout rates; there was a need for the school library to supply materials with which students may practice their reading; students needed access to new books along with support from teacher-librarians. "The school library is the one place where school districts can ensure that all students have access to current materials for independent reading."

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

Children learn to read by reading, the amount of reading children do is a predictor

of other literacy components such as reading comprehension, writing style and spelling ability. When students have access to a professionally staffed school library of high quality they do more free reading.

———. 1995. "The reading hypothesis, the expanded reading hypothesis, and the greatly expanded reading hypothesis." *School Library Media Quarterly* 23, no. 3: 187-192.

There is a direct correlation between number of teacher-librarians employed and the amount of voluntary reading done by students. Also: 1995. "School libraries, public libraries, and the NAEP reading scores." *School Library Media Quarterly* 23, no. 4: 235-237.

———. 2000. "Do teenagers like to read? Yes!" *Reading Today* 18, no. 5: 16.

Teenagers like to read; school and public libraries are important sources of books (90% of those polled said they got books from the library); access to books is necessary to ensure that all potential readers can get books and other reading materials.

———. 2002a. "What do we know about libraries and reading achievement?" *Book Report* 20, no. 4: 38.

Better school libraries were related to higher achievement in reading. Children who attended schools with school libraries with better collections and superior staffing did better on tests of reading.

———. 2002b. "Whole language and the great plummet of 1987-92: An urban legend from California." *Phi Delta Kappan* 83, no. 10: 748-753.

"Whole language" was not responsible for low test scores. Other factors contributed to California ranking last in the U.S., e.g., the quality of its school libraries. In 1990 California had a ratio of 4,595 students per teacher-librarian and the national average was 900:1.

——— and B. O'Brian. 1996. "School library collections and reading achievement in Los Angeles and beyond." *Indiana Media Journal* 18, no. 3: 71-77.

Socioeconomic status of students was the strongest predictor of student reading achievement.

Kreiser, J. L. C. 1991. "A comparative study of curriculum integrated and traditional school library media programs: Fifth-grade students' reading and media program attitudes and utilization." Kansas State University. Unpublished doctoral dissertation.

Student attitudes toward the library and reading were found to be significantly positive for curriculum-integrated library media programs with flexible scheduling. Also: Kreiser and J. Hortin. 1993. "Research of the curriculum integrated library program." *International Journal of Instructional Media* 20, no. 4: 361-71.

Kuntz, L. 1999. "Online resources and the information seeking process." University of California, Berkeley. Unpublished doctoral dissertation.

Students had difficulty choosing an appropriate topic and finding at least one useful source initially as a means to finding more. Many students had not been taught research methods in any structured way throughout their educational lives, including at the university level.

Lance, K. C. 2002. 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. ERIC Clearinghouse on Information and Technology.

Review of four statewide studies found that professionally trained and qualified teacher-librarians made a difference in student performance on achievement tests; support of principals and teachers was required for TLs to make a difference; TLs required support staff to do their jobs effectively; TLs were teachers of students as well as in-service trainers of teachers; to be effective TLs need to embrace technology.

——— C. Hamilton-Pennell and M. J. Rodney. 1999. Information empowered: The school librarian as an agent of academic achievement in Alaska. Juneau, AK: Alaska State Library.

Teacher-librarians are the "information empowered" because they play three critical roles in the learning community: teacher, information specialist and administrator. In each of these roles they empower students

and teachers to meet high standards of academic achievement. The positive relationship between school librarians and test scores could not be explained away entirely by differences in school size, funding and teacher staffing levels.

——— and D. V. Loertscher. 2003. Powering achievement: School library media programs make a difference: The evidence. 2nd edition. San Jose, CA: Hi Willow Research and Publishing.—Summarizes and synthesizes research studies from more than 3,300 schools in eight states, demonstrating that information and technology-rich environments, easily accessible to teachers and students, together with a qualified teacher-librarian with support staff, results in capable and avid readers, information literate students and teachers who partner for improved achievement. When these happen, scores rise by 10-20%.

——— M. J. Rodney and C. Hamilton-Pennell. 2000a. How school libraries help kids achieve standards: The second Colorado study. Denver, CO: Colorado Department of Education. Colorado Student Assessment Program (CSAP) reading scores increased with increased library media program development, information technology, teacher/teacher-librarian collaboration and individual visits to the library. In addition, increases in TL leadership roles led to increases collaboration between teachers and TLs. The seventh-grade level reflected a strong relationship between library media program development and flexible scheduling.

——— M. J. Rodney and C. Hamilton-Pennell. 2000b. Measuring up to standards: The impact of school library programs and information literacy in Pennsylvania schools. Funded by the Pennsylvania Department of Education. Greensburg, PA: Pennsylvania Citizens for Better Libraries.

Pennsylvania System of School Assessment (PSSA) reading scores increased with increases in staffing, information technology and integration of information literacy into the curriculum. In addition, as library staffing, information resources and information technology rose, so too did the involvement of

teacher-librarians in teaching students and teachers how to find and assess information.

——— M. J. Rodney and C. Hamilton-Pennell. 2001. *Good schools have good librarians: Oregon school librarians collaborate to improve academic achievement*. Salem, OR: Oregon Educational Media Association.

Oregon reading test scores rose with the development of school library media programs.

——— M. J. Rodney and C. Hamilton-Pennell. 2002. *How school libraries improve outcomes for children: The New Mexico study*. Santa Fe, NM: New Mexico State Library.

Both individual and group visits to the library were correlated with reading scores. Successful group visits depended on close collaboration between teacher-librarian and teacher in planning and teaching.

——— L. Welborn and C. Hamilton-Pennell. 1993. *The impact of school library media centers on academic achievement*, Colorado Department of Education, Denver, CO.

This study analyzed the impact of library media centres on academic achievement in 221 Colorado public schools during the 1989-89 school year. Major findings included: academic achievement was higher where libraries were better funded, whether their schools and communities were rich or poor and whether adults in the community are well or poorly educated; better funding enhanced academic achievement by providing students access to more library staff and larger and more varied collections; the size of the staff and collection was second in predictors of academic achievement only to the absence of at risk conditions, particularly poverty and low educational attainment among adults; academic achievement was higher where teacher-librarians participated in the instructional process. See also: Lance, K. C. 1994. "The impact of school library media centers on academic achievement." *School Library Media Quarterly* 13: 167-70. Levy, S. 2002 April 22. "Don't dumb them down". *Newsweek* CXXXIX, no. 16:56. Interview with Jakob Nielsen. Nielsen and colleague Shuli Gilutz of the Nielsen Norman

Group's "user experience think tank" found the children ages 5-11 have difficulty using the Web, get confused easily and do not distinguish ads from content. Their study "Usability of websites for children" debunks many myths.

Lewanski, P. M. 1998. "The effect of computer-assisted library research on critical thinking skills acquisition of ninth-grade students." United States International University. Unpublished doctoral dissertation.—A significant increase occurred in the overall critical thinking skills of the experimental group using computer-assisted instruction and resources.

Lowe, J. L. 1984. "A comparative analysis of reading habits and abilities of students in selected elementary schools in North Louisiana with and without centralized libraries." University of North Texas. Unpublished doctoral dissertation.—Students in schools with libraries read more, read more for school and general information and liked reading for recreation more than students in schools without centralized libraries.

Martin, B. A. 1996. "The relationship of school library media center collections, expenditures, staffing, and services to student academic achievement." Auburn University. Unpublished doctoral dissertation.—Examining the variables of collections, expenditures for those collections, staffing levels and services provided by teacher-librarians in elementary, middle/junior high and high schools indicated a relationship of library staffing to student academic achievement, especially in the area of language arts (reading) at the high school level.

Masterson, E. G. 1953. "An evaluation of the school library in the reading program of the school." University of Chicago. Unpublished master's thesis.—Reading ability improved with improved library services. "The activity of a library program as opposed to mere book exposure can be a strong factor in a reading program."

McConnaha, V. 1972. "The effect of an elementary school library at the high school level." *California State Libraries* 43: 24-29.—Students at all levels of ability who were given professional library services performed at a higher level of academic achievement than those students who had not received this service.

McDonald, V. 2002. School libraries: An endangered service. Toronto, ON: People for Education. <http://www.peopleforeducation.com/reports/library/endangrd.html>. Accessed 2003/04/14.

Reports decline in school libraries while research regarding their efficacy increases.

McDowell, S. Jr. 1977. "A study of the library skills of selected college freshmen as related to high school library orientation." University of Michigan. Unpublished doctoral dissertation.

Students who had had formal instruction in the use of secondary school library resource centre rather than informal instruction scored significantly higher on a test of library skills for college students.

McQuillan, J. L. 1996. "SAT verbal scores and the library: Predicting high school reading achievement in the United States." *Indiana Media Journal* 18, no. 3: 65-70.

Public library circulation and the number of books per student in the school library were significant predictors of reading achievement. School library quality and public library use were the most reliable predictors.

———. 1997. "Access to print and formal instruction in reading acquisition." University of Southern California. Unpublished doctoral dissertation.

Variations in the amount of print available to children affect the extent of literacy acquisition and development. Access to print via the school and public libraries had a significant impact on reading achievement and test scores, controlling for the effects of socioeconomic status, teacher-pupil ratio and computer software holdings. See also: 1998. *The literacy crisis: False claims, real solutions*. Portsmouth, NH: Heinemann.

———. 2001. *If you build it they will come: A book flood program for struggling readers in an urban high school*. California State University, Fullerton. <http://www.ncte.org/inbox/ch06.pdf>. Accessed 2003/04/16.

More reading led to better reading, as well as to higher gains in vocabulary. Reading for pleasure, with access to a plentiful supply of books and free reading time, led to increased literacy.

Monahan, M. 1956. "A comparison of student reading in elementary schools with and without a central library." University of Chicago. Unpublished master's thesis. The quality of reading was better in a school with a centralized library that was professionally staffed than in one with only classroom libraries.

New York Regents Commission on Library Services. 2002. *Meeting the needs of all New Yorkers: Library service in the new century*, The University of the State of New York, The State Education Department and the New York State Library, Albany, NY. Appendix D: School Library Media Survey Report. Researchers: Drs. George D'Elia and Nancy Zimmerman.

Students in schools with a qualified teacher-librarian scored higher at the fourth- and eighth-grade levels in English/language arts and math, the two areas examined. The results were statistically significant.

Oberg, D., L. Hay and J. Henri. 2000. "The role of the principal in an information literate school community: Cross-country comparisons from an international research project." *School Library Media Research* 3. [http://www.ala.org/Content/NavigationMenu/AASL/Publications_and_Journals/School_Library_Media_Research/Contents1/Volume_3_\(2000\)/principal2.htm](http://www.ala.org/Content/NavigationMenu/AASL/Publications_and_Journals/School_Library_Media_Research/Contents1/Volume_3_(2000)/principal2.htm). Accessed 2003/04/14.

Roles and expectations of principals and teacher-librarians for themselves and each other are reported with comparisons between and among seven countries: Australia, Canada, Finland, France, Japan, South Korea and the United Kingdom/Scotland.

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.

There was a correlation between library use and school performance. The presence of books was necessary but not always sufficient; attention from a librarian helped to pique interest.

Pantaleo, S. 2000. "Grade 3 students explore the question, 'What's Canadian about

Canadian literature?" *English Quarterly* 32, no. 3&4: 41-49.

The students, when asked to comment on the various Canadian children's books that they read, mentioned specific landscapes, experiences, geography, regions, symbols (flags) and historical elements. They believed that it was important for Canadian students to read books by Canadian authors to learn about Canada.

People for Education. 2003. The 2003 secondary school tracking report: Diminishing support in a harsher environment. Toronto, ON: People for Education. <http://www.peopleforeducation.com/tracking/summrpts/second/03/full.PDF>. Accessed 2003/04/11.

Tracking reports for five years points to declining support for school libraries and teacher-librarians.

People for Education. 2002. Fifth annual report on Ontario elementary schools: Libraries. Toronto, ON: People for Education. <http://www.peopleforeducation.com/reports/library/library2.PDF>. Accessed 2003/04/10.

Despite evidence of the library as an indicator of achievement, funding for staff and collections continues to decline.

Rodney, M., K. C. Lance and C. Hamilton-Pennell. Make the connection: Quality school library media programs impact academic achievement in Iowa. A research project by Iowa Area Education Agencies. Mississippi Bend Area Education Agency, 2002. http://www.aea9.k12.ia.us/aea_statewide_study.pdf. Accessed 2003/04/08.

Both individual and group visits to the library were correlated with reading scores. Successful group visits depended on close collaboration between teacher-librarian and teacher in planning and teaching.

Rutter, M. et al. 1979. *Fifteen thousand hours: Secondary schools and their effects on children*. Cambridge, MA: Harvard University Press.

Schools in inner-city London with better academic results had better libraries. Student use correlated with academic results.

Saterfield, T. H. 1974. The relationship

between student achievement and accreditation variables associated with the student's school. ERIC Document ED 157 913.

When socioeconomic status was not considered, the accreditation variables that were positively related to student achievement were student-teacher ratio, level of teacher certification and expenditure for library books per student.

Shorey, M. E. 1996. "An investigation of four exemplary school library media specialists and how they incorporate multicultural literature into the curriculum." Ohio State University. Unpublished doctoral dissertation.

Exemplary teacher-librarians were service-oriented and proactive in their practice, knowing the curriculum of their schools and their clientele. They possessed a broad knowledge of their collections and the availability of information, the teaching/learning process and how to apply their knowledge to a variety of situations. They worked well with colleagues and were respected by administration, teachers and students.

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

Data on the contribution of libraries and teacher-librarians included higher academic performance at all educational levels in schools with TLs than in schools without them; teacher-librarian activities that had an impact on student performance included planning and teaching collaboratively with teachers and training teachers. Libraries staffed with teacher-librarians and aides were associated with increased library use, as measured by more visits to the library by individual students, more information skills instruction, and more books and materials checked out.

Snider, F. E. 1965. "The relationship of library ability to performance in college." University of Illinois at Urbana-Champaign. Unpublished doctoral dissertation.

The relationships between a student's ability to use books and libraries and performance in college, particularly grade-point average, were positive, consistent and strong.

Solomon, P. 1991. "Information systems for children: explorations in information access and interface usability for an online catalog in an elementary school library." University of Maryland. Unpublished doctoral dissertation.

Overall, 66% of transactions were successful; the remaining 34% broke down owing to skill (reading, spelling, keyboarding), rule (syntax, query form, focus) and knowledge (conditional, procedural, declarative) difficulties.

Soon, G. 1996. Teacher-librarians in B.C.: Working and learning conditions, 1982-1995, British Columbia Teachers' Federation, Vancouver, BC.
<http://www.bctf.bc.ca/ResearchReports/96wlc04/>. Accessed 2003/04/12.

Outlines services provided, with implications of site-based management and declines in staffing.

Thorne, L. M. 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.

Augmented library resource centre services resulted in greater gains in reading comprehension and information skills, with boys gaining most in the former and girls in the latter.

Todd, R. J. 1995. "Integrated information skills instruction: Does it make a difference?" *School Library Media Quarterly* 23, no. 2: 133-38.

Integrated information skills instruction had a significant positive effect on students' learning and on their attitudes toward school, including on students' mastery of prescribed science content and on their ability to use a range of information skills to solve particular information problems. The study also pointed to the value of both a process approach and an integrated approach to information skills instruction.

U.S. Secretary of Labor's Commission on Achieving Necessary Skills. 1991. *What work requires of schools*. U.S. Department of Labor, Washington, D.C.. <http://wdr.doleta.gov/SCANS/whatwork/>.

Accessed 2003/04/16.

Identifies five critical competencies: resources; interpersonal skills, information, systems, technology—in addition to basic and thinking skills.

Udoh, V. W. 1998. "Children's literature: Reflections of society, culture and ethnic groups." *Education for all: Culture reading and information: Selected papers of the 27th annual conference of the International Association of School Librarianship*, eds. S. Shoham, and M. M. Yitzhaki, 249-258. Seattle, WA: International Association of School Librarianship.

Children's literature is a medium of enrichment and socialization through which values are transmitted to the young; it acts as the child's introduction to the philosophy, social and cultural norms, values, aspirations, and hopes of his or her society. "Every nation has a set of values, cultures, systems, and so on that are particular to its people and which it must preserve in order not to lose its identity."

van Deusen, J. D. 1991. "Effects of fixed versus flexible scheduling on curriculum involvement and skills integration in elementary school library media centers." University of Iowa. Unpublished doctoral dissertation.

Schedule and teachers' planning style interacted in to produce more curriculum involvement when flexible scheduling and team planning were implemented together. See also: 1993. "Effects of fixed versus flexible scheduling on curriculum involvement and skills integration in elementary school library media programs." *School Library Media Quarterly* 21, no. Spring: 173-82. And: van Deusen and J. I. Tallman. 1994. "The impact of scheduling on curriculum consultation and information skills instruction: Part one: The 1993-94 AALS/Highsmith Research Award Study." *School Library Media Quarterly* 23, no. 1: 17-25.

Von Sprecken D., J., Kim and S. Krashen. "The home run book: Can one positive reading experience create a reader?" *California School Library Journal* 23, no. 2: 8-9. Attention from a teacher-librarian or other staff can get children interested in books and help them discover a "home run" book.

Williams, D. A., and C. Wavell. 2001.

"Evaluating the impact of the school library resource center on learning."

School Libraries Worldwide 7, no. 1: 58-71.

The school library resource center influenced a wide range of learning experiences and not simply those most closely and traditionally associated with finding and using information. There was evidence of the transfer or development of skills and learning to other areas of the curriculum.

Willson, E. J. 1965. "Evaluating urban centralized elementary school libraries." Wayne State University. Unpublished doctoral dissertation.

Students who attended schools with centralized libraries and qualified teacher-librarians demonstrated superior gains between the fourth and sixth grades, as measured by the Iowa Test of Basic Skills. These students also had access to a greater variety and quantity of learning materials and reference-skill learning experiences.

Writers' Trust of Canada. 2002. "Canadian literature in high schools: A research study of English language literature." *Impact* 11, no. 3: 3-5. See also: Canada Council for the Arts. (Spring, 2002). "English language Canadian literature in high schools." *Impact* 11, no. 2: 20.

Canadian young people were not aware of Canadian writers or resources and were increasingly not exposed to them in high school. "Ironically, at the greatest opportunity for the development of a life-long love of Canadian culture and Canadian literature, high schools lack the support to deliver the programs."

Yoo, J. H. 1998. The educational impact of the school library. ERIC Document ED 417 736.

Excellent teacher-librarians were essential to ensure that all young people had access to reading materials that would help them become literate; school reform was required to improve the declining library collections and services. The size of a school's library staff and collection was a strong predictor of academic achievement.

About Dr. Ken Haycock

Ken Haycock was born in 1948 and attended school in Hamilton and London (Ontario) where he obtained his B.A. in political science from the University of Western Ontario in 1968 and Dip.Ed. in 1969. He began his career as a secondary school history teacher and teacher-librarian at Glebe Collegiate Institute in Ottawa and was a department head and part of the opening day staff at Colonel By Secondary School in Ottawa in 1970. During this time he completed qualifications at the University of Toronto to become an Ontario specialist in school librarianship and later completed his M.Ed. in curriculum and educational foundations at the University of Ottawa. In 1972 he became educational media consultant K-13 with the Wellington County Board of Education. He completed his A.M.L.S. at the University of Michigan through commuting 500 miles each week.

In 1976 he was coordinator for the Vancouver School Board's more than one hundred school libraries, district resource services and special libraries; in 1984 he was named acting manager of elementary/secondary education and in 1985 became a member of Vancouver's senior management team, responsible for curriculum and program development and implementation, curriculum resources and technologies and staff development for 7,000 employees at 115 sites. During this time he was also principal of a large elementary school and completed his doctorate in administration and leadership.

In 1992 he returned to librarianship as a tenured professor and director of the School of Library, Archival and Information Studies at the University of British Columbia. In 2002 he moved to full-time research, teaching and service as a faculty member.

Ken Haycock's areas of special interest and accomplishments are education for library and information studies, organizational leadership and development, implementation of change and staff development, and teacher-librarianship. Dr. Haycock presents papers and leads workshops at innumerable conferences of educators, librarians and managers, particularly in the areas of leadership, quality management, advocacy, organizational effectiveness, translating research into practice and collaborative planning for information literacy.

Dr. Haycock has been an active and contributing member of the library profession since 1969. In 1974 he became the youngest president of the Canadian School Library Association and in 1977 the youngest president of the Canadian Library Association. He has served as a public library trustee and elected school board trustee (six years) and chair (three years). Haycock is an active member of more than 30 professional associations. He has served on more than two dozen government and community boards as diverse as federal publishing juries, community information, elimination of sexism, race relations and community services. He is currently a member of the 70,000 member American Library Association's Council and its Executive Board. He was elected city councillor in West Vancouver in 1999. Haycock is past president of the American Association of School Librarians and of the Council for Canadian Learning Resources where he established Resource•Links: Connecting Classrooms, Libraries and Canadian Learning Resources; he is also immediate past executive director of the International Association of School Librarianship and edits *Teacher Librarian: The Journal for School Library Professionals*.