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The School Library-Principal
Relationship:
Guidelines for Research and Practice

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Preface

The importance of the attitude and involvement of the Principal in the development of a relevant, high quality school library is always evident in any discussion of school librarianship, wherever in the world. Small pockets of excellent practice exist alongside huge swathes of inadequate library provision. Why should this be? There are many factors to consider: the budget; the quality of the resources; the size and design of the library, but strangely, a library can be well-funded, beautifully appointed, and still not well-used. A poorly used library is obviously not an integral part of an information literate school community, however quality information services are a feature of a school where the library is central to the curriculum and the needs of information literate students. A common factor in the provision of effective and non-effective school libraries seems to be the support, or lack of it, given by senior school managers, in particular the principal.

In December 1995 IFLA's Division III (Libraries Serving the General Public) agreed to provide funding to facilitate the development and replication of a set of Australian-based survey instruments on an international scale. The objectives of this international research project were to:

- identify the forms of support for school librarians offered by principals;
- identify the types of actions taken by school librarians to develop principal support;
- identify effective strategies implemented by principals and school librarians in developing information literate school communities;
- identify the professional development needs of principals and school librarians with respect to developing an information literate school community;
- design a model questionnaire on the role of the principal in developing and supporting an information literate school community for use in English speaking countries and suitable for translation;
- foster collaboration in research within school librarianship on an international scale; and
- contribute to the development and publication of an international set of guidelines for principals and school librarians in developing effective information services and supporting information literacy programs in schools.

In July 1996 IASL (International Association of School Librarianship) awarded the project coordinators, with the assistance of Dianne Oberg, additional funding to further support the implementation of these survey instruments in the six IRRG countries consisting of Canada, France, Japan, Finland, South Korea and Scotland.

This international study was indeed ambitious in its aims and had the potential to provide evidence for or against the proposition that the principal relationship with the school librarian was of high importance as an enabling factor in the development of an information literate school community. Indeed this report contributes to the body of research highlighting the importance of the principal's role in supporting school library programs, and provides us with fascinating reading that stresses the potential for improvement and change which exists if the principal and school librarian have a positive relationship, and share aims and objectives for the library within an information literate school community. The similarities and differences between the

approaches in different countries give an extra, interesting dimension to this report, as the national contextual framework is so varied. Yet the situation for school librarians is disturbingly similar.

The description of the research methodology is a key element of the report, and will provide much useful information for other researchers in the field.

The IFLA/UNESCO School Library Manifesto states:

It has been demonstrated that when librarians and teachers work together, students achieve higher levels of literacy, reading, learning, problem-solving and information and communication technology skills.

This report shows that we should now add, before teacher, the word 'principal'.

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Chair of the IFLA Section of School Libraries and Resource Centres 1997-2001
and Secretary of the Section 2001-2003

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The School Library-Principal Relationship: Guidelines for Research and Practice

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CHAPTER ONE

1. Introduction

The international study of the role of the principal in developing school library programs grew out of interest generated by studies completed in Canada and Australia and reported at conferences of the International Federation of Library Associations and Institutions (IFLA) and the International Association of School Librarianship (IASL). One impetus for the international study, for the Australian and Canadian researchers, was the desire to know if similar findings would emerge from studies conducted in countries with educational systems and school library development that were quite different from those of Canada and Australia. Involving non-English speaking countries in the international study reflected to some degree the diverse cultures and languages of IFLA members.

1.1 Need for the Study

Although the school library has long been a part of school infrastructure in many parts of the world, the implementation of the school library's instructional role has been very limited. One element of successful school library program implementation frequently identified in the research literature is the partnership between the principal and the school librarian. There is a broad range of literature identifying the principal as the key agent of school improvement and of program implementation in other areas such as reading education and technology integration.

There is a large body of research and professional literature in English in relation to school library program development and implementation. That literature points to the key role of the principal and the importance of the partnership between the principal and the school librarian. Would that relationship hold true across a wide range of countries and cultures, including non-English speaking countries? Could an international study of the relationship between the principal and the school librarian generate findings that could have implications for practice around the world? The study presented in this report was an attempt to address those questions.

The study also allowed an exploration of the opportunities and challenges offered through international research programs. There have been few international studies utilizing a collegial model as was proposed for this study. The study also allowed the researchers to test the viability of electronic data gathering techniques.

1.2 Framework of the Study

The study was based on some key basic assumptions about the nature of school library programs, the role of school librarians, the goals of school library programs, and the future of school libraries. The Australian and Canadian researchers began from a belief that school library programs involve a range of innovations which can be very difficult to implement because they require changes not only in the way that teaching and learning occurs within the library, but also in the way that teaching and learning occurs within the classrooms and, indeed, throughout the school. School library programs that support student learning and facilitate good teaching practice

require many changes outside the specific domain of the school library. For example, teachers need to work with other teachers, they need to use multiple resources, and they need to involve their students in designing and evaluating learning projects. A whole school approach is needed to implement a successful school library program. The school librarian has a critical role to play, but he or she can only do this with whole school support, and in particular, with the support of the principal.

For this study, the researchers proposed the concept of the school as ‘an information literate community.’ This term, coined by Henri (1995), draws distinctions between the school as a place of learning and the school as a learning community, placing an emphasis on the process of informing within a learning community. Henri suggested a set of benchmarks or criteria that could be used to identify an information literate school community. These criteria were based on the work of Oberman and Wilson (1998) who suggested that information literate learning communities would be ones where school librarians were involved in teaching, where the importance of information literacy was recognized, and where everyone in the community was engaged collaboratively in resource-based, problem-solving learning.

Fundamental ideas underpinning the information literate school community are the concepts of mentoring and modelling. Many schools incorporate information skills into their curriculum but in so doing place the emphasis entirely on students. Only when teachers understand that information literacy must begin with them, is an information literate school community possible. Henri and Bonanno (1999) took the concept further and suggested a set of criteria for measuring a school’s progress towards information literacy.

In like mind, McKenzie (1998) suggested that information literacy is built upon three practices, namely:

1. Prospecting – The first component of information literacy relates to the discovery of relevant information. This prospecting requires navigation skills as well as the ability to sort, sift and select pertinent and reliable data.
2. Interpreting – It is not enough to locate numbers, text and visual data. The learner must be able to translate data and information into knowledge, insight and understanding. The learner must be skilled at interpretation. Huge number sets have little value if we do not know how to ‘crunch’ the data and convert it into charts or other forms which show relationships and help us to resolve issues and questions.
3. Creating New Ideas – True information literacy includes the development of new insights. We cannot be satisfied with rehashing the ideas of others. We expect to see fresh knowledge. We expect more than thinly disguised plagiarism. (McKenzie, 1998, para.2)

The Australian qualitative study (Hay & Henri, 1995; Henri & Hay, 1996) that provided a basis for the design of the international project did not offer a definition of the term ‘information literate school community’. Instead, the researchers were seeking the perspectives of school personnel about what might constitute an information literate school community. The choice of participating schools for the Australian study was determined through a modified Delphi approach. A group of ‘recognized experts’, knowledgeable about schools within the chosen school district, were asked to nominate schools that they thought could be identified as either schools that were information literate school communities or schools that exhibited some key characteristics of such a concept.

Some respondents at the school level found the lack of definition rather disconcerting but it provided them with a freedom to express their views in ways that might otherwise have been denied to them. It also gave the respondents a sense of ownership in the study that came from the knowledge that new ground was being broken. The factors identified by the respondents as critical to an information literate school community were used as major building blocks in the design of the quantitative instruments for the international study. Again, no definition was provided to respondents but the questions themselves provide a clear framework within which their ideas might be developed and articulated. These approaches taken by Henri (1995) and McKenzie (1998) fit within the learning community models developed by Fullan (1999) and by Watkins and Marsick (1993).

1.3 Review of Supporting Research Literature

1.3.1 The Role of the Principal in School Library Development

Over the past three decades there have been frequent references in the professional literature of school librarianship to the concept of principal support but there have been fewer references in the research literature. The role of the principal in supporting the school library program is often referred to, in both the professional and research literatures, simply as ‘principal support.’ A deeper analysis of the complex relationships between principals and school librarian has demonstrated that principal support involves at least four different kinds of principal actions or role categories (Oberg, 1996). These four role categories are used as a framework to present (in Table 1.1) a summary of the professional and research literature related to the role of the principal in supporting the school library program – a key factor in the development of an information literate school community. Citations for each of the references in the table are provided at the end of the chapter.

The discussion below is based primarily on the North American professional and research literature, but it appears that similar patterns may be found in school library literature from other areas of the world. Because the professional literature is more readily accessible (and therefore more well known), only research findings are discussed here.

A number of studies (see for example Baldwin, 1995; Charter, 1982; Gehlken, 1994; Shields, 1987) have found that principal support is critical to the development of school library programs. Dekker (1989) found that school district administrators were also important in enabling principals to support library programs in their schools. Corr (1979) and Turner (1980) found that principal attitude was positively correlated to program implementation. Hellene (1974) and Yetter (1994) found that principal support for the school library program involved such things as encouraging its use by teachers and students, integrating the program into the curricular work of the school, and providing flexible scheduling.

Table 1.1 Role of the Principal: Professional and Research Literature

Developing the School Library Program	Professional Literature	Research Literature
As a supervisor working directly with teachers:	Austrom et al., 1989; Baker, 1980; Carson, 1989; Davies, 1979; Fox, 1982;	Charter, 1982; Hellene, 1974

<ul style="list-style-type: none"> outlines expectations for library use provides professional development for teachers 	Haycock, 1999; Kearney, 2000; Loertscher, 2000; Lundin, 1983; Podemski, 1990; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Yesner & Jay, 1987	
<p>As a model demonstrating personal commitment:</p> <ul style="list-style-type: none"> explicit valuing of program using program in own teaching being visible in library 	Carson, 1989; Davies, 1979; Fox, 1982; Grant, 1988; Haycock, 1999; Kuehn, 1975; Kearney, 2000; Loertscher, 1988; Lundin, 1983; Morris, Gillespie & Spirt, 1992; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Yesner & Jay, 1987	Farwell, 1998
<p>As a manager enabling the program:</p> <ul style="list-style-type: none"> materials/clerical staff budget flexible scheduling includes program as an integral part of school's curriculum work (including planning and evaluating) 	Austrom et al., 1989; Baker, 1980; Barron, 1994; Browne & Burton, 1989; Carson, 1989; Davies, 1979; Fox, 1982; Hamilton, 1983; Haycock, 1999; Kearney, 2000; Kuehn, 1975; Loertscher, 2000; Lundin, 1983; Morris, Gillespie & Spirt, 1992; Podemski, 1990; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Woolls, 1999; Yesner & Jay, 1987	Charter, 1982; Dekker, 1989; Farwell, 1998; Gehlken, 1994; Hellene, 1974; Shields, 1977; Turner, 1980; Wilson, Blake & Lyders, 1993; Yetter 1994
Support for the School Librarian	Professional Literature	Research Literature
<p>As a mentor providing visibility/importance:</p> <ul style="list-style-type: none"> makes time for meetings with the school librarian trusts the school librarian's knowledge/expertise encourages school librarian's personal and professional development 	Baker, 1980; Carson, 1989; Davies, 1979; Hamilton, 1983; Kearney, 2000; Kuehn, 1975; Morris, Gillespie & Spirt 1992; Woolls, 1999; Yesner & Jay, 1987	

Farwell (1998) found that, in schools with successful school library programs, the principal served as an advocate for collaborative planning and information literacy instruction; the principal in such schools also provided financial support for the library program, including that needed to hire clerical staff, and arranged for school librarians and classroom teachers to have time during the school day to plan together.

Campbell (1994) found that for all high school students to become information literate, principals had to move information literacy instruction into the mainstream of the school program. In order to do this, principals assumed roles of direction setters, facilitators, and communicators. Campbell also found that the themes associated with successful implementation of educational change were present where information literacy programs were being implemented on a school-wide basis – vision-building, evolutionary planning, empowerment, resource mobilization, and problem-coping/monitoring. Other studies indicate the virtual rarity of principal support for, and understanding of, the school library program. Studies by Hauck and Schieman (1985), Dorrell and Lawson (1995) and Kolencik (2001) found that principals rarely recognized the instructional role of the school librarian, while Wilson, Blake and

Lyders (1993) found that many principals were hampered in their support for school libraries by lack of knowledge about the management and function of school libraries.

1.3.2 The Role of the School Librarian in School Library Development

Table 1.2 provides a summary of the professional and research literature related to the role of the school librarian in developing the school library program, a second key factor in the development of an information literate school community. The role categories are adapted from those presented in *Information Power: Building Partnerships for Learning* (American Association for School Librarians and Association for Educational Communications and Technology, 1998).

Once again, the discussion is based on North American professional and research literature, and it addresses only the research literature cited in the table. Only a sample of some of the more well-known professional literature has been included in the table since the literature on the role of the school librarian in developing the school library program is too large to be given comprehensive treatment here. It is also noteworthy that the professional and research literature on the role of the school librarian tends to be fairly consistent in its attention to the four role categories identified by Oberg (1996). Citations for each of the references in the table are provided at the end of the chapter.

Mosqueda (1999) found that principals and school librarians in the award-winning schools in her study validated the roles of the school library program and the school librarian in program administration, in information access and delivery, and in learning and teaching. Person (1993) found that the school librarian's actual and ideal roles in teaching information literacy skills, in participating in instructional development activities, and in fostering reading literacy through literature-based reading programs were compatible with the role recommendations in *Information Power* (American Association of School Librarians and Association for Educational Communications and Technology, 1988). Farwell (1998) found that the school librarian was the pivotal player in the implementation of collaborative library programs. In the views of classroom teachers, principals, and school librarians themselves, the school librarian must be knowledgeable about curriculum, the library collection, and instructional design and delivery; they must be open and welcoming to

Table 1.2 Role of the School Librarian: Professional and Research Literature

School Librarian Role in Developing the School Library Program	Professional Literature	Research Literature
<p>As a teacher:</p> <ul style="list-style-type: none"> • analyzes learning/information needs, locates resources, shares information from resources • applies current research on teaching and learning to a variety of situations • helps students to learn, to think, and to create and apply new knowledge • teaches skills in information literacy, including ICT use 	<p>Doiron & Davies, 1998; Kearney, 2000; Loertscher, 2000; Morris, Gillespie & Spirt, 1992; Ohlrich, 1996; Prozano & Prozano, 1999; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Turner, 1993; Woolls, 1999.</p>	<p>Farwell, 1998; Gehlken, 1994; Mosqueda, 1999; Person, 1993.</p>
<p>As an instructional partner:</p> <ul style="list-style-type: none"> • joins with teachers and others to identify links across student information needs, curricular content, learning outcomes, information resources • takes a leading role in developing policies, practices, and curricula • works with individual teachers to design and assess learning, and to integrate ICT skills 	<p>Doiron & Davies, 1998; Kearney, 2000; Loertscher, 2000; Morris, Gillespie & Spirt, 1992; Ohlrich, 1996; Prozano & Prozano, 1999; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Turner, 1993; Woolls, 1999.</p>	<p>Baldwin, 1995; Farwell, 1998; Gehlken, 1994; Hughes, 1998; Mosqueda, 1999; Person, 1993.</p>
<p>As an information specialist:</p> <ul style="list-style-type: none"> • acquires and evaluates information resources in all formats • raises awareness of information issues (eg. ethical use of information) • models for students and others strategies for locating, accessing, and evaluating information within and beyond the library 	<p>Doiron & Davies, 1998; Kearney, 2000; Loertscher, 2000; Morris, Gillespie & Spirt, 1992; Ohlrich, 1996; Prozano & Prozano, 1999; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Turner, 1993; Woolls, 1999.</p>	<p>Farwell, 1998; Gehlken, 1994; Mosqueda, 1999; Person, 1993.</p>
<p>As program administrator:</p> <ul style="list-style-type: none"> • works collaboratively to define library policies and activities • advocates for the program • manages staff, budgets, and facilities • plans, executes, and evaluates the program 	<p>Barron, 1994; Kearney, 2000; Doiron & Davies, 1998; Loertscher, 2000; Morris, Gillespie & Spirt, 1992; Ohlrich, 1996; Prozano & Prozano, 1999; Salmon, Goldfarb, Greenblatt & Strauss, 1996; Woolls, 1999.</p>	<p>Baldwin, 1995; Farwell, 1998; Mosqueda, 1999.</p>

classroom teachers and use good interpersonal skills; and they must be committed to information literacy instruction and willing to act as a change agent.

The change agent role of the school library professional was also confirmed in studies by Baldwin (1995) and Hughes (1998). Hughes found that school librarians helped teachers in their efforts to understand and implement an innovation by providing them with instructional and professional resources, by modelling the new practices for them, and by helping them develop problem-based research projects. Gehlken (1994) found that the school librarian's proactivity and commitment to meeting student needs were critical factors in successful school library programs. The school librarian in the award-winning schools in Gehlken's study were committed to increasing student access to technology and to collections based on curriculum needs and student interests, both before and after school in addition to during the school day. The students in these schools identified help from their school librarian as the most important service provided by the school library program; this finding added validation to the positive role of the school librarian within the educational program of the school.

1.4 Creation of Information Literate School Communities

The creation of information literate school communities is a complex and challenging task for all involved. One approach to thinking about that task is that of analyzing a school in terms of primary inhibitors and basic enablers (Kuhlthau, 1993) in order to develop a plan for creating an information literate school community.

Kuhlthau developed these implementation indicators for school library programs on a series of studies in secondary schools in the United States. She found three primary inhibitors in programs that seemed to have stalled, that is, to have been unable to develop an effective role in teaching and learning in the school: lack of time; confusion of roles; and poorly designed assignments. Stalled programs show evidence of lack of time both for instructional planning and for students to engage in information literacy activities. The lack of instructional planning prevents the development of new or enhanced instructional roles: the teachers give the assignments; the school librarian helps find the resources; and the principal is not involved at all. The student assignments are not integrated into the classroom curriculum; they are often regarded as add-ons or optional enrichment activities, rather than an essential part of curriculum-based learning.

Kuhlthau found that four basic enablers were present in successful programs: a team approach to teaching; a shared understanding of learning as a constructivist process; a shared commitment to lifelong learning; and competence in developing learning activities and strategies. Successful programs show evidence of the teachers, the school librarian, and the principal working together to facilitate, develop, and implement instructional programs. Each person on the instructional team has essential roles to play including: finding time for the instructional team to work together; ensuring that the assignments fit within the school's philosophy and goals; designing assignments based on an information process model; ensuring that the appropriate information resources are available; teaching requisite information skills; and monitoring and assessing student work. The instructional team understands that students bring different understandings to their learning and that their new learning builds on what they already know; the team engages students in problem-based inquiry as one way for students to learn how to learn. The instructional team is focused on helping students to take responsibility for their own learning and to develop the skills for learning that are essential within and beyond the school. The instructional team develops assignments through innovation and experimentation, trying new approaches in order to enhance student learning.

Kuhlthau points out that the basic enablers are not simply opposites of primary inhibitors. This means that creating information literate school communities involves addressing both kinds of indicators, that is, developing the basic

enablers, while eliminating or ameliorating the primary inhibitors. This is consistent with the findings of research in educational change, including those related to the implementation and development of school library programs as cited in Tables 1.1 and 1.2.

Another approach (McKenzie, 1998) to developing a plan for creating an information literate school community is that of analyzing a school in terms of information literacy traits, which are presented in summary form here:

- Invention – Both teachers and students are increasingly engaged in the discovery and building of meaning.
- Fluency – Teachers are becoming more comfortable with the need to move back and forth between an array of instructional roles and strategies.
- Support – The school provides ongoing support for all learners to develop thinking and information skills. These opportunities are rich and frequent.
- Navigation – Teachers and students are developing efficient navigation skills. They can find their way through the new information landscape (as well as the old) with little lost time.
- Searching – Teachers and students are sharpening search skills. They apply Boolean logic. They search with appropriate syntax. They employ powerful search engine features to carve through mountains of information on their way to the most relevant sources.
- Selection – Teachers and students are honing selection skills. They know how to separate the reliable from the unreliable source. They recognize propaganda, bias and distortion.
- Questioning – Teachers and students know how and when to employ dozens of different types of questions.
- Planning – Teachers and students are acquiring additional planning and organizational skills. They learn when a particular stage in the research process might prove most timely and when a particular strategy might produce the best results.
- Interpretation – Teachers and students convert primary sources and raw data into information, and then they proceed further (beyond information) to insight. They create new knowledge.
- Deep Thinking – Teachers and students combine deep thinking and reading with a wide-ranging search for relevant information. Information literacy includes awareness of the limitations of information and the types of thinking required to move beyond those limitations.
- Commitment – All curriculum documents include clear statements regarding the information literacy expectations that are developmentally appropriate for each grade level.

The overview of previous research related to the roles that the principal and the school librarian play in the implementation and development of effective school library programs has been presented in this chapter to provide a framework for interpreting the findings of the international study. The discussion of the concept of an information literate school community has been presented to give a sense of what an effective school library program might mean in terms of enhanced and enriched learning for all members of a school community in the 21st century.

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CHAPTER TWO

2. Background to the Study

The review of the research and professional literature in Chapter One suggests that there has been long and widespread interest in the roles of those involved in developing school library programs, particularly in the role of the principal and the role of the school librarian. The authors of this Professional Report shared that interest, and developed in Australia and Canada, programs of research investigating the role of the principal in relation to school library programs and services. Because that work provided the foundation for the international study, an overview of those programs of research is provided here, in addition to descriptions of how the international study came about and explanations of the parameters and contexts within which the international study was conducted in seven different countries.

2.1 Qualitative Studies in Canada and Australia

During the 1990s, the Canadian and Australian researchers involved in the international study developed programs of research centered around the role of the principal in relation to school library programs. The researchers used qualitative methodologies suitable for in-depth studies conducted in schools. They identified schools with well-established library programs, and they interviewed principals and school librarians using semi-structured interview schedules. The interviews were recorded and transcribed, and then analyzed using a content analysis approach.

In Canada, LaRocque and Oberg (1990) examined the role of the principal as one element of school culture that facilitated the successful establishment of school library programs. The study was conducted in a small urban public school district in Alberta, Canada that was reputed to have exemplary school library programs. The researchers interviewed twelve individuals – the superintendent and school library consultant at the district level, and at the school level, the school librarian and the principal or vice-principal from five district schools. The five schools were selected to participate in the research by the district school library consultant.

In Australia, Hay and Henri (1995) examined the role of the principal in developing and supporting an information literate school community. The successful adoption of the information and communication technologies (ICTs) that enable a school to pursue the goal of information literacy was found to require the same kind of active support from the principal as does the integrated library program. This research project was undertaken in public schools of a metropolitan school region in New South Wales, Australia. The region had been at the forefront of school library development for some years. A panel of nine key people, using a Delphi technique, assisted in the nomination and selection of the research sample – schools reported to have successful, integrated school library programs and a whole school commitment to information literacy. The researchers interviewed the principal and school librarian

in six schools. From the Australian and Canadian research outlined above, five themes emerged that explained what principals do to support the implementation of successful school library programs, that is, instructional programs that enhance teaching and learning in the schools.

Theme 1: Understanding and believing in a collaborative school library program

Principals created the school context within which the principal, teachers, and school librarian could work in a collaborative way, and they conveyed the importance of the library program to teachers. The principals demonstrated active personal commitment for the school library program by making explicit statements about the value of the program and by being visible in the library. Principals who also taught in the classroom modelled this commitment by using the program in their teaching. Principals interpreted the role of the school library program to students and parents and to district level personnel and other principals. The principals demonstrated an understanding of the value of information literacy and provided encouragement to teachers to embrace it.

Theme 2: Recognizing the importance of the school librarian

Principals spoke highly of the school librarians in their schools and gave evidence that they trusted their school librarians' knowledge and expertise. They made time for meetings with the school librarian and encouraged their personal and professional development. Principals expected their school librarian to have a vision of the future development of the library program and/or information services, and to have or develop the skills needed to be leaders in information literate school communities. They were prepared to support the school librarian as a quasi-senior member of staff as long as the school librarian met those expectations.

Theme 3: Ensuring collaborative planning time and other program resources

Principals, through their management and administrative role, ensured the provision of adequate program budgeting for materials and for information and communication technologies. They arranged for flexible scheduling that allowed collaborative work between teachers and school librarians. Provision of time for collaboration was regarded as a critical element and was provided through two main tools: the schedule and the budget. In addition to providing a flexible schedule for the school librarian, principals built into school schedules common planning times for teachers at the same grade or level. Some principals also used some of their administrative time to release teachers from their classrooms for planning, and others used discretionary funds to hire substitute teachers or to provide additional clerical support in the library.

Theme 4: Providing appropriate staff development

Principals encouraged teachers' professional development in relation to the school library program by providing in-service and by providing time for discussions related to the program in staff meetings. Principals also provided resources to school librarians to allow release from teaching to undertake professional development.

Theme 5: Monitoring implementation of the collaborative school library program

Principals ensured that the school library program was integrated into the planning and evaluating structures of the school. Principals made it clear that teachers were expected to be involved in the school library program on an on-going basis. For example, they required that evidence of collaboratively planned projects be provided as part of the teachers' annual performance review.

Findings from the Canadian study were presented at the 1990 conference of IASL (LaRocque & Oberg, 1990), and findings from the Australian study were presented at the 1995 IFLA Schools Section Open Session as well as in Australia (Hay & Henri,

1995; Henri & Hay, 1996). The qualitative studies conducted by Oberg and LaRocque, and by Hay and Henri, provided analyses of the ways that principals working within information literate school communities are able to support the work of school librarians. The projects also identified the methods used by school librarians to involve principals in the development of effective school library and information services.

2.2 Need For A Quantitative Study

Interest in an international study involving a quantitative investigation began at the 1995 IFLA conference where Hay presented a paper on the six-school study in Australia. While the qualitative studies had provided in-depth understanding of a small sample of schools in two countries, many school library practitioners and researchers felt that it was important to test the validity of these findings through a quantitative study. Having identified the factors of influence and support that exist between the principal and the school librarian through qualitative studies, the Australian and Canadian researchers were challenged to undertake the design and administration of an international study that would use quantitative methods to test the existence of these factors across a broader range of schools and in a larger number of countries. The researchers decided that the study would involve surveying both principals and school librarians about principal support, making use of data and the themes from the original qualitative studies. A number of school library practitioners and researchers from other countries stepped forward to participate in designing and implementing an international research project entitled “The Role of the Principal in an Information Literate School Community.”

2.3 Support from IFLA and IASL for the International Study

In 1996, the research team obtained funding from the International Association of School Librarianship (IASL) and the International Federation of Library Associations and Institutions (IFLA) for an international study of the role of the principal in developing an information literate school community. The study would be carried out in seven countries: Australia, Canada, Scotland, Finland, France, Japan, and South Korea.

In the planning process, priority was given to the establishment of an International Research Reference Group (IRRG) composed of researchers from the seven countries who were interested in being involved in the international study (see Table 2.1). The role of this group was to: (a) provide input and advice regarding the adaptation and translation of the quantitative and qualitative instruments for their country; and (b) plan and administer the procedures for data collection, analysis, and reporting of findings for their country. The research team organized a full day session for the IRRG and other interested school library practitioners and researchers at the 1997 IFLA conference. Four papers were given on research related to the role of the principal in an information literate school community (Dogg Hafsteinsdottir, 1997; Henri & Hay, 1997; Moore, 1997; Oberg, 1997), and a planning workshop was held for IRRG members.

Table 2.1 International Research Reference Group*

Australia	James Henri Lyn Hay	Senior Lecturer Lecturer, School of Information Studies, Charles Sturt University, Wagga Wagga
Canada	Dianne Oberg	Associate Professor, School of Library and Information Studies, University of Alberta, Edmonton
Finland	Liisa Niinikangas	Information Specialist and Partner, Lighthouse Consulting, Tampere
France	Colette Charrier	President of FADBEN and Teacher-librarian, Lycee Guez de Balzac, Angouleme
Japan	Setsuko Koga	Professor, Department of Education, Aoyama Gakuin University, Shibuyaku
Scotland	James Herring	Head of School (Acting), Department of Communication and Information Studies, Queen Margaret College, Aberdeen
South Korea	Yoon Ok Han	Professor, Department of Library and Information Science, Kyonggi do University, Suwon-City

* Titles and affiliations in 1998.

2.4 Parameters of the Study by Country

The researchers in each country defined the parameters of the study in their country in a way that was most appropriate to their local contexts. There were no attempts at countrywide surveys. In several cases, the study had to take into account the fact that not all schools in the country or in the region(s) selected for the study had school librarians. In other cases, only secondary schools could be included in the study because elementary schools did not have school librarians.

In Australia, the study was conducted within the Australian Capital Territory (ACT), a relatively homogenous socio-political area with a population of approximately 310,000. The study included all schools within the ACT, both public and Catholic systems, who employed both a full-time principal and a school librarian. There were 191 public schools (with K-6, 7-10, and 11-12 schools) and 55 Catholic schools (with K-6 and 7-12 schools) surveyed.

In Canada, the study was conducted in the elementary and secondary schools of the province of Alberta in western Canada. Not all schools in Alberta have school librarians, and no school district in the province is large enough to have 200 schools with school librarians. The sample for this study consisted of 252 schools, scattered across the province, each with a school librarian assigned at least half time to the school library program.

In Finland, the study was conducted in 86 upper secondary schools in the south of the country. The Helsinki region, including Helsinki, Espoo, Vantaa, and Kauniainen (the only metropolitan area in Finland with a population of more than one million), was the target area of the research. Two towns to the north of Helsinki, Tampere (population of 180,000) and Lahti (population of 70,000), were also included. Lahti is a town with experimental mixed upper secondary and vocational schools and is well known for its school library development.

In Scotland, virtually all state secondary schools (those with students aged 11-18) have professional librarians who are referred to as 'school librarians'. The study included only state secondary schools, since primary schools in Scotland do not have school librarians and some

schools in the private sector do not have qualified librarians. Two hundred schools (50% of all secondary schools in Scotland), with an even balance of rural and urban schools, received the questionnaire.

In Japan, the study was conducted in 40 high schools serving students aged 15-18 in Tokyo (an urban context), and in 60 primary and junior high schools serving students aged 6-14 in northern and central Japan (primarily a rural area).

In South Korea, the study was conducted across 11 high school districts of Seoul, surveying 141 high schools with school librarians. All of the high schools in Seoul do not have school librarians – in all of Korea there are 252 school librarians, 175 of whom are in high schools.

In France, the study was conducted in two regions, Grenoble and Nice. The researchers contacted one in three of the schools in these two regions. A total of 295 secondary schools (colleges serving students aged 11-15 and *lycees* serving students aged 15-18) received the questionnaires. The schools were located in different geographical areas: urban, rural, remote, mountainous and seaside. The researchers in France completed their own data analysis and reported overall findings at the 1998 IFLA conference. However, the data from that study is not yet available in English, and therefore could not be included in this paper.

In summary, in Australia and Canada the studies were conducted in elementary and secondary public and Catholic schools. Each school in the Australian study had a full-time principal and at least a part-time school librarian; each school in the Canadian study had at least a half-time school librarian. In Finland, Scotland, France, South Korea, and Japan, the studies were conducted in secondary public schools. Most of the schools in the Finland study had a part-time school librarian. Each school in the studies in Scotland, South Korea, and Japan had a full-time school librarian.

2.5 Educational Contexts of the Study

Among the seven countries involved in the research project, there were great variances in educational systems and in provision for and staffing of school libraries. In Japan and Korea, public education is organized at the national level and administered in quite an hierarchical fashion. In Australia, Canada, Scotland and Finland, the trend is an increasing move towards decentralization of educational decision-making. Readers need to keep these differences in mind in looking at the findings from the individual countries and the findings of the cross-country comparisons. Some of these variances are illustrated below in two ways: first, by providing a description of some special features of the educational system and of school libraries in Finland, and then by comparing some aspects of the educational systems and of school libraries in Australia and Canada.

In Finland, the Ministry of Education is the central national coordinating body for Finnish education. The Finnish education system is comprised of compulsory comprehensive schools (Grades 1-9), post-compulsory general education and vocational schools (Grades 10-12), higher education, and adult education. The municipal authorities have specific responsibility for schools providing Grade 1-12 education. Recently, the whole Finnish education system has undergone a profound change: a new educational legislation took effect in 1999. From a rigid and highly centralized system of top-down administration, Finland is moving towards a more flexible system of decentralized decision-making. This means much greater autonomy for educational institutions. Officially there were no school libraries in Finland since it was considered that the network of public libraries was sufficient for the needs of school children. However, most schools did have libraries. Most were run for 1-5 hours per week, usually by

teachers without library qualifications; however, there were a growing number of very modern libraries called 'learning support centers' or 'information centers' in the vocational schools and the new polytechnics. In the new 1999 education legislation, school libraries were mentioned for the first time: "In a school there can be a school library for achieving the pedagogical goals of the school. The school library will be financed by the budget of the school."

In both Australia and in Canada, education is a state or provincial matter, and a decentralized decision-making model prevails. The provincial or state ministry of education sets the goals of schooling, establishes curriculum guidelines and requirements, and evaluates student learning, but the means by which goals are met and curricula are implemented are left to local decision-makers at the school or regional jurisdiction level. The involvement of the national government is stronger in Australia than in Canada; where in recent years, the Australian government has attempted to provide a national agenda. Government funding for education at all levels has declined significantly in the last decade in both Australia and Canada, but there are considerable variances in school library provision in the two countries. In Australia, for example, the status of school librarianship (known as 'teacher librarianship') is strong. The majority of secondary schools employ at least one teacher as a full-time 'teacher librarian' who is likely to be qualified in library and/or teacher librarianship studies. However, many primary schools in Australia do not employ a full-time 'teacher librarian', and it is more likely that this teacher will not have undertaken a university course in library and/or teacher librarianship studies. In contrast, in Alberta, where the Canadian study was conducted, the status of school librarianship is much weaker. Only about 15% of the elementary and secondary schools have more than a half-time 'teacher-librarian', and only about half of those 'teacher-librarians' are qualified in library and information studies. In both Australia and Canada, however, school librarians are expected to work in collaboration with teachers and principals to develop information literacy programs for students. Schools that identify their school librarian as an educational leader, and one who is information technology literate are likely to be expanding the traditional role, and the school librarian may well be the school's information and communication technologies coordinator.

2.6 Limitations of the International Study

The qualitative studies conducted in Australia and Canada had provided in-depth understanding of the role of the principals in developing effective school library programs. These qualitative studies, conducted in a small number of schools, took account of the educational culture – including such aspects as administrative structure, curriculum and pedagogy, and teacher education – in which the school library programs were developed. These were interpretive studies, not designed to generate generalizable findings with predictive value; instead, they were designed to allow transferability of findings. That is, on the basis of the information provided by the researchers, those wishing to transfer or apply the findings from the study situation to another situation will be able to decide whether transferability to that other situation is possible or advisable. In this way, the insights into complex organizations and programs generated through interpretive studies can provide understandings that can be used by practitioners, educators, and researchers to guide and direct policy and practice.

The researchers involved in the international study attempted to test the validity of these findings through a quantitative study. They undertook the development of quantitative instruments to test the existence of the findings generated from their qualitative interpretive studies across a broader range of schools and in a larger number of countries. The international study of the role of the principal in developing school library programs was designed to collect and analyze primarily quantitative data about the perceptions and beliefs of principals and school librarians in a diverse range of countries and educational settings. However, practitioners, educators, and researchers who wish to transfer or apply the findings from the international study must keep in mind the extent to which data collection and data analysis has been shaped, for example, by the different approaches used to select study participants, by the variations in response rates, and by the different educational cultures in the participating countries.

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CHAPTER THREE

3. Research Design and Methodology

The international study of the role of the principal in developing school library programs was designed to collect and analyze primarily quantitative data about the perceptions and beliefs of principals and school librarians in a diverse range of countries and educational settings. While the qualitative studies conducted in Australia and Canada had provided in-depth understanding of a small sample of schools in two countries, the researchers felt that it was important to test the validity of these findings through a quantitative study. Having identified the factors of influence and support that exist between the principal and the school librarian through qualitative studies in two countries, the researchers undertook the development of quantitative instruments to test the existence of these factors across a broader range of schools and in a larger number of countries.

The data for the study was collected from principals and school librarians through questionnaires. The questionnaires included both closed-choice questions and open-ended questions. The responses to closed-choice questions were analyzed using the software program, SPSS (Statistical Package for Social Sciences) for Windows 3.1; the responses to open-ended questions were analyzed using a content analysis approach facilitated by the use of the software program, The NUDIST*QSR.

This chapter describes the work of the research team in relation to the design of the research instruments (the questionnaires), the collection of the data, and the analysis of the data.

3.1 Design of Research Instruments

The questionnaires used in the international study were developed and tested in Australia. The questionnaire items were based on interview questions, data categories, and key factors derived from the original qualitative studies. The piloting of the questionnaires was conducted in Australia using standard hard copy questionnaires. In addition, the Australian researchers attempted to use the Internet to distribute the pilot instruments to volunteer members of the Australian professional listserv, OZTL_NET; however, the inability of many respondents to translate email attachments resulted in the questionnaires being faxed or sent by regular postal mail to the majority of the participants in the piloting.

Two model questionnaire sets – one for principals and one for school librarians – were developed. The three instruments in each of the questionnaire sets included both closed-choice and open-ended questions. The closed-choice questions in Instrument 2 employed a five point scale, with a zero weighting for the additional category ‘*Cannot Comment*’. The traditional five point scale was rejected because the instruments were lengthy and it was felt that there might be an interest in over-using a mid point.

The following discussion explores the design of each of the three instruments used in the study and some of the problems encountered in the data collection process. The researchers also describe the online approach to data collection that was used in the study and explore the advantages and challenges of such an approach.

3.1.1 Instrument 1 – Demographics

Instrument 1 was designed to identify demographic variables, including the personal and professional characteristics of the principals and school librarians and characteristics of individual schools for each of the country samples. Principal and school librarian respondents were required to complete different versions of Instrument 1. Principals and school librarians were required to provide their personal and professional details. In addition, the principals were asked to provide some whole school data, while the school librarians were asked to provide specific school library resource center (SLRC) data. The researchers split the demographic data across both versions of Instrument 1 to avoid duplication of school-based demographic data and to reduce the data input burden for both principals and school librarians. Examples of the Australian online versions of Instrument 1 are included in the Appendices and also can be found at http://farrer.riv.csu.edu.au/principal/survey/PR1_au.html and http://farrer.riv.csu.edu.au/principal/survey/TL1_au.html.

Principal Demographics

Table 3.1 summarizes the demographic variables for the principal version of Instrument 1. Question 1 contained closed-choice questions, where respondents were asked to select a category or value that best defined their individual school type. A standardized set of values – ‘government’, ‘community’ and ‘private’ – was devised to define the different types of school systems, and then the labels of these values were edited into the preferred terminology of the educational system for each country. For example, the Australian principal instrument used only the two values of ‘government’ and ‘non-government’, whereas the Finland instrument used all three standardized values. The Finland version also asked for two additional types of values: (a) whether the school was identified as a ‘specialty’ school (ie. arts, sports, etc.); and (b) whether the school was included in the experimental school reform movement – both specific to current educational administration in Finland.

A set of values for the grade variable type was also customized to reflect the climate of each country’s school system, and included an additional ‘open’ value of ‘Other’ to ensure that all grade ranges were identified correctly. For example, the Canadian instrument listed the range of grade values as ‘K-6’, ‘7-12’ and ‘Other’, whereas the Japan instrument used the values ‘1-6 elementary’, ‘1-3 middle school’, ‘1-3 high school’ and ‘Other’. The customization of Principal Instrument 1 for each country lead to a total of 8 grade level values across the seven nations including K-6, 1-6, K-10, 7-9, 7-10, 7-12, 10-12 and 11-12. The integrity of each of these values was kept, rather than collapsing them into, say, three standardized values, for the purpose of permitting more meaningful future analyses, for individual countries and for cross-country comparisons.

Questions 5 and 6 were also closed-choice questions for the variables of principal age and gender. Respondents were asked to select from the age range scale of ‘20-29,’ ‘30-39,’ ‘40-49,’ ‘50-59’ and ‘60+’ years, and from the gender scale of ‘Female’ or ‘Male.’ All other questions were answered using an open field, rather than closed value scales. Some countries encountered problems with the open field design of the

Table 3.1 Variables for Principal Instrument 1 (PR1)

Question and/or	Variable	Value
1. Type of school**	System	Government Community Private
	Grade	K-6 7-10

		11-12
		Other
	Location	Rural
		Urban
2. Size of school	No. of teachers	
	No. of teacher librarians	
	or days/hours per week	
3. No. of Internet connections in school		
4. No. of Internet access points (terminals) in school		
5. Principal's age		
6. Principal's gender		
7. Principal's academic qualifications		
8. No. of teaching years prior to appointment as principal		
9. No. of years in current position as principal		
10. No. of years in Executive positions:		
11. No. of teacher librarians worked with since becoming a principal		
12. Membership in professional associations (please name):		

** Note: The values for the type of school variables varied across countries.

second variable in Question 2 where principals were asked to identify the number of days or hours per week worked by the school librarian where the position was not full-time, ie. 5 full school days per week. Some respondents indicated a number without clarifying whether that value was representing either a unit of one day or a unit of one hour. The data entered by subjects was 'open', and the instrument designers had not foreseen the number of ways this data could be packaged. For example, a school librarian who taught for 3 days a week in a school could be entered as either: (a) 3 days; (b) 0.6 of a position, or (c) 18 hours per week. While the majority of data could be coded correctly, some data was ambiguous and could not be used as an accurate measure. This was the major flaw in survey instrument PR1. This flaw led to the data for this variable being invalid for the country of Japan, whereas this problem did not arise for South Korea because only those schools employing a full-time school librarian were surveyed.

Questions 3 and 4 required principals to record the total number of Internet connections in the school and the total number of Internet access points (or computer terminals) in the school. These questions were designed to identify the extent of Internet access throughout the school. However, both questions caused some confusion for respondents in that some respondents could not make a distinction between the terms 'connection' (ie. the number of connections via a modem pool or dial-up connections available at any one time) and 'access points' (ie. the number of terminals throughout the school that allowed users to access the Internet). As a result, the data from both Question 3 and 4 could not be reliably used. However, the term 'access points' seemed to be better understood by respondents in most countries and, therefore, Question 4 data seems to reflect more accurately the level of Internet access for each country.

The remaining six questions on Principal Instrument 1 focused on principals' professional education and experience. For principals' academic qualifications (Question 7), the assigned value range consisted of 'Bachelors Degree or undergraduate equivalent,' 'BA/Diploma Ed/Honours,' 'Masters or postgraduate degree' and 'PhD.' Questions 8, 9 and 10 were designed to determine how many years the principal respondents had been teaching before taking on the position of principal, how many years they had held their current school position as principal, and the total number of years that the respondents had functioned at the school executive level. Question 11 sought to identify the number of school librarians the respondent

had worked with since becoming a principal, while Question 12 required respondents to list the names of professional associations to which they belonged.

School Librarian Demographics

The school librarian version of Instrument 1 was designed to identify demographic variables of the school library resource centre (SLRC) and the school librarian position, as well as characteristics of the individual person holding the position of school librarian in the school. Table 3.2 summarizes the demographic variables for the school librarian version of Instrument 1 (referred to as TL1). The term ‘teacher librarian’ or ‘TL’ was the nomenclature used in each of the three instrument blueprints for IRRG members’ questionnaire sets – these were then edited to reflect the preferred nomenclature for the school librarian position within their own country.

Questions 1 and 2 were designed to identify the level of Internet access in the school library resource centre compared with that in the overall school (based on Questions 3 and 4 in the Principals Instrument 1). Once again there was some confusion among respondents about the difference between ‘connections’ and ‘access points’. Questions 3 and 4 were closed choice questions for the variables of school librarian age and gender. Respondents were asked to select from the same age and gender scales used for principals. The remaining nine questions on this version of Instrument 1 focused on the school librarian’s professional education and experience. An additional value of ‘Certificate/TAFE/Trade’ was included in the school librarians’ academic qualification (Question 5) range to that of the principal range.

While Questions 6 and 7 asked how many years the respondents had been teaching before taking on the position of school librarian and how many years they had held their current position as school librarian, Questions 9 and 10 were designed to determine the activity of the school librarian in informal leadership (‘pseudo-executive’) positions and/or formal executive positions. Question 8 was designed to identify whether the school librarian position had been filled using a merit selection process, as opposed to allocation of school librarian positions according to internal transfer coordinated at the educational system level. Questions 11, 12 and 13 were used to identify the level of professional development activity of the school librarian based on membership in professional associations and on listservs, and reading of professional journals.

Table 3.2 Variables for Teacher Librarian Instrument 1 (TL1)

Question and/or Variable	Value
1. No. of Internet connections in SLRC	
2. No. of Internet access points (terminals) in SLRC	
3. Teacher librarian's age	
4. Teacher librarian's gender	
5. Teacher librarian's academic qualifications	
6. No. of years of teaching prior to appointment as teacher librarian	
7. No. of years in current position as teacher librarian	
8. Were you appointed to an advertised position?:	
9. Are you an Advanced Skilled Teacher (AST)?	
10. No. of years served in Executive positions	
12. Membership in professional associations (please name):	
12. Subscription to teacher librarian listservs	Yes
	No

	If Yes, please name these listservs	
13. Teacher librarian journals read (please name)		

3.1.2 Instrument 2 – Perceptions and Beliefs

Instrument 2 was designed to identify the level of principal support for the school library program and for the school librarian. Principals answered 50 questions while school librarians answered 53 questions, using 5-point rating scales. Instrument 2 was divided into two parts: (a) perception factors, and (b) belief factors. The Australian online versions of Instrument 2 can be found in the Appendix of this volume and also have been mounted at http://farrer.riv.csu.edu.au/principal/survey/PR2_au.html and http://farrer.riv.csu.edu.au/principal/survey/TL2_au.html.

Part A: Perception Factors

Principal and school librarians were required to complete identical versions of the 31 perception questions in Instrument 2. Respondents were asked to firstly rate the level of attention they perceived the principal to give each item at present using the rating scale, *A Lot - Some - Little - None - Cannot Comment*, and secondly, to rate (using the same scale) the level of attention they would like to see the principal give each item in the future. Table 3.3 groups the perception items of principal support surveyed in Part A according to the four types of principal support identified earlier in Chapter One (Table 1.2).

Part B: Belief Factors

Principal and school librarians were required to complete different versions of belief statements in Instrument 2. While both respondent groups were asked to indicate the strength of their belief for each of the items using the scale, *Strongly Agree - Agree -*

Table 3.3 Principal Support for the School Library Program

Support for the School Library Program	Perception Question No./Item
Working directly with teachers	3. Facilitate professional development (PD) of staff 5. Support collaboration between TL & staff 9. Encourage staff involvement in development of SLRC 10. Encourage staff to invest time to CPT with TL 11. Facilitate staff PD in understanding & use of IT 12. Inform new staff re importance of collaboration with TL 24. Encourage staff to use wide range of resources in teaching 31. Seeks staff feedback re quality of SLRC services
Demonstrating personal commitment	4. Advocate TL role in school curriculum 14. Encourage staff debate re information policy 18. Visit SLRC to observe work of TL 22. Seek advice from TL re whole school information management
Enabling the school library program	1. Facilitate development of ILSC 2. Ensure information literacy in school plan 6. Ensure SLRC reflects school goals 7. Ensure appropriate allocation of support staff 8. Allocate adequate, flexible time for TL 13. Support currency/relevancy of SLRC collection 15. Ensure significant funding allocated to SLRC budget 16. Seek outside funding to supplement SLRC budget 28. Encourage information skill integration and assessment by

	staff 30. If TL not on key committee, PR ensures SLRC needs addressed
Support for the Teacher Librarian	Perception Question No./Item
Providing visibility/importance	17. Engage in regular/timely communication with TL 19. Encourage TL to debate/justify current practice 20. Ask questions of TL re teaching & learning 21. Rely on TL to keep PR abreast of developments re TL role 23. Encourage TL to take risks 25. Encourage TL leadership in development of information skills continuum 26. Work with TL to develop his/her personal PD plan 27. Advocate TL as member of key school-wide committees 29. Provide time release & funding for TL's ongoing PD

Disagree - Strongly Disagree - Cannot Comment, the principal instrument consisted of 18 belief statements whereas the school librarian instrument consisted of 21 belief statements. Table 3.4 lists the belief statements (in a shortened version) regarding principal support surveyed in Part B. These belief statements were designed to indicate the strength of and alignment between principal and school librarian beliefs about the roles of principals and school librarians in developing and supporting an information literate school community (ILSC). The belief statement responses can also be used to shed more light on the results found regarding principal attention in Part A. In retrospect, asking the additional questions of both principals and school librarians would have increased the value of the data generated from these questions. For example, in relation to the school librarian role being good preparation for the principal position, the principals might have had quite different views from those that were expressed by the school librarians and this information would then enrich school librarians' understanding of how their role is perceived by the principal.

Table 3.4 Common Beliefs

Question No.	Belief Statements
32	TL as a key player in school's information literacy programs
33	TL ought to have education and librarianship qualification(s)
34	TL ought to be appointed according to a merit selection process
35	An unqualified TL appointment should undertake a specialist qualification in TLship
36	TL should spend all of his/her day in the SLRC
37	Staff development plans should address development of teachers' information literacy
38	TL should be timetabled to cover classroom teachers' RFF time
39	TL is an information technology (IT) leader in the school
40	TL should provide flexible timetable for needs of individuals, groups, whole classes
41	Internet access should be available through the SLRC
42	Students should have individual access to the SLRC during class time
43	Principal should supervise the TL
44	TL should provide appropriate inservicing to teaching staff
45	Principals should act as role models/mentors to staff reticent about use of IT
46	CPT should occur in classrooms as well as SLRC
47	When TL is absent, it is necessary to fill position with qualified replacement
48	TLs should be supported to achieve AST status and appropriate executive positions
TL49/ PR50	PR is well placed to judge TL's professional competence

PR49	Principal Beliefs (Additional) PR's acceptance of TL's professional judgement relates directly to his/her credibility
TL50	Teacher Librarian Beliefs (Additional) TL is responsible to educate PR about role of the TL
TL51	TL should inform PR about issues affecting potential of SLRCs
TL52	TL is good preparation for position of Principal
TL53	TLs seek mentorship from teaching staff in addition to that provided by PR

3.1.3 Instrument 3 – Additional Information

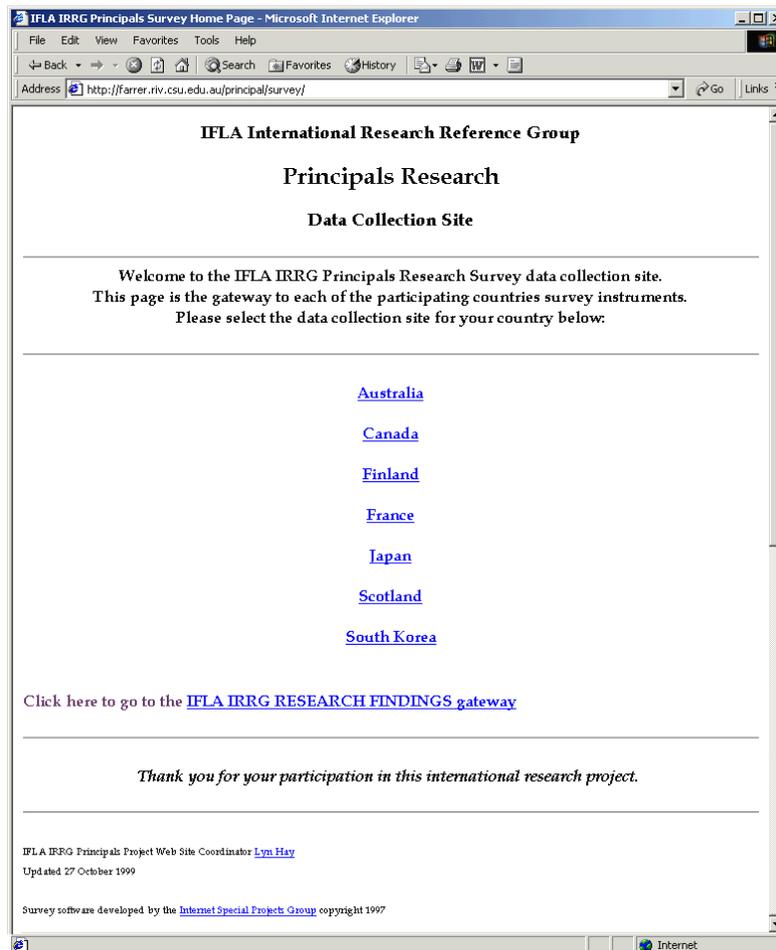
Instrument 3, composed of open-ended questions, was designed to elicit additional information from principals and school librarians in a qualitative format. Nine of the open-ended questions were identical for principals and school librarians. These questions invited the respondents to make comments related to the strengths and challenges of the school library; the school librarian's contributions to teaching and learning; the nature of information literacy; barriers to integration of information skills; the promotion of the school library; and the respondents' roles in developing and supporting an information literate school community. School librarians were asked two additional questions that were related to ways they maintained their credibility as school librarians and ways that their principals could provide them with additional support. The Australian online versions of Instrument 3 can be found at http://farrer.riv.csu.edu.au/principal/survey/PR3_au.html and http://farrer.riv.csu.edu.au/principal/survey/TL3_au.html.

In retrospect, asking principals the two extra questions would have provided useful information about school librarian credibility and about the nature of principal support. The level of response to these open-ended questions varied from country to country with the Canadian and Australian respondents providing the most lengthy and detailed comments. This raises some interesting questions. This may have been related to the fact that the open-ended questions were framed initially by the Australian researchers; the questions may have been framed in terms that were more meaningful for the Australians and Canadians – two respondent groups with relatively similar educational systems compared with those of the other countries.

3.2 Developing an Online Approach to Data Collection

In-school research is typically slow. Gaining approval to conduct the research involves meeting the demands of approval protocols: completing numerous forms, providing sample instruments, indicating timelines, and dealing with many levels of authority. In addition, the candidate respondents, especially principals, are very busy professionals. School and district authorities are often reluctant to approve proposals that will add demands to already over-worked professionals. It was with these factors in mind that the decision was made to transfer the administration of the questionnaires from a 'snail-mail', paper-based approach to an online, Web-based approach.

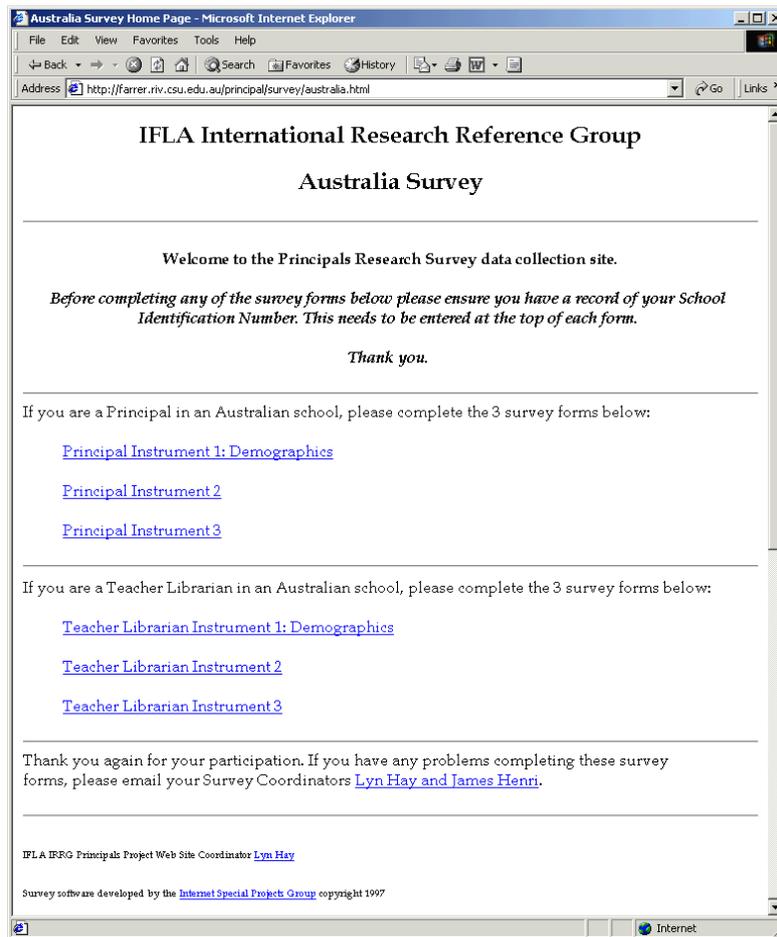
Figure 3.1 IRRG Principals Survey Home Page



Lyn Hay was the IRRG Website Coordinator and consulted with IRRG members to adapt and translate the questionnaires to be mounted as interactive HTML forms on the IRRG Principals Project website. Figure 3.1 illustrates the homepage of the IRRG Data Collection site at <http://farrer.riv.csu.edu.au/principal/survey/>.

Each country was given its own homepage on the data collection site. This was designed to provide a direct gateway for subjects wishing to submit their answers to questions online. Figure 2 illustrates the Australian homepage on the IRRG Data Collection site at <http://farrer.riv.csu.edu.au/principal/survey/australia.html>. This format became a template for all other country homepages.

Figure 3.2 Australian Data Collection Home Page



From the country homepage, both principal and school librarian respondents could elect to complete each questionnaire. Email contact details for the IRRG members were provided on each webpage as well as the email contact details for the Website Coordinator, and the Internet Special Project Group (ISPG), responsible for the programming design and support of online data collection tools sitting behind the IRRG gateway website.

Each school was assigned a School Identification Number (SIN) which was an essential requirement for online data entry. The principal and school librarian of a school were given the same number, ensuring the data sets from each could be electronically matched and manipulated in preparation for the data analysis phase. Three instruments were used to collect data. Instrument 1 included a combination of pull-down menu selection of set fields, and short and open-ended question fields. Instrument 2 collected data using a series of pull-down menus. Instrument 3 collected responses to 12 open-ended questions which were entered using a series of open window fields. All raw data was tagged by the SIN and the instrument number. An 'accept data' webpage was generated to confirm a respondent's successful submission of an online instrument.

The online questionnaires employed a simple Common Gateway Interface (CGI) script to capture data in a form that could be processed by Standard Generalized Markup Language (SGML ISO 8879:1986, see <http://www.oasis-open.org/cover/sgml-xml.html>) tools. The CGI scripts were written in Python (see <http://www.python.org>), a programming language that is much easier to write than Perl, the language popularly used for scripting (see <http://www.perl.org>). Python was also used to convert the questionnaire data into a suitable form for processing.

3.3 Data Collection

Each IRRG member was responsible for the collection of data in their country and for the entry of those data via the Web database at the School of Information Studies, Charles Sturt University (CSU). Where possible, the respondents were asked to enter their responses on an electronic format of the questionnaire, ie. accessed online via the Web. There was variation in data collection and data entry across the seven countries, and in no country was there 100% electronic data entry from respondents. In five of the countries, the data was collected using paper questionnaires. In four of these, the researchers then entered the data onto the CSU website. In non-English speaking countries, this second step also involved translating non-numeric data into English. In one non-English speaking country, this additional step proved too daunting, the data was never entered onto the CSU website, and the data was analyzed by a local research agency. In Canada and Australia, some respondents entered their data directly onto the CSU website, while others completed paper questionnaires which were then entered onto the website by the researchers. The Canadian respondents had the highest rate for data entered directly onto the CSU website.

3.4 Data Analysis

The quantitative data from the CSU website was analyzed using SPSS by Hay and Henri (with Natasha Wood) at Charles Sturt University. Frequency analysis was used to get an overall picture of the data, and t-tests were used to check for significant differences between the responses of principals and school librarians. The qualitative data from the open-ended questions was analyzed using a framework and procedures developed by Oberg at the University of Alberta.

3.4.1 Data Analysis for Instruments 1 and 2

Coding

The data analysis process for the quantitative Instruments 1 and 2 was developed using the Australian data. As each country's data was analyzed a comparative coding masterfile was developed to accommodate the additions or changes made to instruments of individual countries. A coding sheet was developed for coding of the demographic data from Instrument 1 for each country. Variables were created in SPSS for Windows 3.1 beginning with SIN, TL_PR (Teacher-Librarian-1 or Principal-2), and Country. Variables for perceptions, both future and present, in Instrument 2 were created for each question, ie. *q1f*, *q1p*, *q2f*, *q2p*, and belief questions, ie. *q32b*, *q33b*. The number '999' was entered for missing values section under each variable. Each of these variables were then labelled under the Label sections, so that coding was explained under each variable by double clicking on the variable label in the grid/data file of the SPSS .sav file. All other settings remained as the default settings. All perception questions in Instrument 2, both present and future, were coded in the following manner: 0 = no comment; 1 = none; 2 = a little; 3 = some; and 4 = a lot. Beliefs were coded in the same manner: 0 = no comment; 1 = strongly disagree; 2 = disagree; 3 = agree; and 4 = strongly agree.

Frequency Analysis

Frequency analysis was carried out on Instrument 1 data to provide useful data for reporting, including quick and tangible figures, and a summary of information of nominal and ordinal scales. An initial frequency analysis was carried out selecting minimum and maximum values to be shown in order to check that all data was entered correctly, and that 999 had been coded as a missing value and would not be included as a valid number, and therefore used in analyses. Any errors to data entry were corrected at this stage. The data file was then split (using the 'split file' command), so that all analyses would be run for school librarians and principals as two separate groups. The File Split function was used under the variable TL_PR.

Valid percentages were used in giving the frequency data. Thus all 999 responses were excluded from the calculations, eg. if there were 68 respondents and of those 10 were missing (999 codes), the percentages were calculated from the 58 respondents who had valid responses for that variable. Percentages were then recorded for the report in order of TL variables, PR variables and then School variables. Percentages of each response for each variable were recorded, eg. with gender, it might be that 59% of school librarians were female and 41% were male.

Descriptive Data

Descriptive data (mean and standard deviation) were used to provide a quick summary of the present, future and beliefs data (ordinal data, 2 is more than 1 in value, etc.). Due to the coding and the later use of present, future and belief data in analyses, it was more appropriate to use mean (average response) rather than how many (percentage) for each code, eg. how many answered 1 – none to question 1 future, 2 – a little to question 1 future, and so on. The data was still split at this stage so that school librarian and principal data was analyzed separately. Mean and standard deviation responses were tabulated for each present and future question in one table. TL data was presented first. TL average responses to each question were then presented in written form for present and future. Mean and standard deviation responses for principals were then tabulated in the same format as that for the school librarians. Instead of a complete rundown for principals, a short paragraph summary was given in respect of the school librarians' responses.

Belief responses were tabulated and presented for TL followed by a summary of the beliefs that the school librarians as a group believed were accurate and then those which the school librarians believed were not so accurate. Any mean over 3.0 was seen as being in clear agreement with the belief. Any mean below 2.5 was seen as being in clear disagreement with the belief. Belief responses were tabulated and presented for the principal followed by a summary of those responses which differed from those given by the school librarians, ie. if the school librarians had been in agreement with a belief and the principals in clear disagreement, then this response was presented.

T-tests

T-tests were carried out to compare present versus future perceptions. A general standard of $p < .001$ was set for significance due to the fact that so many t-tests were carried out, thus increasing the chance of making an error (saying a result is a significant difference when it in fact occurs by chance). Setting the significance level so much lower helped prevent this error from being made. Dependent t-tests were run for the present versus future questions. A dependent t-test was used to compare school librarians' responses to two different questions, rather than two different people's responses to the same question. Results were tabulated giving the Mean, Standard Deviation for present and then future, and the P value for each question that was significantly different from present time to future time spent. A written summary was then given of the questions that were significant, eg. "TLs believe their principals should be spending more time seeking feedback from staff about their impressions of the quality of the SLRC services than they currently do." The same process was carried out for the principals.

Independent T-tests

Independent t-tests were carried out to compare the two different independent variables of TL and PR on each question, ie. *qlf*. Independent t-tests were carried out on all present, future, and belief questions and significant results were presented. Again significant results were generally set a $p \leq .001$, but for some countries it was $p < .01$. Results were then tabulated and a written summary given of the results in terms of the present questions that the principal and school librarian differed on, the future questions the principal and school librarian differed on and then the beliefs the principal and school librarian differed on. Tabulated results included the Levenes F value, Levenes P value, T-value, degrees of freedom, p value, TL mean and standard deviation, and Principal mean and standard deviation. Independent t-tests were also carried out on the following variables: number of years in current position, age, gender, number of years in executive positions, number of years teaching prior to current appointment, qualifications, and number of professional association memberships. Significant results of these comparisons between the principals and school librarians were tabulated as per the present, future, belief questions, and a summary was provided.

Global Comparisons

A variable called 'Present' was created by adding up the respondents' answers to each of the 31 present questions, the results of which was recorded under the variable, so the result would be out of 124 (31 x 4). A variable called 'Future' was created by adding up the respondents answers to each of the 31 future questions, the results of which was recorded under the variable, so the results would be out of 124 (31 x 4). A variable called 'Beliefs' was created by adding up the respondents' answers to each of the belief questions, the results of which was recorded under the variable. Independent t-tests were carried out for these three variables comparing the principal and school librarian for each one to see if they significantly differed from each other. All results were tabulated and a written summary provided.

3.4.2 Data Analysis for Instrument 3

Responses to the open-ended questions on Instrument 3 were analyzed using a content analysis approach. Content analysis involves a lengthy process of reading and re-reading

responses, noting the content of responses, identifying themes or categories from the responses according to the content, and then grouping and re-grouping the responses within the themes or categories. This interpretive process began with reading all the responses to get an overall sense of the data. Then, each of the open-ended questions was analyzed. For example, the responses of the principals to Question 3 were read and content of each response was noted (that is, the ideas within the response were written down). Themes were identified and the ideas were grouped under the themes. From this, the frequency of ideas could be seen and the dominant themes could be identified. This process was then repeated for the responses of the school librarians to the same question. The NUDIST*QSR software program, designed for use with textual qualitative data, was used to gather together all the responses to each open-ended question from all the principals in each country and all the school librarians in each country. It was also used to gather together pairs data, that is, the responses of the school librarian and the principal for each school where both principal and school librarian submitted responses to the questionnaires.

The responses to the open-ended questions by school librarians and by principals in each country have been analyzed as a group. That is, the responses of the school librarian participants from each country have been analyzed as a group to identify dominant themes, and the responses of the principal participants from each country have been analyzed as a group to identify dominant themes. In future, it is anticipated that researchers in some of the countries will want to analyze the responses to Instrument 3 provided by school librarians and principals in the same school (pair data) to identify possible patterns related to alignment of beliefs, perceptions, and goals for an information literate school community.

3.5 Further Applications

A goal was to review the project research design and methodology in light of experience with this international project. In Chapter Six, the researchers present recommendations for the consideration of other researchers interested in replication of the study, or in other applications of the research design and methodology.

CHAPTER FOUR

4. Reports from the Participant Countries

This chapter provides brief reports of the research conducted in the countries participating in the international study. The reports have been derived from the reports presented at the IFLA '98 Workshop session. The researchers were asked to report on the nature of school librarianship in their country, to outline how the research was conducted, and to give summaries of the research findings and conclusions. The authors of this Professional Report have edited the reports for length, keeping in mind the interest of the readers, both principals and school librarians, in how conditions for effective information literacy programs in schools might be developed and improved. Please note the preferred nomenclature for school librarians in each country has been respected (and retained) in the writing of these reports. For example, in the Australia and Japan reports the term 'teacher librarian' is used; in the Canada and South Korea reports the term 'teacher-librarian' is used; in the Scotland report the term 'school librarian' has been used; and so on.

4.1 Report from Australia

Researchers: James Henri and Lyn Hay

4.1.1 Background

By world standards, the status of teacher librarianship in Australia is strong. Most schools employ a teacher librarian; some employ a number. It should be noted that while schools refer to the person in charge of information services as a 'teacher librarian', it is possible that this person may not be a qualified teacher or a qualified librarian, although most are qualified teachers. The majority of secondary schools employ at least one teacher as a full-time teacher librarian who is likely to be qualified in library and/or teacher librarianship studies of some kind. In contrast, many primary schools do not employ a full-time teacher librarian, and it is more likely that this teacher will not have undertaken a university course in library and/or teacher librarianship studies. Schools that identify their teacher librarian as an educational leader who is information technology literate are likely to be expanding the traditional role, and the teacher librarian may well be the school's information technologies (IT) coordinator. In schools where teacher librarians are regarded as 'bookish' and 'under-productive', they are likely to have been marginalized and another member of staff will be leading the IT charge.

The dismal economic condition in Australia in the 1990s, coupled with economic rationalism, has seen a significant decline in government funding for education at all levels. Support services for teacher librarians have diminished over the past decade, although there has been a recent revival of consultants. Funding for digital information has increased dramatically and the employers are embarking upon programs that provide sophisticated IT to teachers. The education of teacher librarianship is almost exclusively provided by distance education to qualified and experienced teachers. Programs are typically offered at the graduate level. There is strong demand for these programs but not sufficient to cover market needs. There is a current shortage of qualified teacher librarians in Australia.

4.1.2 The Australian Research Sample

The study was conducted within the Australian Capital Territory (ACT). The ACT has a population of approximately 310,000 and is a relatively homogeneous socio-political area. All schools within the ACT public and Catholic systems that employed both a full-time principal and a teacher librarian were surveyed. Close liaison with key personnel in each system enabled this identification. There were 246 schools surveyed: 191 public schools (comprising schools with Grades K-6, Grades 7-10, and Grades 11-12) and 55 Catholic schools (comprising schools with Grades K-6 and Grades 7-12).

4.1.3 Survey Administration in Australia

One of the challenges associated with an international project is the timing of the project. In the northern hemisphere, November and December may be good times to administer a survey but not so in Australia where teachers are approaching the end of the school year and a summer holiday of six weeks over the Christmas and New Year period. The research in schools protocol is to seek approval from the Education System and, when this is granted, permission must be sought from individual schools to proceed with the research. This process can be time-consuming, particularly at the close of a school year. The Catholic School system provided the 'green light' in time to facilitate sending out individual school letters in November 1997. Permission from the public school system took longer, and these letters could not be sent until February 1998.

A paper copy of the survey instruments was sent with the letter of introduction to each school, but participants were encouraged to employ the online version of the survey instruments. This was done for a number of reasons. Firstly it was known that not all schools had Internet access. Secondly, even where schools did have Internet access, it was felt that some respondents would not feel comfortable with that approach. Thirdly, because of the international timeline and the late commencement date for Australian participants, delays caused by the requesting of paper copy would create significant problems.

All original correspondence to schools was sent through the school systems' internal mail system following negotiation with the appropriate administrative officer. This

reduced the cost of mailing and guaranteed that all schools received the correspondence. Close liaison was maintained with the officer in each system responsible for school library services and with professional bodies who made reference to the project at their meetings and in correspondence, encouraging their members to be involved. This meant that information regarding the project came to potential participants from a number of stakeholders.

Despite the intensity of efforts to ensure a strong response rate, early returns both directly on the Web and through the mail were slow. Initially, there was only a 17% response rate. Telephone calls to individual schools resulted in the return of further instruments for a final response of 33%. Respondents could complete an online or paper survey: some respondents were uneasy about using the Web, while others saw this as a sound approach. Some respondents completed one or two, rather than all three instruments. No doubt the length of the instrument was an issue here.

4.1.4 Survey Results for Australia

Findings from Instrument 1 – The Australian Participants

The demographic data collected in Instrument 1 can be used to provide a composite picture of the typical respondents. Most of the Australian principals had earned both BEd and MEd degrees, and they were in their forties and fifties. The Australian principals were fairly evenly divided by gender (57% males and 43% females). Most of the principal respondents were the administrative heads of government primary (K-6) schools in urban areas, with fewer than 20 teachers and from 200 to 400 students. Most of the principal respondents had been in their current positions for less than 5 years, but they had had considerable experience in schools, first as teachers in the classroom for 15 or more years and then in administrative roles (executive status) for about 12 years. Typically, the principal respondents had worked with fewer than 5 different teacher librarians during their time as classroom teachers and administrators. The principals had full-time teacher librarians in their schools. Most of the principal respondents were members of three professional associations.

The teacher librarian respondents were female (100% of respondents were female, although there were some male teacher librarians employed in ACT schools at the time of administering the questionnaires). Most had one year of training beyond their BEd degrees, and they were in their forties and fifties. Most of the teacher librarians had been at their current schools for less than four years, and most had been appointed to the role after fewer than 10 years as a classroom teacher. Most of the teacher librarians had not held executive positions, but many had been identified as Advanced Skills Teachers (ASTs) for their contributions to teaching and learning. Most of the teacher librarian respondents were members of two professional associations and they were regular readers of three professional journals including *Access*, the publication of the Australian School Library Association.

Both principals and teacher librarians were selected for their positions by a competitive application process. Compared to the teacher librarians, the principals were somewhat senior in age, in teaching experience, and in experience beyond the classroom.

These data suggest that it is necessary to identify male teachers who might be willing to become teacher librarians. The data also suggest that, although teacher librarians are teachers of high calibre, they may not be gaining promotion positions.

Findings from Instrument 2 – Perceptions and Beliefs of Participants

The Australian principals and teacher librarians demonstrated a close affinity with respect to many of the perception factors and belief statements. Overall principals viewed themselves as spending a little more time on critical support matters than the teacher librarians perceived them to be spending. Furthermore, principals perceived that they were allocating as much time as they currently were able to on information literacy support.

Principals indicated that they needed to increase their support in the future in the following areas:

- ensuring that the school library resource centre objectives reflect school goals;
- informing new teaching staff about the importance of collaborating with the teacher librarian;
- encouraging teaching debate about information policy;
- encouraging teaching staff to employ a wide range of information resources in their teaching programs; and
- seeking feedback from staff about their impressions of the quality of library resource centre services.

Teacher librarians indicated that generally they disagreed with the following statements:

- being a teacher librarian is a good preparation for the position of principal;
- the principal is well placed to judge a teacher librarian's professional competence;
- a teacher librarian should be timetabled to cover teacher's preparation time; and
- the principal should supervise the teacher librarian.

Principals differed from teacher librarians in that they:

- did not believe that it is important to find a suitably qualified person if the teacher librarian were to be absent;
- believed that the acceptance of the teacher librarian's professional judgement relates directly to her credibility; and
- believed themselves to be well placed to judge the teacher librarian's professional competence.

Whilst both principals and teacher librarians agreed with the statement: “That should an unqualified teacher librarian be appointed to my school, I would expect that s/he undertake a specialist qualification in teacher librarianship,” the level of support from the principals was much lower than that of the teacher librarians.

Sample Findings from Instrument 3 – Contributions and Barriers

Question 3 asked the participants to identify the things that the teacher librarian does that are critical to the quality of teaching and learning. Question 8 asked them to identify the major barriers to the integration of information skills across the curriculum.

Teacher librarian’s critical contributions to the quality of teaching and learning

The critical functions of the teacher librarian, according to both principals and teacher librarians in the Australian study are: (1) contributing to professional development of teaching staff; (2) collegiality; (3) collection management; (4) process orientation; and (5) IT expertise.

The participants emphasized the need for the teacher librarian to be a person who could work well with staff and who was at the cutting edge across a number of areas and could encourage and equip teachers to try new approaches. They pointed out that the teacher librarian needed to be a person who kept abreast of changes in curriculum, pedagogy, resources, and technology. The teacher librarians' across-the-school perspective and their willingness to be collegial were presented in a diversity of ways, including being a teacher; teaming with teachers; supporting teachers; leading teachers; and assisting teachers. For teacher librarians, the content foci of those activities were primarily the application of IT, the strengthening of the research process and the promotion of reading and literature; for principals, the concerns were similar but they put little emphasis on literature promotion.

The collection management function was seen as both providing the resources and providing access to those resources. The process orientation was exhibited through the development of an information skills culture and the integration of skills into units of work. Teacher librarians gave emphasis to the role that the teacher librarian played in evaluating student learning. While the IT focus could be seen as a part of each of the preceding categories, there is a sense in which it also stood alone. Both principals and teacher librarians suggested that the teacher librarian's role as an IT expert; even as the IT manager, was critical to the quality of teaching and learning.

Also mentioned by both principals and teacher librarians, but with less frequency, were the contributions of the teacher librarian in meeting the individual needs of students, in helping to develop a school-wide plan or vision for learning, in networking with other information providers, and in communicating the role of school library programs to parents and to the wider community. In addition, the teacher librarian's capacity to manage time and juggle responsibilities, coupled with a flexible approach to change processes, was highlighted.

The differences between principals and teacher librarian came down to a difference in emphasis. Principals, in the main, tended to see the teacher librarian as a key support, a key resource, a key facilitator – but largely as a professional who enables things to happen, or as a means to an end. The teacher librarians tended to emphasise the 'front line' responsibility of planning, teaching, and evaluating learning as an equal partner with other teachers.

Major barriers to integration of information skills across the curriculum

There was strong agreement between principals and teacher librarians about what barriers hindered the integration of information skills across the curriculum. The barriers could be grouped under five major headings: (1) funding; (2) teacher knowledge and beliefs; (3) teacher desire; (4) planning time; and (5) credentials. Teacher librarians identified a further category, namely: lack of 'top-down' support.

Funding was viewed as inadequate for the purchase of information resources and IT needed for teaching information skills. The provision of professional development with respect to the integration of information skills into the classroom curriculum was also seen as inadequate. The funding for allocation for teacher librarian hours and for support staff hours was generally seen as inadequate, particularly for smaller and larger schools – medium-sized schools fared best. Inadequate funding for staffing sometimes meant that teacher librarians were under-involved in information skills-specific teaching and learning, but over-involved in library administration and/or in unrelated teaching activities.

An information literate school community thrives in a culture of collegiality. It draws its strength from communities of practice that give focus to the importance of information as

process. Not surprisingly, the beliefs that were identified as counterproductive were beliefs that were incompatible with these core building blocks. If school leaders held a belief that learning an information process was less important than studying subject content, it was likely the role of the teacher librarian would be marginalized to that of ‘manager’ or ‘relief teacher’. Likewise, those teachers who did not place importance on collegiality would be unlikely to provide support to an ‘interventionist’ role for the teacher librarian.

Of major concern was the view expressed by some principals that teacher librarians believed that they were most productive when they worked alone. This was identified as an argument by teacher librarians for low levels of collegiality and minimal attention to the possibility of acting as a change agent. Some principals held the view that some teacher librarians had been relocated from classroom teaching to the school library because they were inadequate teachers. These principals had low expectations of their teacher librarians.

‘Teacher desire’ was seen as a major issue. Teachers were described as sometimes being ‘jaded,’ too old to change, not wanting to vary from an established program, and not wanting to share ‘their’ classrooms. Often professional development was available but not taken up by teachers. Planning time (or the lack thereof) was a significant problem. The existence of rigid timetables, the fragmentation of the curriculum, the part-time status of the teacher librarian, the isolation of the teacher librarian, the heavy workload of teachers, and the focus on KLAs (key learning areas) rather than the processes of learning, all contributed to the perceived lack of planning time. Teacher librarian respondents were very aware that their role could be marginalized if they were required to replace class teachers during teachers’ scheduled release time (referred to as ‘release from face-to-face’ or ‘RFF’). The credentials of the teacher librarian (where the teacher librarian was not qualified, or considered ‘unprofessional’) was considered as the fifth (category) barrier to the integration of information skills across the curriculum.

Teacher librarians saw the lack of top-down support as a major impediment to their ability to influence the curriculum. This support might be expected from the principal and other executive staff. If the teacher librarian’s supervisor was not supportive, innovative practice was less likely to occur.

4.1.5 Implications from the Findings

1. Professional education of teacher librarians – Principals need to be better informed about the existence of education for teacher librarianship programs and how these can make a difference to the school's information literacy outcomes. There is a shortage of qualified teacher librarians in Australia and therefore it is difficult to find suitable short-term appointments.

2. Professional credibility of teacher librarians – Teacher librarians are not especially aware of how important their professional credibility is. Teacher librarians are not aware of the value of being supervised by the principal. If teacher librarians do not believe that the principal is well placed to judge their professionalism, they need to address this issue by educating the principal. But it may be that teacher librarians underestimate the understanding that principals have.

In general, principals displayed a desire to create schools that were responsive to community needs. The importance of IT was universally accepted. The value given to information literacy as a tool for improvement was less clear. Teacher librarians who demonstrated the links between IT and information literacy were recognized as influential within their schools.

4.1.6 Conclusion

The Australian findings demonstrate that there is a significant affinity in Australia between principals and teacher librarians with respect to information literacy issues. This should allow teacher librarians, principals, and other school personnel, as well as school library educators and researchers, to concentrate on those issues that are seen as contentious. This will also facilitate the development of a short survey instrument that could be used to generate research data on these key issues. This will be fruitful because the length of the current instruments has been a barrier to the involvement of the stakeholders.

Related Reading

Hay, L., & Henri, J. (1995). *Leadership for collaboration: Making vision work*. Paper presented at the IFLA Conference, Session 125: School Libraries Section, Istanbul, Turkey. Retrieved March 31, 2002, from <http://www.ifla.org/IV/ifla61/61-hayl.htm>

Hay, L., Henri, J., & Oberg, D. (1998). The principal's role in developing information literacy: Findings from Australia and Canada. In S. Shoham & M. Yitzhaki (Eds.), *Education for all: Culture, reading and information* (pp. 69-80). Selected papers of the 27th International Conference of the International Association of School Librarianship, held in Ramat-Gan, Israel.

Henri, J. (1998). *Plugging into principal power*. Paper presented at the ASLA (New South Wales) Biennial Conference, Sydney, Australia, 8 August. Retrieved March 31, 2002, from <http://farrer.riv.csu.edu.au/principal/survey/report/au/henri98>

Henri, J., & Hay, L. (1996). The principal's role in developing and supporting an information literate school community. In *Beyond the Horizon: Conference Proceedings of the Fourteenth*

Biennial Conference of the Australian School Library Association (pp. 111-125). Fremantle, WA: ASLA.

Henri, J., & Hay, L. (1997). *Understanding principal patronage: Developing and piloting a quantitative instrument*. Paper presented at the IFLA Conference, Section of School Libraries and Resource Centres, Copenhagen, Denmark. Retrieved March 31, 2002, from <http://www.ifla.org/IV/ifla63/63heha.htm>

4.2 Report from Canada

Researcher: Dianne Oberg

4.2.1 Background

The Canadian study was conducted across the public and separate school districts of the province of Alberta. Alberta is in the Western part of Canada; it is a very large geographic area that is sparsely populated. In Alberta, both non-denominational public schools and Catholic separate schools are fully funded by the provincial government. The ministry of education for the province sets the goals of schooling; establishes curriculum guidelines and requirements; evaluates student learning through a testing program at Grades 3, 6, 9 and 12; and provides educational funding. The delivery of schooling is delegated to school districts; districts are governed by elected boards of trustees and range in size from several schools and a few hundred students to over 200 schools with tens of thousands of students. The organizational structure for public education in Alberta results in considerable local autonomy for schools, even those within the same school district. This local autonomy, combined with reductions in funding to education by the provincial government, has led to a decrease in the time allocation for many teacher-librarians and a decrease in the overall numbers of teacher-librarians in the province in the past two decades.

4.2.2 The Canadian Research Sample

Selection of the research participants could not be done by random sampling because all schools in Alberta do not have teacher-librarians. A population approach (selection of all the schools in one district, for example) could not be used either because no district in the province is large enough to have 250 schools with teacher-librarians, the sample size that was needed to reach the target response number of at least 150 participating schools (both elementary and secondary schools). This was based on a minimum 60% response rate, predicted from earlier survey research done in the schools of the province. Instead a purposive sampling approach was used. The sample – the 252 schools with a teacher-librarian assigned at least one-half time to the school library program – was identified using the teacher information database of the provincial ministry of education.

4.2.3 Survey Administration in Canada

Because all public schools in Alberta were believed to have Internet access, the online version of the questionnaires was used for the study. In November, information about the study and how to participate was mailed to the principals of the 252 schools. Because of the Freedom of Information and Protection of Privacy Act of the Province of Alberta, letters could not be sent to principals and teacher-librarians by name. To increase response rate, reminder cards were mailed to teacher-librarians one week after the invitations to participate were mailed to principals. As the responses began to come in, problems became apparent. By January, it was clear that some of the online forms were being only partially filled out, that only one or two of the three instruments were filled out by some participants, and that not both the principal and the teacher-librarian in some schools were responding. A second reminder letter was mailed out to the schools in March.

The response rates for the Canadian study were low: 23% for the teacher-librarians (59/252) and 15% for the principals (40/252). A number of factors explain the low response rates. A postal strike delayed the mailing of the letters inviting participation in the study until November, the beginning of a very busy time in schools. The Canadian participants viewed survey instruments as too lengthy and too complicated to complete. The Web-based format of the instrument created difficulties because not all schools actually had Internet access, and some participants, particularly principals, were inexperienced Internet users. In addition, the two largest school systems in the province were involved in labour disputes during the time of the study, and teachers were expected to limit their non-classroom activities including research activities.

4.2.4 Survey Results for Canada

The findings from the Canadian data are based responses from 59 teacher-librarians and 40 principals. Due to the fact that the majority of schools who responded were K-6, urban, public schools, the results of this study will reflect the perceptions of principals and teacher-librarians in urban primary schools that are public schools more than those of rural schools, private schools and schools of other types (ie. high schools, K-10, 11-12, and 7-10). These results cannot be generalized to all the schools in Alberta due to the fact that the sample size was skewed in this manner. However, it is likely the results are generalizable for urban K-6 public schools in Alberta.

Findings from Instrument 1 – The Canadian Participants

Instrument 1 collected information about the school context of the participants and about their education and experience. A composite picture of the Canadian participants and their context has been developed by selecting the modal (most frequently selected) response for each of the categories in Instrument 1. The principals and teacher-librarians differed significantly ($p \leq .001$) in gender, age, educational qualifications, teaching experience, and leadership experience beyond the classroom.

Most of the principals were males in their fifties holding BEd and MEd degrees. The majority of the principal respondents headed elementary (Grades K-6) schools in urban areas. Their schools typically had approximately 20 teachers and 500 students. Most of the principals had been principals of their current schools for less than 5 years and they had been classroom teachers for 10 years or more before they were first appointed to principal positions. Most of the principals had served in school or district leadership positions for more than 20 years and, during their time as classroom teachers and administrators, they had worked with three or four different teacher-librarians. Most were members of the provincial teachers' association's specialist council for administrators.

Most of the teacher-librarian were females in their forties holding BEd degrees and a year or more of post-baccalaureate study. The majority of the teacher-librarians had been teacher-librarians for less than 5 years, and most had been appointed to the role after less than 10 years as a classroom teacher. Most of the teacher-librarians had not served in any school or district leadership roles, but they were members of the specialist council for teacher-librarians. Most subscribed to three or four different teacher-librarian journals and were regular readers of *Teacher-Librarian Today* (the publication of the provincial specialist council) and *Emergency Librarian* (a commercial publication for Canadian and American teacher-librarians). Although, in most cases, the teacher-librarians had Internet connections in their libraries and, although there are several listservs for teacher-librarians in Canada and the United States, few of the teacher-librarians belonged to a listserv.

Findings from Instrument 2 – Perceptions and Beliefs

Part A of Instrument 2 examined the perceptions that teacher-librarians and principals held in relation to the amount of time that principals spend now and should spend in the future in relation to the development of an information literate school community.

For the teacher-librarian respondents, the means for the Present Situation ranged from a high of 3.66 (between *Some* and *A lot*) for “The principal encourages and facilitates the professional development of teaching staff” to a low of 2.37 (between *Little* and *Some*) for “When the teacher-librarian is not represented on a key committee, the principal ensures that the needs of the library resource centre are addressed.” For the teacher-librarians, the means for the Future Situation ranged from a high of 3.49 for “The principal ensures that the attainment of information literacy is part of the school plan” to a low of 2.64 for “The principal encourages teaching staff debate on information policy.” On average the Canadian teacher-librarians viewed their principals as spending an appropriate amount of time on tasks related to the development of an information literate school community. For example, the teacher-librarians viewed their principals as spending between *Some* and *A lot* of time on ensuring that the attainment of information literacy was part of the school plan and they felt that the principal should continue to spend this amount of time on this task in the future.

For the principal respondents, the means for the Present Situation ranged from a high of 3.94 (between *Some* and *A lot*) for “The principal encourages and facilitates the professional development of teaching staff” to a low of 2.51 (between *Little* and *Some*) for “The principal actively seeks outside school funding possibilities that can be used to supplement the library resource budget.” For principals, for the Future Situation, the means ranged from a high of 3.94 for “The principal ensures that the school library resource centre objectives reflect school goals” to a low of 2.80 for “The principal actively seeks outside school funding possibilities that can be used to supplement the library resource budget.” Overall, principals viewed themselves as spending about the same time on tasks as teacher-librarians perceived them to be spending. Principals also perceived themselves as generally spending as much time on tasks as they can or think they should.

Only one individual item in Part A: Perception Factors revealed significant difference ($p < .01$). Present vs Future responses to the item, “The principal informs new teaching staff about the importance of collaborating with the teacher-librarian” were significant for the principals only (Present mean of 3.40 and Future mean of 3.71).

By overall scores, principals and teacher-librarians differed significantly on the amount of time they perceived the principal to spend on tasks. Principals viewed themselves as spending slightly more time on tasks than did the teacher-librarians. Principals and teacher-librarians also significantly differed on the amount of time they perceived the principal should spend on tasks in the future. Principals believed they should spend more time on tasks in the future than did the teacher-librarians.

Part B of Instrument 2 examined the beliefs held by teacher-librarians and principals in relation to a number of issues related to the development of an information literate school community.

Both teacher-librarians and principals rated the following belief statements very strongly (mean of greater than 3.70):

- the teacher-librarian should be a key player in the school’s information literacy programs;
- the teacher-librarian should provide a flexible timetable that best meets the needs of individual students, groups, and whole classes;
- Internet access should be available through the school library;

- the teacher-librarian should provide appropriate in-servicing to the teaching staff;
- cooperative planning and teaching should occur in the classroom as well as in the school library; and
- the teacher-librarian should inform the principal about issues affecting the potential of the school library.

The principals differed from teacher-librarians on other items: the principals were less likely to believe that it was necessary for the teacher-librarian to spend all of his/her day in the school library; they were more likely to believe that the principal should supervise the teacher-librarian; they believed it was not as necessary to fill the teacher-librarian's position with a suitably qualified person if the teacher-librarian were absent; and they did not believe that it was as necessary for the teacher-librarians to be supported to serve in school or district leadership positions as the teacher-librarians themselves felt it was.

Findings from Instrument 3 – Contributions and Barriers

The participants were asked to identify the strengths of the library resource centre. Principals emphasized the qualified and cooperative staff, the resources and equipment, and a focus on learning and curriculum; teacher-librarians emphasized the resources and equipment, a focus on learning and curriculum, and an open, inviting, well-organized environment.

The participants were asked to identify the challenges that face the library resource centre. Principals and teacher-librarians mentioned financial resources most frequently. Teacher-librarians frequently mentioned two other challenges: lack of support for the library resource centre from other educators, and difficulties in dealing with constantly changing technology.

The participants were asked to identify the things that the teacher-librarian does that are critical to the quality of teaching and learning. The three critical functions of the teacher-librarian, according to both principals and teacher-librarians in the Canadian study, are in-servicing staff, cooperative planning and teaching, and collection development. Overall, the principals and teacher-librarians were in agreement as to the nature of teacher-librarians' contributions to teaching and learning. However, the principals put the strongest emphasis on the in-servicing role while the teacher-librarians put the strongest emphasis on the cooperative planning and teaching role.

The participants were asked how the form and quality of teaching and learning in the school would be affected if the learning resource centre were to be closed for more than two weeks. Principals most frequently responded that students and teachers would be unable to access the resources that they needed and that this would have a major school-wide impact. Teacher-librarians also mentioned the school-wide impact but were more likely to focus on specific impacts such as students and teachers being unable to access the resources that they needed, less collaboration among staff, reductions in the variety of instructional strategies being used, and decreased recreational reading by students.

They were also asked how the form and quality of teaching and learning would be affected if the teacher-librarian were to be absent for more than two weeks. Both principals and teacher-librarians believed, first, that there would be less collaboration among staff and, second, that the instructional program related to the research process would suffer. They were asked about the arrangements that are made to ensure access to the learning resource centre when the teacher-librarian is absent. Slightly more than 50% of both principals and teacher-librarians

reported that support staff (aide or technician) are left in charge to do the best that they can while the others reported that a substitute teacher (not necessarily a qualified teacher-librarian) supervises the learning resources centre.

The respondents were invited to give their ideas about information literacy. The principals responded to this question with fewer ideas and with less consistency than did teacher-librarians. The most frequent responses from both groups centred on being able to access information from a variety of sources and knowing how to analyze, evaluate and use information. Only teacher-librarians mentioned being able to share knowledge effectively and being able to find answers to questions relevant to one's life as important aspects of information literacy.

The respondents were asked to identify major barriers to the integration of information skills across the curriculum. The barriers mentioned most frequently by both principals and teacher-librarians were teachers' beliefs and attitudes and lack of funding. Teacher-librarians saw time (their own time and teachers' time) as the major barrier to integration. They also mentioned two other barriers: lack of principal leadership and understanding, and focus on test scores instead of critical thinking skills.

The respondents were asked to describe how they promoted the role of the learning resources centre through school committees. The most frequent responses, from principals and teacher-librarians, centred around the teacher-librarians' membership on the internal committees of the school, those responsible for general governance such as faculty council and those responsible for key aspects of school organization such as professional development, budget and technology as well as their regular participation in monthly staff meetings. Several principals mentioned that the teacher-librarian represented the school on the school council, the advisory bodies made up of parents and teachers which are mandated for Alberta schools; others mentioned that they supported and defended the position of the teacher-librarian at the system or school district level.

Only teacher-librarians were asked to respond to the two questions about maintaining teacher-librarian credibility and about additional support that the principal could provide. Teacher librarians reported that they maintained their credibility by keeping current in curriculum and instruction and technology, by providing a quality school library program through collaboration and through services to teachers, by participating in the life of the school including serving on committees, and by staying current in their own field of teacher-librarianship. Teacher-librarians suggested that principals could provide additional supports by increasing financial support for resources, teacher-librarian time, and/or clerical staff time and by advocating for the program through talking about the library program and collaboration in staff meetings and through visiting the library and providing feedback to the teacher-librarian. Some of the respondents reported that their principals were, in fact, very supportive.

4.2.5 Implications from the Findings

1. Professional education of teacher-librarians – Teacher-librarians in Alberta need to work to increase both their qualifications. Many teacher-librarians lacked the minimum recommended educational qualifications for their positions; almost half (46.4%) of the teacher-librarian respondents had neither a post-baccalaureate diploma nor a graduate degree. Both principals and teacher-librarians agreed that teacher-librarians should have a qualification in education and librarianship, but teacher-librarians were less likely than principals to believe that an unqualified teacher-librarian should seek librarianship

qualifications. The principals, however, were less likely to believe that absent teacher-librarians should be replaced by suitably qualified persons.

2. Leadership role of teacher-librarians – Teacher-librarians in Alberta need to more directly seek to increase their curriculum leadership experience. Many teacher-librarians responding to the survey lacked the leadership experience that would help them perform their expected leadership role; almost half (46.2%) had not served in a school or district curriculum leadership position. Principals were much less likely than teacher-librarians to believe that teacher-librarians should be supported to serve in leadership positions. This suggests that the principals did not see the teacher-librarian in a leadership role.

3. Re-thinking supervisory roles – Teacher-librarians and principals may need to work together to improve their supervisory relationships. The principals and teacher librarians disagreed on both the amount of supervision and the sources of information used in supervision, now and in the future. Both reported that the principal currently spends some time visiting the library to observe the work of the teacher-librarian, but principals believed they should spend more time in this way in the future while teacher-librarians believed that principals should spend less time in this way in the future (mean of 3.40 for principals; mean of 2.88 for teacher-librarians). Both principals and teacher-librarians believed that in future principals should be spending more time seeking feedback from staff about their impressions of the quality of library services, but principals believed that they should spend more time at this than did teacher-librarians (mean of 3.29 for principals; mean of 2.86 for teacher-librarians). Supervision can be and should be an opportunity for mutual education and for realistic goal-setting. The new teacher supervision system being used in Alberta schools does require all educators to set goals annually for performance, to meet with their supervisors at the beginning and end of each year to discuss goals and assess progress. This approach, where educators develop and use ‘personal professional growth plans’ could be used to good effect by teacher-librarians and principals in learning to work together more effectively.

4.2.6 Conclusion

The relationships between principals and teacher-librarians are likely to be influenced by differences in gender, age, experience and education as well as their position power. In the Alberta study, the principals had the advantage overall in these important areas. Compared to the mostly female teacher-librarians, the mostly male principals were senior in age, in education, in teaching experience, and in experience beyond the classroom – 81.4% of principals had a diploma or graduate degree and all had five or more years of administrative experience. Consideration of these factors would increase the strength of the recommendation for teacher-librarians to increase their qualifications, to increase their curriculum leadership experience, and to re-think the role of supervision in enhancing their principals’ understanding of and support for the teacher-librarians’ contributions to the development of information literate school communities.

Although there were many difficulties with the data collection for the Alberta study, they were the kind of problems from which researchers can learn. For example, piloting of data collection instruments always needs to be done very carefully and thoroughly, but in an international study, the instruments need to be piloted in each of the countries involved and with a population that is very similar to the one that will be surveyed. The use of Web-based questionnaires was a major obstacle for many of the Alberta participants and likely a total deterrent for many potential participants. Despite the low response rates for the principals and teacher-librarians and despite the skewed data (responses mostly from urban elementary schools), the data has provided some interesting patterns and has allowed the raising of questions for further investigation.

4.3 Report from Finland

Researcher: Liisa Niinikangas

4.3.1 Background

School library issues are controversial in Finland. In 1998, the Chief Executive of the Finnish Library Association, Tuula Haavisto, stated:

There are no school libraries in Finland. This will not be changed in the new(library) act. It is considered that the network of public libraries is sufficient for the needs of school children. Our experience supports the view that common libraries for children and adults make better use of library resources than do separate institutions. People continue to use the same library after leaving school because they do not have to cross new thresholds.

The fact is, however, that Finland does have school libraries. The economic recession of the early 1990s cut funding to many school libraries, but most schools have libraries, operated 1-5 hours per week, mostly by teachers without library qualifications. There are also qualified school librarians working in school libraries, but their number is unknown. There are, especially in vocational schools and new polytechnics, a growing number of very modern libraries called ‘learning support centres’ or ‘information centres’. These schools have undergone a major educational change; in order to attain their goals, these schools have had to renew their whole pedagogical environment including their school libraries.

Unfortunately, there has been no clear school library policy in Finland. In the library legislation of 1990, responsibility for activities within school libraries was given to public libraries. In the Ministry of Education, no one has been responsible for the strategic planning of school libraries, although public libraries and schools are central actors in the national Information Society Strategies (Information Superhighway). Schools are given funding for the Information Society projects, too. Due to the unclear position of school libraries, the money inside schools often has been allocated to computer classrooms instead of school libraries. The National Board of Education forms the tactical level of educational policy in Finland. It sets the goals of schooling, establishes curriculum guidelines and requirements, and evaluates student learning. One of the many tasks of the chief inspector for the teaching of the Finnish language is to develop school libraries.

In 1999, however, new educational legislation took effect, which is changing the whole education system in profound ways. From a rigid and highly centralized system of top-down administration, Finland has moved towards a more flexible system of decentralized decision-making. This means much greater autonomy for

educational institutions. In the new education legislation, school libraries are mentioned for the first time ever:

In a school there can be a school library for achieving the pedagogical goals of the school. The school library will be financed by the budget of the school.

It is still to be seen how this challenge can best be used for the benefit of school libraries. The supporting role of local decision-making bodies and principals will be emphasized. The academic programs in librarianship at Finnish universities (Tampere, Oulu, Åbo Akademi) do not offer possibilities to specialize in school librarianship. There is no education for teacher-librarianship, either. The basic ideas of libraries supporting learning have become familiar in the in-service workshops or continuing education courses offered mainly by the Continuing Education Centre for Vocational Schools (AK-KK) in Tampere. Some recent research and strategies (Niinikangas, 1995, 1996) have also been published, and the idea has been advocated also in Finnish library journals. The School Library Association of Finland has proclaimed its goals for the development of Finnish school libraries. There are also a growing number of politicians, teachers, principals and parents who think that a real innovation of the school is impossible without a school library resource centre.

The Finnish education system is comprised of comprehensive schools (Grades 1-9), post-compulsory general and vocational education (Grades 10-12), higher education, and adult education. The language of teaching is Finnish or Swedish: official bilingualism guarantees the Swedish-speaking minority (about 6% of the population) equal opportunities at all levels. The Ministry of Education is a central coordinating body for Finnish education. The municipal authorities operate comprehensive schools and post-compulsory general and vocational education schools.

Compulsory comprehensive school education starts at the age of 7 and continues for 9 years. Comprehensive education is free of charge for all pupils. In 1995, about 581,000 pupils were attending approximately 4,400 schools. Just over 1% of the schools are private; the Ministry of Education also supervises them.

Since the early 1980s, educational planning in Finland has been based on the principle of offering either vocational or higher education to the entire age group. On entering the 21st century, the policy will be to provide upper secondary education, either general or vocational, to the entire age group, and further higher education to 60-65 % of the age group. After leaving comprehensive school, a young person may apply for a place at a general upper secondary school or at a vocational school. There is also an experiment under way in upper secondary education, which aims at providing a wider range of opportunities than before to obtain vocational diplomas and to complete the upper secondary school syllabus. This is being carried out through collaboration among vocational institutions and upper secondary schools: their students can choose courses from both institutions.

Upper secondary schools normally provide general education to prepare the pupils for further studies. At the end of schooling, the pupil takes the national matriculation examination, which is a general eligibility criterion for university

or polytechnic admission. Schools follow a fairly homogeneous curriculum. They can also specialize in languages, science, sports, music or the arts. The curriculum reform of 1994 increased the range of choices in the curriculum. All instruction is given in the form of courses. Pupils are allowed to take their courses at their own pace, so the upper secondary level can last from 2 to 4 years. In 1995, 54% of comprehensive school pupils went straight on to study at an upper secondary school and 31 % at a vocational school. Education is free of charge in both schools. There were about 440 upper secondary schools with over 109,000 pupils in 1995.

4.3.2 The Finnish Research Sample

The study was conducted in upper secondary schools of the southern Finland. The Helsinki region, the only metropolitan area in Finland, with the population of more than one million (including the towns Helsinki, Espoo, Vantaa, Kauniainen) was the target area of the research. Helsinki is the capital of Finland and the biggest town in Finland. Two towns to the north of Helsinki, Tampere (pop. 180,000) and Lahti (pop. 70,000, a well known school library town with experimental mixed upper secondary and vocational schools) were also included. The Finnish research sample included all upper secondary schools and those vocational schools taking part in the ‘mixed’ educational experiment in the chosen areas. Swedish schools were not included. The number of the participating schools was 86. Educational directories, statistical yearbooks and telephone catalogues of each town were used to identify the schools. This research sample was selected for a number of reasons. The Helsinki region has the largest schools and the greatest variety of upper secondary schools (both private and municipal schools). Most upper secondary schools have school libraries, and most of the qualified Finnish school librarians work in the Helsinki area.

4.3.3 Survey Administration in Finland

Eeva-Maria Suojarvi, a librarian familiar with school library terminology, translated the three research instruments for the principal and school librarian into Finnish. The Finnish version of the questionnaire was pilot tested in the printed form by the library assistant students of Tampere College of Business. The comments given by them and their teacher, Leena Aaltonen, made us clarify the typographical format, Finnish terminology, and the letter of intent. The piloting phase showed clearly that it was essential to explain the underlying school library philosophy and the purpose of the questionnaire, because these concepts seemed unfamiliar and difficult.

No new Finnish terms needed to be invented, because all the basic theory is known. However, the following questions were added/changed in Finland to get national information: (i) “Are you a member of the Finnish School Library Association?; and (ii) Do you follow any library listservs?” (There is not a special listserv for school librarians in Finland).

Questions about the Internet were translated using the relevant Finnish terms but these questions were mostly misunderstood. In Finland we have a national

plan to connect all schools to the Internet by the year 2000, and the program is at different levels in various schools. The answers reflect the situation at the end of 1997, and after that the situation has quickly changed. Reasons for the misunderstandings could be:

1. Most school librarians are mother tongue teachers who have little knowledge about computers or the Internet. They might be confused by the questions concerning access points and connections.
2. Internet access is arranged differently in different towns and also in different private schools. There are town wide strategic plans for schools to access the Internet and there are single school solutions. It is easy for the principals, too, to be confused with the number of connections and access points.
3. In Finnish schools, computers and Internet usually are in hands of computer teachers.

The National Board of Education was contacted at the beginning of the research for moral support and financial assistance. In November 1997, permission was given to send a supportive letter as an attachment to the survey, but no funding was allocated to the research. The Finnish School Library Association also promised to support the research. These statements of support were used to gain research permission from the local authorities and to encourage responses from the schools.

Letters asking for permission to conduct the study were sent to the educational authorities of each chosen town after this. Every town gave its consent by early December 1997. Mauno Rissanen, the leading principal of Tampere upper secondary schools, wrote in his letter of consent:

These questions seem to reflect a reality totally different from Finland with working possibilities totally different from ours, yet it may be that just the things worth developing became visible in this questionnaire.

Both the principal's and school librarian's research instruments were sent out in the same envelope to each school library in early December 1997. The questionnaire was in paper form, with a letter telling about the research and a letter of support from the National Board of Education. The questionnaire was sent out in paper form because not all schools had Internet access and many participants were likely to be inexperienced Internet users. Most responses were returned before Christmas leave; the last ones arrived when principals and teachers returned to work at the beginning of January 1998. No reminder letters were sent in Finland.

The overall response percentage in Finland was 49%. Principals and school librarians in pairs answered 38%, principals alone in five cases, school librarians alone in three cases. The principal and school librarian was the same person in two cases. Research Instrument 3 was left unanswered by eight principals and three school librarians, and partially answered by ten principals and seven school librarians. Many research instruments were answered partially. There were empty spaces and question marks in the answers. Reasons for the low

response percentage might be that: (a) research instruments were complicated to complete; (b) the whole survey was very long and detailed; and/or (c) it was a very busy time in schools before Christmas leave. Still, however, it seemed to be very relevant to some respondents, who even attached detailed letters with their answers. In January 1998, a Finnish student translated the research data into English. The researcher loaded the data into the CSU website during one week in early February 1998.

4.3.4 Survey Results for Finland

Findings from Instrument 1 – The Finnish Participants

All schools in the research were located in urban areas. Most schools were quite small; 75% of schools had less than 600 students. More than half of schools (65%) had less than 40 teachers. Most of the schools were community schools (67%); private schools were 25% and governmental schools were 8% of the research sample. Most schools were regular upper secondary schools; 37% were ‘mixed’ schools, combining an upper secondary school and either a vocational school or a business college. Most schools (65%) did not have a full-time school librarian, but 35% of schools had a qualified school librarian. The questions about the Internet were misunderstood by many respondents; however, it was clear that most of the responding schools provided Internet connections and access in the computer classrooms but not in the school library.

Most of the Finnish school librarians responding to the survey were females, over 40 years of age, and holding MA degrees but no library qualifications. They were usually appointed to their positions, not selected for advertised positions. School librarianship was part of their duties as mother tongue language teachers. As school librarians, they took care of the school library less than 9 hours per week (most commonly, 2 to 3 hours per week). Many had worked as school librarians for less than four years (50%) and as teachers for less than 10 years (56%) prior to appointment as school librarians. Being teachers, Finnish school librarians are members of the teachers’ union and the Association of the Mother Tongue Teachers. They do not follow Finnish library listservs or Finnish library journals: instead, they read journals of their own subject area and of the Teachers’ Union. (Qualified librarians do not belong to the teaching staff.)

The majority of the Finnish principals responding to the questionnaires were males (57%), in their late fifties, and holding an MA degree. Many of them had been in their current positions less than 10 years (70%). About 57% had been in an executive position for more than 10 years, and about 67% had been a teacher for more than 10 years prior to their appointment as principals. The majority of the principal respondents had worked with one or two school librarians (56%). Finnish principals belong to the Union of the Finnish Principals and most also belong to at least one professional association.

Findings from Instrument 2 – Perceptions and Beliefs

The school librarians agreed strongly that:

- Internet access should be available through the school library;
- students should have individual access to the school library during class time;

- **it is the school librarian's responsibility to educate the principal about the role of the school librarian; and**
- **the school librarian should inform the principal about issues affecting the potential of the school library.**

The principals differed from school librarians in the statements with which they most agreed. The principals strongly agreed that:

- **the school librarian should be a key player in the schools' information literacy programs;**
- **the school librarian should have a qualification in education and librarianship;**
- **school librarians should be appointed according to a merit selection process;**
- **it is important that principals act as role models and mentors to staff who are reticent about the appropriate instructional use of IT; and**
- **principals are not well placed to judge the school librarian's professional competence.**

School librarians and principals agreed that principals should be spending more time in future on the following tasks than they currently do:

- **encouraging the teaching staff to invest time in cooperatively planning and teaching with the school librarian; and**
- **informing new staff about the importance of collaborating with the school librarian.**

The principals believed they should be spending more time in the future on the following tasks than they feel they currently do:

- **actively seeking outside school funding possibilities that can be used to supplement the school library budget; and**
- **providing time release and funding to the school librarian to undertake ongoing professional development.**

The school librarians believed that their principals should be spending more time in the future on the following tasks than they feel that their principals currently do:

- **advocating and facilitating the development of an information literate school community;**
- **ensuring that the attainment of information literacy is part of the school plan;**
- **understanding and advocating the role of the school librarian in the school's instructional plan;**
- **demonstrating support for collaboration among the school librarian and teaching staff;**
- **ensuring that the school library objectives reflect school goals;**
- **supporting the development of the resource collection that is current and relevant to the curriculum needs of the school;**
- **encouraging staff about information policy;**
- **ensuring that significant funding is allocated to the school library budget;**
- **visiting the school library to observe the work of the school librarian;**

- encouraging the teachers to incorporate learning of a range of skills into their teaching programs and to assess process skills as well as content; and
- seeking feedback from staff about their impressions of the quality of the school library.

In general, the principals viewed themselves as spending more time on school library tasks than the school librarians perceived them spending. Principals also perceived themselves as generally needing to spend a little less on these tasks in the future than the school librarians perceived in the future.

Findings from Instrument 3 – Contributions and Barriers

Principals and school librarians were asked to give their perspectives on the strengths and challenges of the library resource centre. Overall, both principals and school librarians agreed that the existence of a school library was important. Principals emphasized that the strengths were resources and equipment, nearness to users, open access and connections to other libraries, a qualified and/or cooperative staff and a focus on learning or curriculum. School librarians emphasized the library's open access, nearness to the users, resources and equipment, qualified and/or cooperative staff and its focus on learning or curriculum.

Principals saw information technologies (IT) and acquisition of both printed and electronic material as the biggest challenges in the school library. More room, professional staff and cooperation between teachers, students and the library were also seen as important challenges. School librarians considered adequate library space and the acquisition of modern basic materials the most important challenges. The importance of following the general library development was self-evident even to those school librarians who were teachers without library qualifications. Other challenges included IT and IT user education, teaching information skills, and weeding out old material. The low salary (compared to teachers' wages) and the low status of qualified school librarians were also mentioned. Overall, principals emphasized the importance of IT more than school librarians; school librarians sometimes saw IT as an 'enemy' to reading.

Principals and school librarians were asked to identify the things that the school librarian does that are critical to the quality of teaching and learning. Principals considered most important the school librarian's task to teach information skills/user education and to inspire and encourage students and staff. Traditional library tasks, such as cataloguing or converting the card catalogue to the database, selecting and acquiring material and organizing the school library, were next. School librarians saw as their most important tasks the acquisition of material, the guidance of students to the right sources of information, and the quality of library collection. A few school librarians emphasized the importance of an enthusiasm to promote the reading and the use of the library. School librarians saw as their most important task the acquisition of the materials, whilst according to principals' opinion it was the teaching of information skills.

Principals and school librarians were asked about how the form and quality of teaching and learning would be affected if the library resource centre were closed for more than two weeks. The majority of the principals considered that the students' independent work would become more difficult, but a few thought

that it would not affect school work at all. Some stated that students would have to go elsewhere and that the teaching strategies could not vary as much during the closure. The school librarians emphasized that students could not work independently at school or they could not complete their assignments. A few stated that students and teachers would not have space to work, that project work would be endangered, and that many students would lose the ability to study independently. Overall, principals saw the effects less important than did the school librarians.

Principals and school librarians were asked about how the form and quality of teaching and learning would be affected if the school librarian were absent for more than two weeks. Some principals reported that the school library was always open in their school, and that there was some kind of a stand-in librarian. Others thought that the absence of the school librarian would cause some harm, but that it would not upset the whole school. In a few schools, this situation would threaten the independent search for information. One principal considered the absence of the school librarian as a catastrophe! The majority of the school librarians thought that such an absence would have no effect or hardly any effect. In some cases, the teachers had keys or they could use the library independently. Some school librarians on the other hand mentioned the practical side of the school librarian's absence: The library will be messy and materials returned to the wrong places. There were also those school librarians who remembered the learners: Guidance will become to an end and the same happens to the cooperation and integration. The school librarians and principals agreed that affects would not be critical but, on the other hand, some regarded it as a very serious matter.

Principals and school librarians were asked to describe the arrangements that were made to ensure access to the library resource centre when the school librarian is absent. The arrangements varied from school to school. In some schools, other teachers had keys; in others, the library was always open or they had substitute arrangements. In some schools, the janitor or other school staff opened the door. Some respondents pointed out that students knew the rules of the library and self-service was arranged so that students could use the school library. Overall, it seemed clear that internal arrangements were made to ensure that the school library could be used even if the school librarian were absent.

Principals and school librarians were asked to define the concept of information literacy. Most principals saw information literacy as a critical skill to be able to look for and find essential information. A few principals included the skills of being able to use information for the right purpose, to distinguish between true and false, or the skill to 'understand the whole picture'. The majority of the school librarians saw information literacy as an ability to find information from various sources; a few saw it as traditional and media literacy. Some mentioned that information literacy involves knowing how to acquire, understand, analyze, criticize and apply information, to distinguish the important from the unimportant, to see the cause and result. Both principals and school librarians had quite a similar idea about information literacy.

Principals and school librarians were also asked to identify the major barriers to the integration of information skills across the curriculum. Some of the principals saw the rigid subject areas of compulsory courses and their fixed and limited content as the major barriers. Other principals mentioned lack of resources or lack of time, space and training. The school librarians gave a slightly different picture: some mentioned the lack of time while others mentioned the rigid borders between subject areas and tight timetables. Qualified school librarians also mentioned the negative attitudes of the teachers, the low status of the school librarian, and the ignorance about the work of the school librarian.

Finally, school librarians were invited to comment on their role as school librarians. Two extremes are seen in their comments:

Your questionnaire is idealistic but really very far from the real situation. In your questionnaire you totally ignore the importance of the school librarianship from the point of a view of teachers' employment. I have got the responsibility of the school library because it gave me my minimum of teaching hours. (Teacher)

The questions asked in this questionnaire and the comparison to the real situation in our school library are much apart from each other: Our school library is in the cellar (or in the bomb shelter or in the attic or in the rear of the assembly hall), because of lack of space. We do not have a qualified school librarian but a mother tongue teacher, who takes care of the school library for three hours per week. The responsibility of the development of IT is upon our principal and IT-teacher. (Teacher)

I feel I am an important member of the school community. My duties don't include tasks like coffee making or other people's tasks. Teachers are not yet ready to develop the library, they say: "You can decide about the library matters." Still there are exceptions: Many teachers are in the long run interested in the acquisition of material of their subject area and also in classification. Teachers also bring me their schedules and time tables and we talk about the contents of the courses. (Librarian)

I feel I have a key position in our information centre. In addition we try within the quality criteria to maintain the quality of collection and service, level of the knowledge of the personnel and the coziness and functionality of the space, we also aim at the ongoing grass-root-level collaboration with teachers to integrate information skills to all teaching. Tomorrow is that we work together with students in an inspiring information atmosphere, where we all have windows open to the world. We will have possibilities in the process of creating "new information" or "new knowledge." The contents of my work are always changing and growing. (Teacher-librarian)

Principals and school librarians in upper secondary schools in Finland differed significantly in gender and age. Whilst school librarians were primarily female, principals were primarily male. Whilst school librarians were likely to be between 40-49 years of age, principals are likely to be between 50-59 years of age.

4.3.5 Implications from the Findings

The kind of cooperation between principals and school librarians varied. The data analysis shows three probable types of cooperation between principals and school librarians in Finnish upper secondary schools:

1. **A school library is divided into subject areas.** The school librarian is a mother tongue teacher working with help from a team of subject teachers. The library's emphasis is on supporting subject areas and their teaching. The school librarian's main task is to order books. The principal's support and cooperation with the school librarian is minimal.

2. **A traditional school library (most schools) is like a warehouse of books** (there is no IT). The school librarian is a mother tongue teacher with a maximum of five hours per week in the school library. School library is always open. Rules for using it independently are in practice. The main focus of the school library is in supporting reading and students' independent information seeking. The principal's support and cooperation with the school librarian is small. Both teachers taking care of the school library and qualified school librarians feel that they need more of the principal's support. There are pressures to have a better school library, but the limits to the development are tight.

3. **A modern learning resource centre** has a good collection with IT, and there is networking with other libraries. The school librarian is a qualified professional librarian, perhaps even a 'teacher-librarian'. The emphasis of the learning resource centre is on supporting students' independent learning and teachers' teaching. The principal supports the development of the learning resource centre. The school librarian and principal communicate on an open and honest basis. They share the same school vision.

4.3.6 Conclusion

The research showed the weaknesses of Finnish school libraries: the lack of school library vision and competence at all levels. There are small resources inside the school: lack of space, lack of materials, and lack of IT. The traditional vision of the school library is linked only with books and promoting reading. The school librarian is struggling without support. Inside the school there are rigid subject areas. Teachers teach traditionally from the textbooks, so there is no need for a learning resource centre. This all reflects the difficulties that must be overcome if the school library is to be an organic part of learning and teaching within schools.

This survey also aims at showing the challenges of the Finnish school libraries:

1. The enthusiastic spirit and will to develop the school library is strong in some schools where student-centred learning is not only a possibility but also a living fact. The changing curriculum is a major stimulus for change.

2. There are existing Finnish examples of modern learning support centres with all possible IT supporting reading, students' independent learning and teachers'

work. They are most common in schools where the change in pedagogy has taken place.

In both cases principals and school librarians are working together for the information literate school community.

Principals and school librarians should be equal partners in a shared process. Earlier studies have shown that principal's support is vital to the well being and development of the school library. School librarians should also bear their part of the challenge of the educational reform.

This research gave some hints for developing Finnish school libraries, whether in collaboration with public libraries or inside schools as the school's learning resource centres. The small number of participating schools limits the generalizability of the results of the research, but the results can and need to be used for the benefit of Finnish learners and teachers.

Related Reading

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4.4 Report from France

Researchers: Colette Charrier, Brigitte Bacconnier and Alain van Cuyck

4.4.1 Background

Since 1998, most secondary schools in France have a school library or resource centre (called a ‘documentation and information centre’ or ‘CDI’) and at least one teacher librarian. Secondary schools in France educate youth aged 11-18. Some primary schools have a library or resource centre (called a ‘library and documentation centre’ or ‘BCD’), but there are no trained personnel to run them. In France, the official mandate to provide documentation resources to school users and to teach pupils how to acquire information retrieval skills extends only to secondary schools, that is, schools serving youth aged 11-18.

In France, teacher librarians are both information professionals and teachers. Since 1989, they have been recruited in the same way as other secondary teachers through a specific CAPES (the national French academic qualification which entitles the candidates to be teachers in secondary schools). The French ministry of education, which creates the necessary posts, engages teacher librarians; a few schools, which deal with the upper grades, are provided with two posts. Teacher librarians are in charge of the CDI; they work under the responsibility of the school principals. The official role of the teacher librarian is to provide documentation resources to school users and to teach pupils how to acquire information retrieval skills. These responsibilities or functions are defined by national official texts, especially the one called *Circulaire de mission* (1986), but these texts need to be modified and renewed, to bring them in line with the changes that have been made within the profession. The professional work of teacher librarians must be carried out within the local school policy and educational context as well. As a consequence, there are many differences among the CDI, in such things as their structures, their opening times, their media equipment, and so on.

Despite the fact that the French educational system is centralized and hierarchical at many levels, operating according to strictly defined policies, the particularities of the CDIs and their responsibilities more closely mirror the local school policy. Such is the case, too, in the relations between the different CDIs and their teacher librarians, and also in the cooperation between schools and public libraries. Although the French educational system rarely encourages activities that go beyond or outside the schools, the collaborative activities of the teacher librarians with information and documentation professionals in the public libraries helps the educational system to be more open. Working together allows them to know each other and to identify what is specific to each kind of library. The French context thus introduced a number of particularities into the leadership and the implementation of the international research.

4.4.2 The French Research Sample

The research participants were chosen from two different French académies: Grenoble and Nice. One-third of the schools were selected by random sampling within different geographical areas: urban, rural, remote, mountainous, and seaside. The questionnaires were sent between December and March to 295 secondary schools, including both colleges (serving students aged 11-15 years) and lycees (serving students aged 15-18 years). The response rate was 31% (91 completed questionnaires); most of the incomplete questionnaires came from principals who refused to participate in the research.

4.4.3 Survey Administration in France

The French team adapted the questionnaire, and they sent out the questionnaires by mail, as many schools were not connected to the Internet. Many reminder letters were necessary. Many principals and a few teacher librarians were not willing to participate in the study; the reasons given for not participating included lack of time, the content of the survey, and disagreements between principal and teacher librarian. The mountainous region gave the highest response rate (82% completed the questionnaires). The local policy in the mountainous region is very favourable to school library development. Down south, at sea level, the response rate fell to 22%.

4.4.4 Survey Results for France

Findings from Instrument 1 – The French Participants

The principals and teacher librarians differed significantly by gender and age. About 70% of the principals were male, while about 74% of teacher librarians were female. About 70% of principals were aged between 50 and 60, while 54% of teacher librarians were aged between 30 and 49. In France, while principals continue to be senior in age at the time of appointment, the increasing tendency is for teacher librarians to be quite young at the time of appointment. The teacher librarian respondents were highly qualified educators; all held the minimum of BAC+3 and many held BAC+4 and BAC+5 (BAC+3 is the French state educational certificate equivalent to a 3-year bachelor's degree, while BAC+5 is the French state educational certificate equivalent to a master's degree). It is difficult to know about the academic qualifications of the principal respondents as very few principals responded to this question.

Findings from Instrument 2 – Perceptions and Beliefs

Both teacher librarians and principals agreed that the resource centre is a specific place with particular activities run by a specialist. It was seen both as a physical and intellectual meeting point for teachers and pupils. It was often considered as the school's showroom, too. The respondents indicated that the multimedia documents of the CDI were carefully chosen, in a wide variety, appropriate to the CDI's specific users as well as to the curriculum. References were computerized, with users offered an online catalog. The CDI's space was generally functional, wide and pleasant.

An important percentage of the survey respondents insisted on the collaboration between teachers and teacher librarians: 57% of principals gave their full support to the idea of partnership, especially when the local school projects are taken into account. The principals and teacher librarians agreed that a resource centre is a place where different ways of learning, including those outside the official curriculum, can be practised because it is outside the classroom. But, at the same time, the classroom can be used for these activities when the learning activities have been prepared in a collaborative way. Such learning sessions must allow the pupils to acquire fundamental knowledge and information retrieval skills. Principals tended to emphasize “fundamental knowledge” whereas teacher librarians emphasized “information retrieval skills.” Some of the principals (33%) emphasized the importance of information skills in the local school project, but other principals (21%) and some of the teacher librarians (25%) did not. The principals and teacher librarians also saw the resource centre as a place for pupils to develop reading skills and to inform their vocational choices. The cultural dimension was seen as important too (for exhibitions, lectures, international exchanges, and so on).

The teacher librarians’ professional qualities were seen to include: efficiency, imagination, management, teaching abilities, and communication abilities. The main professional responsibility of the teacher librarians was seen to be the users’ guidance, but teacher librarians also must be open-minded, friendly, and ready to offer activities. Teacher librarians reported that their role was to support pupils in acquiring autonomy and critical sense. The teacher librarians also insisted on the role that they play in providing help to disadvantaged pupils and in giving equal opportunities to every pupil as far as information is concerned. They stated that pupils must be able to freely choose to come to the resource centre.

Because the resource centre is meant for everyone, it needs to be open as much as possible, which requires enough qualified personnel. To be able to be efficient in their work, teacher librarians stated that their number must be sufficient. Most of the principals (53%) thought that teacher librarians were given enough help as far as personnel is concerned, whereas teacher librarians agreed at only 44% to this statement. Teacher librarians were seen to be not only keepers of books; they needed to be involved in activities throughout the school. About one-half of the respondents (47% of principals and 56% of teacher librarians) reported that teacher librarians do not have to spend all their working-time inside the resource centre.

Principals seldom visited the resource centre to observe the teacher librarians at work. They relied on the teacher librarians to let them know about their activities, and they very seldom sought the teacher librarian’s advice about information management throughout the school. According to many principals (45%), teacher librarians should be recruited with a specific profile, but some teacher librarians (30%) disagreed.

Many principals (45%) reported that they should have control over the teacher librarian’s work, but many teacher librarians (41%) disagreed with this

statement. Teacher librarians reported that principals often do not support them in taking risks, because principals believe that that it might mean that teacher librarians are taking power too.

4.4.5 Conclusion

The principals indicated that the resource centre was an important part of the school. The principals saw the resource centre as a whole: for them, it must be an efficient and effective tool serving everybody in the school, managed by an efficient and friendly teacher-librarian who keeps the resource centre open as long as possible. The teacher-librarians insisted on the special nature of the resource centre as a place where users work differently than they do in the classroom. They insisted also on the management of the resources by asking for enough resources and enough qualified personnel. The pupils were at the core of the teacher librarians' concerns, especially because of the necessity for pupils to learn the information skills they need to become autonomous learners.

Despite the principals' interest in the resource centre, they indicated very little support for the teacher librarians taking part in activities, such as the local school projects, where they could act as experts. This contradicts the support that the principals gave for the involvement of teacher librarians in teamwork. The principals recognized the capacity of the teacher librarians to get people to work together, but the principals were not ready to give up any of their power. The principals recognized that the teacher librarians were leaders but, in many schools, the principals had sidelined the teacher librarians and did not delegate authority to them or seek advice from them.

Related Reading

Charrier, C., Baconnier, B., Van Cuyck, A. & Sarremejeanne, V. (1998). *Enquete Internationale: Partie francaise de l'enquete* [Portant sur responses de 91 chefs d'establissement et de 91 documentalists]. Lyons, France: FABDEN / ERISCO.

4.5 Report from Japan

Researchers: Setsuko Koga and Yuji Hirakue

4.5.1 Background

At the Copenhagen IFLA meeting in 1997, the survey instruments for principal and teacher librarian were presented, and the members participating in this project had a discussion about the contents of the questionnaire set and how the sampling of schools would be done. The discussion revealed that, among the seven countries involved in the international research project, there were great variances in educational systems, and in provision for and staffing of school libraries. In Japan, for instance, public education is organized at the national level and administered in quite an hierarchical fashion.

4.5.2 The Japanese Research Sample

In Japan, 100 government schools were surveyed. The schools were selected from 17 prefectures from Hokkaido to Kyushu, from the northern part of the country to the southern part of the country. Of the 100 schools, 40 were high schools serving students aged 15-18 in Tokyo (an urban context), and 60 were primary and junior high schools serving students aged 6-14 in northern and central part of Japan (a predominantly rural area).

Responses were received from 68 schools (68% response rate). The schools responding to the survey included schools serving Grades 1-6 (39%), schools serving Grades 7-9 (33%), and schools serving Grades 10-12 (28%). The size of the schools ranged from those with under 200 students to those with over 1,000 students; there was no over-representation of very small or very large schools. The responding schools were located in both urban areas (61%) and rural areas (38%) of Japan.

4.5.3 Survey Administration in Japan

Before distributing the survey, the questionnaires had to be translated. This involved quite a lot of hard work because of the differences between Japan and Australia (where the questionnaires were originally designed) in the status of school libraries as well as in the cultural and educational background of the survey participants. Therefore, it was decided not to use Instrument 3 for the principals and teacher librarians in Japan. There also were some questions that were not applicable to the Japanese situation; those were eliminated after consultation with Lyn Hay.

With the completion of the translation of Instruments 1 and 2 into Japanese, both instruments for principals and teacher librarians were tested for validity by

principals and teacher librarians, and in a few instances, the wording of a question was changed. Then, the questionnaires were sent out to 8 primary school principals, 2 middle school principals, and 10 high school principals with the covering letter from the director of the Japan School Library Association. Those principals then distributed the survey instruments to principals and teacher librarians in other schools.

The survey questionnaires, with stamped return envelopes, were distributed to 100 principals and 100 teacher librarians. Each of the study participants returned his or her survey directly to the researcher by mail. All together, 68 principal questionnaires and 68 teacher librarian questionnaires were mailed back by the end of January, and the survey data were entered into the online database at the School of Information Studies, Charles Sturt University, by the end of February.

4.5.4 Survey Results for Japan

Findings from Instrument 1 – The Japanese Participants

The teacher librarians and principals differed significantly in relation to their gender and age, the number of years they had spent teaching prior to appointment to their current position, and number of years they had served in their current position. The level of academic qualifications for principals and teacher librarians were similar; only a very few held post-graduate degrees.

While the principal respondents were mostly male (88%), the teacher librarian respondents were mostly female (82%). While principals were likely to be between 50-59 years of age, teacher librarians were likely to be between 40-49 years of age. The teacher librarians were more likely to have spent between 8 to 12 years teaching prior to their appointment as teacher librarians; the principals were more likely to have spent between 20 or more years teaching prior to appointment as principals. While the teacher librarians were likely to have spent 7 to 11 years in their current positions, the principals were likely to have spent 2 to 6 years in their current positions. Most of the research participants were members of one professional association; a few principals were members of several professional associations.

Findings from Instrument 2 – Perceptions and Beliefs

Overall, in the Japanese study, principals and teacher librarians differed significantly on the amount of time they perceived the principal to spend on tasks. Principals viewed themselves as spending slightly more time on tasks than did the teacher librarians. Principals and teacher librarians also significantly differed on the amount of time they perceived the principal should spend on tasks in the future. Principals believed they should spend more time on tasks in the future than did the teacher librarians.

For example, the principals perceived themselves as spending more time than did the teacher librarians on these tasks:

- advocating and facilitating the development of an information literate school community;

- ensuring that the attainment of information literacy is part of the school plan;
- encouraging and facilitating the professional development of staff;
- understanding and advocating the role of the teacher librarian (as per ministry/system policies) in the school's instructional program;
- encouraging the teacher librarian to debate and justify current practice; and
- seeking feedback from staff about their impressions of the quality of library services.

However, principals believed they should spend more time on these tasks in the future

than did the teacher librarians.

Overall, in the Japanese study, the teacher librarians and principals did not differ significantly in their beliefs. For example, both principals and teacher librarians agreed on the following belief statements, that:

- the teacher librarian should be a key player in the school's information literacy programs;
- the teacher librarian ought to have a qualification in education and librarianship;
- should an unqualified teacher librarian be appointed to a school, s/he undertake a specialist qualification in teacher librarianship;
- the teacher librarian should to spend all of his/her day in the library;
- staff development should address the development of teachers' information literacy;
- the teacher librarian should provide appropriate in-servicing to the teaching staff;
- teacher librarians should provide flexible timetable that best meets the needs of individual students, groups, and whole classes;
- Internet access should be available through the LRC;
- students should have individual access to the LRC during class time;
- when the teacher librarian is absent, it is necessary to fill his/her position with a suitably qualified replacement;
- principals should act as role models and mentors to staff who are reticent about the appropriate instructional use of information technology;
- cooperative planning and teaching should occur in the classroom as well as in the library; and
- the teacher librarian should inform the principal about issues affecting the potential of the library.

The one clear exception to this alignment of beliefs between principals and teacher librarians was in relation to principals' supervision of teacher librarians. Most principals believed that they were well-placed to judge the teacher librarians' professional competence, and that they should supervise teacher librarians; most teacher librarians did not believe that principals were well-placed to judge the teacher librarians' professional competence, and they did not believe that principals should supervise teacher librarians.

4.5.5 Conclusion

The Japanese experience shows that piloting of data collection instruments needs to be done very carefully and thoroughly. In an international study, the concepts underlying the research instruments should be discussed in advance and the instruments need to be piloted in each of the countries involved. Despite the challenges involved in the research, the experience showed that an international survey could be completed successfully via the Internet.

Related Reading

Koga, S. & Hirakue ,Y. (1999). The role of principals for promoting information literacy in primary and secondary school. *Gakko Toshokan*, 586(8), 47-52.

4.6 Report from Scotland

Researcher: James Herring

4.6.1 Background

In Scotland, virtually all state secondary schools (pupils aged 11-18) employ professional librarians who are referred to as ‘school librarians.’ In the private sector, there is a mixture of professional librarians, non-qualified librarians, and teacher librarians. Teacher librarians in Scotland are teachers who spend a few hours a week supervising the library. Primary schools in Scotland do not have qualified librarians.

The main trend affecting school librarians in Scotland is the decrease in the support that they receive from the local authority School Library Service. There has been a gradual run down in the funding of these services, and this affects school librarians in that they now receive less in-service training, less professional advice, and fewer bulk loans of learning resources. Most schools now have Internet connections and, due to a government initiative, all schools will have networked Internet access in the near future.

4.6.2 The Scottish Research Sample

Only state secondary schools were included in this project since primary schools in Scotland do not have school librarians and, in the private sector, some schools do not have qualified librarians. As the aim was to survey about 200 schools, with the hope of a 40% response rate from both school librarians and head teachers (principals), questionnaires were sent out to 50% of all Scottish secondary schools. The method used was to choose every alternate school listed by educational authority in the educational guide, *Educational Authorities Directory 1998*. This ensured that an equal balance of urban and rural schools was chosen. There was no attempt to balance the choice of Catholic schools, which are found mainly in the west of Scotland, in the sample. The survey questionnaires were mailed to 200 schools, and the response rate was 22% for both head teachers and school librarians. A total of 75 school librarians returned questionnaires but data was only included where both the principal and school librarian questionnaires were returned from the school. In some areas, permission had to be gained from the local authority before questionnaires were sent out.

4.6.3 Survey Administration in Scotland

Questionnaires were sent to the head teacher and the school librarian in separate envelopes, mainly to ensure that the school librarian actually received the questionnaire. A stamped addressed reply envelope was included with the school

librarian's questionnaire and the head teacher was asked to forward his/her questionnaire to the school librarian for return. On reflection, this was not a good idea. Anecdotal evidence suggests that this ignored the politics of the school in that the head teacher is the senior manager in the school and, in most schools, the school librarian has the status of a class teacher (not a head of department). In only a few cases did the school librarian return both questionnaires. In most cases, the school librarian returned her questionnaire in one envelope and the head teacher's questionnaire was returned separately. It was clear that head teachers were, in most cases, not prepared to let the school librarian see what they had written. There has, however, been no systematic check on this point amongst the schools. If the survey were repeated, a separate stamped addressed reply envelope would be provided for the head teacher as well as the school librarian.

There were some problems with the wording of a minority of the questions. For example, there appeared to be some confusion about what constituted an Internet connection and Internet points in the school. As an incentive to schools to return both questionnaires, a British Telecom fax machine was offered as a prize for the school chosen from a prize draw consisting of all schools who sent back 2 questionnaires. British Telecom provided the fax machine in the form of sponsorship and a leaflet about the company's educational service was provided with each questionnaire.

4.6.4 Survey Results for Scotland

Findings from Instrument 1 – The Scottish Participants

The schools returning both questionnaires tended to be the larger secondary schools in Scotland, with 42% having over 1000 pupils and 38% having 600-999 pupils. In terms of staffing, 69% had between 60 and 100 staff. These figures are likely to be higher than the national average in terms of size of school. Most (90%) of schools had one school librarian and only 2.4% had 2 school librarians. The schools profiled in the project do reflect the urban/rural split in Scotland: 44% of the responding schools were urban and 56% were rural.

Of those school librarians responding to the survey, 42% were aged 40-49 and an equal percentage were aged 20-39, but these figures are unlikely to reflect the national profile which would show a higher percentage of younger school librarians. In addition, 21% were male which does not reflect the gender balance of school librarians in Scotland. The majority (60%) of school librarians in this survey had been in their present position between 0 and 9 years and 40% between 10 and 19 years. In the author's experience, this latter figure appears to be very high and does not reflect the national profile. Virtually all the school librarians were graduates with some having postgraduate qualifications. Only 2.4% were members of a listserv and this reflects the absence of a listserv for UK school librarians. In terms of professional reading, 75% read one journal and 50% read two or three journals.

The age range of head teachers (58% between 40 and 49) likely reflected the national profile as did the 86% male figure and the experience in terms of

teaching and senior management. Head teachers were, in general, used to working with school librarians, as 75% of them had worked with either 1 or 2 school librarians since becoming a head teacher.

Findings from Instrument 2 – Perceptions and Beliefs

Overall, the school librarians believed that their head teachers should spend more time in the future than they did at present on most of the tasks but, in particular, on:

- advocating and facilitating an information literate school;
- ensuring that the attainment of information literacy is part of the school plan;
- ensuring that the school librarian has an appropriate allocation of support staff;
- encouraging the teaching staff to involve themselves in the development of school library policies and programs;
- encouraging the teaching staff to invest time in cooperative planning and teaching with the school librarian;
- encouraging and facilitating the professional development of teaching staff to enhance their understanding and use of IT;
- informing new teaching staff about the importance of collaboration with the school librarian;
- encouraging debate amongst teaching staff on information policy in the school;
- actively seeking external funds to supplement the school library budget;
- engaging in regular and timely communication with the school librarian;
- seeking advice from the school librarian on issues of whole school information management;
- encouraging teaching staff to use a wide range of information resources in their teaching;
- encouraging the school librarian to take a leadership role in developing information skills across the whole curriculum;
- working with the school librarian to develop the school librarian's personal and professional development plan;
- ensuring that the needs of the school library are addressed in major committees where the school librarian is not represented; and
- seeking feedback from staff on their impressions about the quality of services offered by the school library.

It was clear from the analysis that there was a difference in perception between school librarians and head teachers about the amount of time spent on tasks. Head teachers saw themselves as spending more time on the tasks listed than did the school librarians. However, despite this, it is interesting to note here that the principals agreed that they should spend more time in the future on 12 of the above 16 categories. Although there was no significant difference in the amount of time which school librarians and head teachers thought head teachers should spend on these categories in the future, in 23 out of the 31 categories in Instrument 2, the head teacher mean for the future was in fact higher than that of the school librarian. This indicates that head teachers are aware that they should spend more time on these aspects in the future slightly more than the school librarians. This should be seen as encouraging for school librarians who, therefore, need to think about strategies for ensuring that the head teachers do, in fact, spend more time on these tasks in the future.

There were some significant differences in beliefs between the school librarians and the head teachers in this study but there were also many key areas where head teachers and school librarians shared the same beliefs. There was agreement on aspects such as:

- **the school librarian as a key player in information skills development;**
- **the importance of staff development plans addressing teachers' information literacy;**
- **Internet access in the school library;**
- **access to the school library for pupils during class time; and**
- **the role of the school librarian in providing in-service training for staff.**

The school librarians and head teachers differed in that:

- **head teachers agreed that school librarians should have dual qualifications but school librarians did not agree;**
- **head teachers believed that cooperative planning and teaching should take place in the library and in the classroom; and**
- **head teachers did not agree that the school librarian should be an ICT leader in the school.**

These disagreements are surprising, and it would be interesting to see if the same results occurred from a larger sample. If it is true that head teachers favour dual qualifications for Scottish school librarians, then this would raise an issue that has lain dormant in the UK for a number of years. The school librarians' disagreement on the issue of cooperative planning and teaching in the library and the classroom is surprising and, if this reflects a wide held belief, is worrying. School librarians are encouraged to plan cooperatively with teachers and not just with regard to the library. Also, if head teachers do believe that school librarians should not be ICT leaders in the school, then school librarians need to make head teachers more aware of their ICT skills.

4.6.5 Conclusion

Strategies for improving cooperation between school librarians and head teachers in relation to the development of information skills in schools should be developed and disseminated to both head teachers and school librarians. A follow-up study, either to repeat the questionnaire exercise for those who did not respond, or to choose a sample of school librarians and head teachers for interview, should be considered.

4.7 Report from South Korea

Researcher: Yoon-ok Han

4.7.1 Background

Korea is a small country geographically, but its population is large. The educational system is 6-3-3-4, and there are 5,732 elementary schools, 2,705 middle schools, and 1,856 high schools in Korea. The Ministry of Education is a central coordinating body for school education; it sets the goals of schooling for the nation and establishes curriculum guidelines and requirements. Elementary and secondary schools are under the supervision of the provincial area's superintendent of education. In Korea, public secondary schools are not fully funded by the national or provincial government and students have to pay their tuition. Teachers can belong to the teachers' associations of their own choice, while the teachers' union has not been permitted yet, because teachers are not accepted as labourers in Korean society. This organizational structure for public education results in a non-autonomic educational system.

According to the statistics of the *1996 Korean Education Yearbook*, 62.4% of elementary schools, 84.9% of middle schools, and 98.3% of high schools have libraries. The Law of Education recommends the employment of a teacher-librarian, but it is not obligatory. Elementary school libraries, with a few exceptions, do not have teacher-librarians. Only 1.3% of middle school libraries, 6.2% of high school libraries, and 1.5% of all schools in Korea have teacher-librarians, and these are mainly in Seoul.

Compared with this low employment rate of teacher-librarian and the nation's geographical size, the programs for education in librarianship are not small. Programs for librarianship education began in Korean universities in 1957, and now 32 universities offer undergraduate courses for library and information science. Among these universities, 13 offer a masters program and 6 offer doctoral courses.

While the education programs are rich, the number of professors in faculties of education, with the expertise and credentials necessary for supervising graduate work in teacher-librarianship, is also very small. All this means that there is not a large amount of research in teacher-librarianship carried out in Korea, and much of the research that is carried out is conducted by students in their master's or doctoral programs, not much of which is disseminated to the profession.

4.7.2 The South Korean Research Sample and Survey Administration

Seoul, as the capital city, was chosen for this project. Only 141 high schools have teacher-librarians in Seoul, and all of them were selected as the research sample.

In Korea, at the time of the study, using an online survey format could not be expected because almost all participants, particularly principals, were inexperienced Internet users even though most schools had computers. Because of the participants' lack of familiarity with Web-based forms, paper copies of the surveys were prepared.

The three research instruments for principals and teacher-librarians were translated into Korean by September 1997. Also information about this research project and how to participate were outlined in the covering letter. In October, assistance was sought from the Seoul Secondary School Library Association to increase response rate; an official letter of the Association requesting the principals and teacher-librarians' cooperation was obtained. Prepared instruments were mailed to the 141 schools. When only 17 principal/teacher-librarian pairs of questionnaires were collected by early January 1998, 124 paper copies of the surveys were mailed a second time. In early February, the third paper copies of the surveys were mailed, and contact was made by phone. Finally, by late February 43 principal/teacher-librarian pairs of questionnaires were collected for a final response rate of 30.5%. The data was loaded onto the Charles Sturt University data collection website by the researcher and an assistant over a period of three weeks.

A number of factors influenced the low response rate. First, the instruments were lengthy and complicated to complete, especially the open-ended questions (Instrument 3). Second, some of the questions in the instruments were not relevant to the present educational situation in Korea.

4.7.3 Survey Results for South Korea

Findings from Instrument 1 – The South Korean Participants

All of the responding principals' schools were located in urban areas and more than half (55%) of them were public schools with large enrolments. Most of the schools (98%) had more than 1,000 students and 71% had between 60-100 teaching staff. All of the participant schools had one full time teacher-librarian (teacher-librarians' time allocation is not connected with school size).

The participants differed significantly by gender: 86% of the principals were male and 77.3% of the teacher-librarians were female. Teacher-librarians and principals also differed significantly on the number of years they had spent teaching prior to appointment to their current position; number of years in executive positions; and age. For example, 88% of the principals had spent between 10 to 20 years teaching prior to appointment, while 45.2% of the teacher-librarians had not had any teaching experience. Principals were likely to have spent between 15 to 19 years in executive positions, while none of the teacher-librarians have been in an executive position, because teacher-librarians cannot be promoted to an executive position by Education Law. The teaching profession's retirement age is 65 in Korea. With few exceptions, a teacher cannot become a principal before 50 years of age; 100% of the principal respondents were over 50 years of age and 71% of them were over 60 years of age. In

contrast, most of the teacher-librarian respondents were between the ages of 30-49. Most of the principal respondents had worked with 1 or 2 teacher-librarians and a few had worked with 5 or 6. The latter case is possible because the public school teachers have to be transferred every 4 years. Most teacher-librarians are appointed by way of unadvertised positions because employment of a teacher-librarian is not required in Korea, so most employment is carried out by a personal recommendation.

All principals and teacher-librarians had graduated from university; 43% of the principals and 23% of the teacher-librarians had attended graduate school. The great majority of teacher-librarians subscribed to several journals and were members of several professional associations, but 92.7% of schools had no Internet point in the school library, and only 39% of teacher-librarians subscribed to a listserv for librarians. This means that (before 1998) professional activity through a computer had not yet become popular in Korea.

Findings from Instrument 2 – Perceptions and Beliefs

According to teacher-librarian respondents, their principals gave the most attention to the following tasks:

- advocating and facilitating an information literate school;
- encouraging the professional development of teaching staff;
- enhancing the use of information technology (IT); and
- allocating flexible time for the teacher-librarian to administer the school library.

A significant difference ($p<.001$) between time currently spent and time perceived to be required in the future, as reported by teacher-librarians, was found in relation to the principals' role in enhancing the use of information technology. The teacher-librarians reported that the task receiving the least attention from principals as seeking outside school funding possibilities that can be used to supplement the school library budget at present and in the future. Here again, there was a significant difference between time currently spent and time perceived to be required in the future.

According to the principal respondents, principals pay most attention to the following tasks:

- allocating adequate time for the teacher-librarian to administer the school library; and
- facilitating the development of an information literate school community.

Principals report that they pay the least attention to the task of “advocating that the teacher-librarian be a member of key school committees to tap into her/his expertise and school-wide perspective”.

A significant difference ($p<.001$) between time currently spent and time perceived to be required in the future, as reported by principals, was found in relation to the principals' role in relation to these tasks.

Overall, there were significant differences between teacher-librarians and principals for many perception factors. This indicates that principals and teacher-librarians differed on how much time they thought the principal spent on various tasks (eg. facilitating the development of an information literate school community). Overall principals viewed themselves as spending more time on tasks than the teacher-librarians perceived them to be spending. Principals also perceived themselves as generally being able to spend more time on tasks in the future than the teacher-librarian thought they should.

When asked about their beliefs in relation to developing information literate school communities, the teacher-librarians emphasized the importance of their qualifications in education and librarianship, and the opportunities for promotion as well as the importance of library service. The majority of the teacher-librarians agreed that they should be key players in the school's information literacy program, and that Internet access should be available through the school library. They especially expressed negative feelings about principals' judgement about teacher-librarian competence and about the principals' supervision of their work. Two unexpected results were that the teacher-librarians did not agree with the necessity of providing a flexible timetable to best meet the needs of individual students, groups and whole classes, and they did not agree that teacher-librarians were responsible for educating principals about the role of teacher-librarians.

The principals were also interested in the teacher-librarian's ability and qualifications, but they were not concerned about the teacher-librarians' opportunities for promotion. The principals believed that staff development plans should address the development of teachers' information literacy and that teacher-librarians should provide appropriate in-servicing to teaching staff. On the other hand, the principals did not believe that teacher-librarians should be key players in the school's information literacy programs, nor did they believe that teacher-librarians should be identified as IT leaders in the school. Overall, however, there were no significant differences between teacher-librarian and principals for the belief factors.

Findings from Instrument 3 – Contributions and Barriers

The responses to the open-ended questions on Instrument 3 were analyzed and interpreted, and it was found that the strengths of the school library, according to both principals and teacher-librarians, were promoting reading, and providing books and/or information for teaching and learning. However, the principals put the strongest emphasis on the reading, while the teacher-librarians put the strongest emphasis on providing information, or on helping teachers teach and students learn. The challenges that faced the school library were budget and information literacy. Also mentioned by teacher-librarians, but with less frequency, were the library's role being limited to being a 'study room'. The teacher-librarian's critical functions were seen as providing information and reading guidance. The function of 'providing information' was seen as circulation of books. If the library were closed or a teacher-librarian were absent for more than two weeks, results showed respondents felt that teaching and learning would be affected in relation to using information materials. Thus,

student aides have to be trained well in order to ensure access to the school library when the librarian is absent.

Both teacher-librarians and principals saw information literacy mostly as ability to get information through computer networks. Mentioned by teacher-librarians, but with less frequency, was the provision of teaching-learning materials. Lack of software and budget were seen as the major barriers to the integration of information skills across the curriculum. Principal respondents saw that their roles in the development of an information literate school community were to provide a supporting budget, and to emphasize the role of the school library.

4.7.4 Conclusion

Principals and teacher-librarians significantly differed on their perceptions of the amount of time the principal was presently spending on tasks for an information literate school community, and the amount of time the principal should spend in the future. The principals believed they spend some time and should spend more time on tasks for an information literate school community in the future, than in the teacher-librarians believed they did. However, the teacher-librarians responded that their principals have no concern for the role of the teacher-librarian in the instructional program, and that their principals were not interested in seeking collaboration of the teacher-librarian with respect to issues of whole school information management.

Research has shown that the principal's understanding and advocating of the school library is very important for the development of an information literate school community. The Korean principals perceived that the attainment of information literacy should be part of the school plan; however, their basic understanding of the school library has not been sufficient to the task.

Related Reading

Han, Y. (1999). Principals and teacher-librarians working within an information literate school community - Research from Korea. *Journal of the Korean Society for Library and Information Science*, 33(2), 141-167.

CHAPTER FIVE

5. Major Findings from the International Study

5.1 Interpreting the Study Results

In this section of the report the researchers present highlights of the major findings of the study, with examples from the findings of cross-country comparative analysis and with examples from the findings for individual countries. In interpreting the findings, however, readers must keep in mind the extent to which data collection and data analysis has been shaped, for example, by the different approaches used to select study participants, by the variations in response rates, and by the different educational cultures in the participating countries. Readers should bear in mind that the researchers in each country selected the survey participants in the way most appropriate to their local context. In no case was a countrywide survey attempted. The response rates for each country varied (see Table 5.1) with low response rates limiting the researchers' confidence to generalize from the results. There was variability within the responses as well. For example, not all participants who responded to Instrument 1 and 2 completed Instrument 3, and not all those who completed Instrument 3 responded to all of the questions in that instrument. In addition, it must be born in mind that the Japan study did not include Instrument 3 and that only a small part of the data from the France study has been made available in English at this time.

Table 5.1 Survey Response Rate

Country	Schools Surveyed		Principal Response		School Librarian Response	
	n	%	n	%	n	%
Australia	246	15%	38	15%	40	16%
Canada	252	16%	40	16%	59	23%
Finland	86	47%	40	47%	36	42%
France	295	31%	91	31%	91	31%
Japan	100	68%	68	68%	68	68%
Scotland	200	22%	44	22%	42	21%
South Korea	141	30%	43	30%	44	31%

5.2 Cross-Country Comparisons of Findings from Instrument 1

Two differences evident in the data from Instrument 1 were the gender and age of the

principals and the school librarians. Across all of the countries in the study, most principals were male and most school librarians were female (Table 5.2). This gender difference was statistically significant ($p \leq .001$) for all of the countries in the study, even though the actual gender percentages varied from country to country. The percentages of principal respondents who were male ranged from 57% in Australia to 88% in Japan; the percentages for school librarian respondents who were female ranged from 74% in France to 100% in Australia.

Table 5.2 Gender of Survey Participants (Percentages)

	Principals		School Librarians	
	Male	Female	Male	Female
Australia	57	43	0	100
Canada	75	25	12	88
Finland	57	43	8	92
Japan	88	12	18	82
Scotland	86	14	21	79
South Korea	86	14	23	77

Most principals were older than most school librarians. This age difference was also significant ($p \leq .001$) for all of the countries. Most principals were in their fifties, while most school librarians were in their forties (Table 5.3). The exceptions were in South Korea where most principals were over 60, in Scotland where most principals were in their forties, and in Finland where most school librarians were in their fifties.

Table 5.3 Age of Survey Participants (Percentages)

	Principals				School Librarians			
	under 40	40-49	50-59	over 60	under 40	40-49	50-59	over 60
Australia	6	43	51	0	11	51	35	3
Canada	4	17	62	17	14	46	39	1
Finland	0	18	70	12	25	22	50	3
Japan	12	3	85	0	16	57	25	2
Scotland	5	58	37	0	43	43	14	0
South Korea	0	0	29	71	50	43	0	7

5.3 Cross-Country Comparisons of Findings from Instrument 2

Data from Instrument 2, from Australia, Canada, Finland, Japan, Scotland, and South Korea, was available for analysis on the CSU website and was analyzed using SPSS software.

5.3.1 Overall Mean Scores for Perceptions and Beliefs

An overall comparison of the data across the countries was conducted using overall mean scores calculated for Present Perceptions, Future Perceptions and Beliefs for the school librarians and the principals in each of the countries. The overall means and p-values for comparisons are reported in Table 5.4. Based on the overall mean scores for Present Perceptions, principals and school librarians in all countries but South Korea differed significantly ($p \leq .01$) on the amount of time they perceived the principal to spend on tasks.

Table 5.4 Overall Mean Scores – Present and Future Perceptions, and Beliefs

	AU	CA	FI	JP	KR	SC
Present						
School Librarian - Mean	88.71	95.75	66.00	71.72	73.89	73.83
Principal - Mean	103.03	107.14	77.88	84.07	81.76	87.07
p-value	.001	.003	.008	.001	.038	.004
Future						
School Librarian - Mean	104.29	96.85	85.19	86.99	82.70	94.67
Principal - Mean	108.80	111.83	85.48	103.49	96.95	98.59
p-value	.254	.003	.956	.000	.001	.430
Beliefs						
School Librarian - Mean	62.55	64.48	41.31	55.97	56.68	56.07
Principal - Mean	60.60	64.29	44.83	60.04	54.53	50.64
p-value	.154	.890	.169	.019	.208	.001

In all countries, principals viewed themselves as spending more time or slightly more time on tasks than did the school librarians. The four main tasks on which the principal and school librarian participants in all countries disagreed were:

- advocating and facilitating the development of an information literate school community;
- demonstrating support for collaboration among the TL and teaching staff;
- ensuring that the TL has an appropriate allocation of support staff; and
- allocating adequate, flexible time for the TL to administer the SLRC.

Based on the overall mean scores for Future Perceptions, the principals and school librarians in Australia, Finland, and Scotland appeared to be aligned (no significant difference in their responses) in regards to the amount of time they thought the principal should spend on tasks in the future. In Canada, Japan, and South Korea, however, there were significant differences between the two groups; the principals believed they should spend more time on the tasks in the future than did the school librarians. For example, in Canada principals and librarians differed significantly on 22% of the tasks, in South Korea, on 42% of the tasks, and in Japan, on 63% of the tasks. In these three countries, the principals and school librarians significantly differed on the tasks of:

- advocating and facilitating the development of an information literate school community;
- informing new staff about the importance of collaborating with the TL; and
- encouraging teachers to incorporate the learning and use of a range of information skills into their teaching programs and to assess process skills as well as content.

For each of these tasks, school librarians thought that their principals could give *a little* –

some more attention to these tasks, whereas the principals felt they should give *a lot* more attention to these tasks. This suggests that the school librarians in Canada, South Korea, and Japan have relatively low expectations regarding the information literacy advocacy role of the principal in the school.

Based on the overall mean scores for Beliefs, principals and school librarians in five of the six countries appeared to be well-aligned in their beliefs. The exception was Scotland where school librarians are not qualified teachers – this finding was of particular interest to the school library profession in the UK, as James Herring observed:

The school librarians and headteachers differed in that:

- *Headteachers agreed that school librarians should have dual qualifications but school librarians did not agree*
- *Headteachers believed that cooperative planning and teaching should take place in the library and in the classroom*
- *Headteachers did not agree that the school librarian should be an IT leader in the school.*

These disagreements are surprising to this author and it would be interesting to see if the same results occurred from a larger response. If it is true that headteachers favour dual qualifications for Scottish school librarians, then this would raise an issue that has lain dormant in the UK for a number of years. The school librarians' disagreement on the issue of cooperative planning and teaching in the library and the classroom is surprising and, if this reflects a wide held belief, is worrying. School librarians are encouraged to plan cooperatively with teachers and not just with regard to the library. Also, if headteachers do believe that school librarians should not be IT leaders in the school, then school librarians need to make headteachers more aware of their IT skills. (Herring, 1998, pp. 3-4)

5.3.2 Overall Task Priorities for Principals

The researchers next looked at the means for each of the questions related to tasks that the principals might carry out in support of the development of an information literate school community (Questions 1-31). Both principals and school librarians rated each of the tasks in terms of the time/attention that the principal was giving the task at Present and should give the task in Future. Table 5.5 provides a cross-country comparison of school librarian and principal Present versus Future Perceptions based on T-tests results. Those tasks identified by the school librarians (TL) and the principals (PR) as requiring significantly more attention by the principals in future are identified by the letter 'M.'

Table 5.5 identifies considerable alignment between principals and school librarians in both Canada and Japan. However, this alignment occurred at opposite ends of the attention spectrum. While there was overall consensus in Canada that principals *did not* need to focus more attention on the majority of tasks (except for two items, Q.12 and 31).

Table 5.5 Tasks Identified as Requiring Significantly More Attention ($p \leq .01$)

No.	Question	CAN		AUS		FIN		SCO		S KOR		JAP	
		TL	PR	TL	PR	TL	PR	TL	PR	TL	PR	TL	PR
1	Facilitate development of ILSC					M		M	M	M	M		M
2	Ensure info literacy in school plan			M		M		M	M	M	M		M
3	Facilitate professional development of staff										M		M
4	Advocate TL role in school curriculum					M				M	M	M	M
5	Support collaboration between TL & staff					M					M		M
6	Ensure library reflects school goals				M	M			M	M			M

7	Ensure appropriate allocation of support staff						M					M	
8	Allocate adequate, flexible time for TL										M	M	M
9	Encourage staff involvement in development of library				M		M	M			M	M	M
10	Encourage staff invest time to CPT with TL		M		M	M	M	M	M		M	M	M
11	Facilitate staff PD in understanding & use of IT						M		M		M	M	M
12	Inform new staff re importance of collaboration with TL	M	M	M	M	M	M	M	M	M	M	M	M
13	Support currency/relevancy of library collection				M				M		M	M	M
14	Encourage staff debate re information policy		M	M	M		M				M	M	M
15	Ensure significant funding allocated to library budget				M						M	M	M
16	Seek outside funding to supplement library budget		M		M	M	M	M	M	M	M	M	M
17	Engage in regular/timely communication with TL						M		M	M			M
18	Visit library to observe work of TL				M				M	M			
19	Encourage TL to debate/justify current practice			M						M	M	M	M
20	Ask questions of TL re teaching & learning							M		M	M	M	M
21	Rely on TL to keep PR abreast of developments re TL role		M						M			M	M
22	Seek advice from TL re whole school info management		M				M				M	M	M
23	Encourage TL to take risks								M	M			M
24	Encourage staff to use range of resources in teaching			M			M	M	M	M	M	M	M
25	Encourage TL leadership in development of info skills continuum						M	M			M		M
26	Work with TL to develop his/her personal PD plan				M	M	M	M	M	M	M	M	M
27	Advocate TL as member of key school-wide committees										M	M	M
28	Encourage information skill integration and assessment by staff				M						M		M
29	Provide time release & funding for TL's ongoing PD		M		M	M			M	M	M	M	M
30	If TL not on key committee, PR ensures library needs addressed		M		M		M				M	M	M
31	Seeks staff feedback re quality of library services	M	M	M	M		M	M			M	M	M

ILSC = Information Literate School Community PD = Professional Development
 TL= School Librarian PR = Principal CPT = Cooperative Planning & Teaching

Principals and school librarians in Japan agreed that principals *did* need to spend more time/attention on nearly two-thirds of the tasks (20 out of 31 tasks). There was only one task that both respondent groups in Japan agreed *did not* require further attention – Q.18 that dealt with the principal visiting the library to observe the work of the school librarian.

In both Japan and South Korea, the principals identified a larger number of tasks that they felt required more of their attention, than those identified by the school librarians. One possible cause of this high level of Future attention might be that the process of completing these survey instruments acted as an awareness-raising exercise for the

principals as to the potential support they could give their school librarian. In Australia, respondent groups were aligned on 68% of the tasks. Seven of the ten remaining tasks, however, were identified by the school librarian as requiring more principal attention than they were currently receiving. This suggests that Australian school librarians have higher expectations of principal support than Australian principals. The five tasks identified as requiring significantly more principal attention across all countries included:

- informs new teaching staff about the importance of collaborating with the TL;
- encourages the teaching staff to invest time in cooperatively planning and teaching with the TL;
- actively seeks outside school funding possibilities that can be used to supplement the library budget;
- seeks feedback from staff about their impressions of the quality of library services; and
- works with the TL to develop the TL's personal professional development plan.

5.4 Cross-Country Comparisons of Findings from Instrument 3

In this section of the paper the findings from Instrument 3 from the studies conducted in five of the participating countries, namely Australia, Canada, Finland, Scotland, and South Korea are presented. The data from France is not yet available in English, and the Japan study did not include Instrument 3.

Readers should note that not all respondents to Instrument 1 and 2 completed Instrument 3 and not all those who completed Instrument 3 responded to all of the questions in that instrument. For example, for Canada, themes for each of the open-ended questions from Instrument 3 were derived from the responses of 43-47 of the 59 school librarians and 18-31 of the 40 principals who participated in the study. However, approximately the same proportion (about 75%) of the school librarian respondents completed the open-ended questions, as did the principal respondents.

Responses to the open-ended questions on Instrument 3 were analyzed through a process of reading and re-reading responses, noting the content of responses, identifying themes or categories according to the content, and then grouping and re-grouping the responses within the themes or categories. This interpretive process began with reading all the responses to get an overall sense of the data. Then, each of the open-ended questions was analyzed. Cross-country comparisons were conducted using the same content analysis approach.

5.4.1 Contributions of the School Library and School Librarian

In all of the five countries, principals and school librarians indicated that two key strengths of the library were: (1) an emphasis on supporting staff and students in teaching and learning, and (2) the provision of resources and equipment. In all but South Korea, there were frequent mentions of trained and qualified staff as a key strength. In Canada and Finland, the library as an environment that was open, inviting, well organized, and connected to other libraries was also seen as important.

Participants in all of the five countries mentioned the provision and organization of information and resources as one of the critical functions of school librarians. All but South Korea identified in-servicing staff and cooperative planning and teaching as the other two critical contributions that school librarians made to the teaching and learning in schools. Principals and school librarians in Canada and Australia differed in the emphasis they placed

on these two functions: principals tended to focus on the school librarians' role in professional development, in enabling things to happen, while school librarians tended to focus on the front line responsibilities of planning, teaching and evaluating learning as equal partners with other teachers. In Scotland and Australia, the role of the school librarian in IT, both IT management and IT user education, was also seen as very critical.

5.4.2 Challenges for the School Library and the School Librarian

Funding was one of the challenges in school libraries that ranked high on the list for principals and school librarians across all the countries. In some countries, this reflected the low levels of funding to education as a whole; in others, more specific issues were identified such as low salaries for library staff or competition from IT for a piece of the budget pie. In all but South Korea, IT represented an important challenge in terms of the need for constant upgrading of technology; in terms of the demands for staff training, and in terms of user education. In Canada, Scotland and Finland, support for the library from school administrators and from teachers also was seen as a key challenge.

When asked about the effect of the library being closed for more than two weeks, participants in all of the five countries agreed that there would be losses in access to resources and in the teaching of information skills. They suggested that instructional strategies might become less varied and less student-centred and that teachers might rely more on the textbook approach.

The next question asked about the impact of the school librarian being absent for more than two weeks. Participants in three out of four of the countries (no responses were available from South Korea for this question and for the question on arrangements to replace absent school librarians) agreed that there would be serious declines in the instructional program related to information skills. The majority of the participants from Finland suggested that there would be little impact on teaching and learning. In order to ensure access to the library when the librarian was absent, participants in Canada and Australia reported that efforts would be made in some schools to hire a replacement with at least teacher qualifications but generally in Scotland and Finland no replacement staff would be provided.

Participants in all five countries acknowledged that teachers' attitudes and beliefs constituted one of the major barriers to the integration of information skills across the curriculum. Time available for teachers and school librarians to work together was seen a barrier by principals and school librarians in Australia, Scotland and Finland and by school librarians in Canada. Lack of 'top-down' support – limitations in the principal's understanding and leadership, and lack of a school information skills policy or curriculum – was seen as a barrier by school librarians in all but Finland. Educational practices such as compulsory courses with rigid content requirements, university entrance examinations, and government testing programs were seen as barriers by school librarians in South Korea and Canada and by principals in Finland. Funding was seen as a barrier by principals in South Korea, Canada and Scotland.

5.4.3 Foundations for Creating Information Literate School Communities

In Chapter One, the researchers acknowledged that the creation of information literate school communities is a complex and challenging task for all involved, and drew on the work of Kuhlthau (1993) on primary inhibitors and basic enablers of effective library-based instructional programs. The open-ended questions in Instruments 3 attempted to explore the challenges (or primary inhibitors) and contributions (or basic enablers) related to creating information literate school communities. Underpinning the work of creating information literate school communities is a shared understanding of the concept of information literacy. As Bruce (1998) has pointed out, based on her study of instructors and librarians in higher

education, there are widely varying conceptions of information literacy. Educators involved in information literacy education need to develop an understanding of these conceptions in order to inform and guide their practice as information literacy educators.

The study participants were invited to give their definitions of information literacy. The strongest element in the definitions of information literacy offered by the study participants was the ability to access information from a variety of sources. Practitioners from each of the participating countries shared this concern about access. Principals and school librarians in South Korea and Scotland and principals in Australia made special mention of the ability to access information from electronic sources. In all countries but South Korea there was some recognition of the process approach to information access and use, but only in Australia was a specific model of process-based information literacy education mentioned with any frequency.

5.5 Applications of the Research

Each researcher participating in the international study gained new insights and this informed and extended understanding of the local situation, as the following comments from researchers in participating countries illustrates:

The Australian findings demonstrate that there is a significant affinity between principals and teacher librarians with respect to information literacy issues. This will allow a concentration on those issues that are seen as contentious and will facilitate the development of a short instrument that could be used to generate data on these key issues. (Henri, 1998, p. 6)

[In South Korea] the principals believed they spend some time and should spend more time on tasks for an information literate school community in the future... However, the teacher-librarians respond that their principals have no concern for the role of the teacher-librarian in the instructional program, and their principals do not have interest in seeking collaboration of the teacher-librarian with respect to issues of whole school information management. Already the facts have been revealed that the principal's understanding and advocating of the school library is very important for the development of an information literate school community. The Korean principals perceived that the attainment of information literacy is part of the school plan; however, their basic understanding of the school library is not sufficient. (Han, 1998, p. 8)

Strategies for improving cooperation between school librarians and headteachers in relation to the development of information skills in schools should be developed and disseminated to both headteachers and school librarians. A follow up study [in Scotland], either to repeat the questionnaire exercise for those who did not respond or to choose a sample of school librarians and headteachers for interview, should be considered. This study is a valuable contribution to research in the school library/information skills area and has the potential to be of value to school librarians and headteachers in that it highlights the importance of information skills development and the key role which school librarians can play in this area. (Herring, 1998, p. 4)

Principals and school librarians should be equal partners in a shared process. The earlier studies have shown that principal's support is vital to the well-being and development of the school library. The school librarian should also bear her/his part

of the challenge of the educational reform. Above all, the educational policy and the socio-economic factors within each country establish possibilities for school libraries. This research gave some hints for developing Finnish school libraries, whether in collaboration with public libraries or inside schools as the school's learning resource centres. The results of the research may not be valid for a small amount of the participating schools, but they can and need to be used for the benefit of Finnish learners and teachers. (Niinikangas, 1998, p. 13)

However, the individual researchers and their respective local communities of school library practitioners, educators, and researchers could also derive insights from the findings of the. We all could learn from each other regarding programs and strategies that effectively support the development of information literacy in schools.

The researchers involved in this international study acknowledge the limitations of the study, but nevertheless anticipate that this and other reports of their experiences will be of value to others engaged in research about programs and strategies that effectively support the development of information literacy in schools at the local or international level. They also hope that the findings of the study and the insights from cross-country comparative analysis of data will prove useful to principals and school librarians throughout the world, as they develop effective school libraries, contributing to quality schooling and the development of literate and independent library users.

References

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CHAPTER SIX

6. Recommendations

In undertaking this international study, the researchers set themselves several goals related to drawing out recommendations from the study and from its design and implementation. One of the goals was to provide readers with some general observations about the creation of information literate schools that emerged from this international study. In this chapter, the researchers re-visit the notion of the ‘information literate school community’ and suggest several approaches that might be used by a school staff to forge an information literate school community. A second goal of the researchers was to review the overall research design and methodology employed for the study. In this chapter, the researchers discuss the design of each of the three instruments used in the study and some of the problems encountered in the data collection process. The researchers also describe the online approach to data collection that was used in the study and explore the advantages and challenges of such an approach.

6.1 Recommendations for Forging Information Literate School Communities

Throughout the world, school systems are investing significant resources to connect schools to the new technologies. This often means significant investment in infrastructure, including building new laboratories, renovating the library or resource centre and the classrooms, budgeting for cabling and telecommunications, keeping up with the latest software, hiring additional staff (both teaching and technical), and providing professional development. The issue, however, is that many schools have been ‘rewired’ but nothing much has changed about the way school has an impact on the lives of students. Teachers may adopt the new technologies but often this means no more than exchanging a textbook for a CDROM, or exchanging a chalkboard for a set of PowerPoint slides. An information literate school is much more than an IT-rich school. This international study of the attitudes and values of principals and school librarians has demonstrated the potential power of school librarians and principals working together to forge a culture of change in which information services play an important role in educational reform. Many lessons can be learned from this study; some are identified below.

A school that has a desire to ‘build’ an information literate school community must invest time to explore the experiences of those schools that are regarded as providing best practice in information literacy. Key staff must undertake literature reviews, locate examples of good practice, and talk to the formal and informal leader in the school about the culture of the school and about how change works. Time must be invested in virtual and real tours of exemplary schools. Establishing a budget for innovation in this area and dedicating at least 30% of that budget to professional and technical development of all staff is a good place to begin.

6.1.1 Information Leadership

Schools need to identify those key staff who will form the information leadership team. In doing this, schools need to focus on the expertise that will be required and the functions that will be carried out in implementing and achieving innovation, necessitating in some instances re-conceptualising traditional staff positions and groupings. The information leadership team should identify core elements of an information literate school community, analysing and evaluating the present and future needs of their particular school. The core elements can be

identified within a rubric that would allow for identification and measurement of ongoing development. As time passes, the core elements would be adjusted and important new elements grafted into the rubric. Figure 6.1 provides an example of such a rubric. Other approaches might be to base the identification and measurement of ongoing development on Kuhlthau's (1993) primary inhibitors and basic enablers or McKenzie's (1998) traits of information literate school communities (see Chapter One).

Information literate schools are schools where the community constructs knowledge. These schools change the images that are used to describe teaching (eg. from dispensing knowledge to nurturing independent thinkers). Information literate schools are schools where teachers are moving away from transmission as the predominant mode of teaching and learning and where school change is happening from the bottom up. Wagner (1998) points out that the limitations of top-down school change approaches parallel the limitations of traditional transmission teaching, and he calls for a new practice of school change that is “consistent with our understanding of how learning takes place and how organizations change” (p. 512).

Effective information use within school by teachers and students will not emerge if it is regarded as merely a restructuring exercise, or an add-on to an existing culture. Schools that desire to become information literate communities must consider the basic building blocks of school structures and debate the legitimacy of the existing models against alternatives. Consideration must be given to such issues as: teacher groupings; curriculum divisions (subjects, key learning areas, topics and themes); student groupings; design of instructional areas; timetabling issues (flexibility in access, length of instructional sessions, and allocation of time for collaborative planning); and the style and location of ICT (i.e., Does the school adopt fixed location technology or a wireless and portable technology? Is the technology placed into dedicated laboratories, or integrated into classrooms, or both?)

6.1.2 Teacher Transformation

Without teacher transformation, that is, major changes in the way teachers think about teaching and learning, it is unlikely that schools can become information literate communities. Structural changes, such as flexible scheduling, full-time library staff, and collaborative planning, are necessary but insufficient preconditions for major change. Forging an information literate school community requires normative changes, that is, changes in the way school staff think about the nature of learning and the kind of teaching needed to support learning. Teacher transformation comes about through normative thinking, through an interplay of inquiry, reflection, and practice.

Figure 6.1 Rubric for Appraising an Information Literate School Community

Indicator	Emerging	Developing	Proficient	Advanced
The existence of an information policy	The school is planning an information policy.	Only the school head participates in all phases of the policy development, implementation, assessment and any necessary amendments.	Only the principal and his/her deputies participate in all phases of the policy development, implementation, assessment and any necessary amendments.	All stakeholders are able to participate in all phases of the policy development, implementation, assessment and any necessary amendments.
An ICT plan is in place	The school is considering an ICT plan.	The school has an ICT plan that aims to: <ul style="list-style-type: none"> ▪ develop a fully ICT literate community (Access); ▪ ensure that ICTs are meaningfully integrated into all levels of the curriculum (Integration). 	The school has an ICT plan that aims to: <ul style="list-style-type: none"> ▪ develop a fully ICT literate community (Access); ▪ ensure that ICTs are meaningfully integrated into all levels of the curriculum (Integration); ▪ create conditions whereby ICTs are used routinely (Evolution); 	The school demonstrates its appreciation for the exponential growth of information access, by implementing an ICT plan, and allocating appropriate funding, to allow for future contingencies. The plan provides: <ul style="list-style-type: none"> ▪ Access; ▪ Integration; ▪ Evolution; and

			<ul style="list-style-type: none"> introduce the latest information handling ideas. 	<ul style="list-style-type: none"> Readiness and professional development.
Authentic assessment enables the development of integrated information skills	The school is planning to implement authentic assessment.	Authentic assessment is only implemented in a small number of subjects.	The school develops assessable portfolios of learning experiences so that students are provided with a framework for reflective practices.	Assessable portfolios of learning are used, metacognitive scaffolds are integral to instructional practice. Students are encouraged to identify any deficiencies in their research methods.
School-wide appreciation of the role of the school librarian	A member of the teaching staff is selected to fill a school librarian vacancy.	The school appoints a qualified school librarian.	The qualified school librarian has a clear role statement ensuring that resources are current, relevant, appropriate and accessible.	Information skills are taught in context and across the curriculum. The school librarian ensures that resources are current, relevant, appropriate and accessible.
Learning contexts are varied and available in a variety of formats	The library resource centre contains printed resources only.	The library resource centre contains print and non-print resources.	The school librarian contributes to school policy on ICTs. The library resource centre contains print, non-print and online resources.	The school librarian is a senior member of staff who has a major impact on school policy. The library resource centre contains appropriate resources and access to worldwide information. Classes use information on demand.
Information skills are taught and learned in context and across the curriculum	Information skills are taught in the lessons devoted to 'library' only.	Information skills are acquired and required by students for all subjects, not just for those lessons devoted to 'library'.	Information skills are acquired and required by students for all subjects, not just for those lessons devoted to 'library'. The school librarian organizes professional development (PD) for teachers on information skills.	The school librarian works with students to prompt the right questions and to guide in the availability and use of information resources. The school librarian collaborates with teachers as a curriculum partner helping to design, plan and teach units, and assesses learning outcomes.
Mechanisms in place for supporting the professional development (PD) of teachers for information literacy	The school is planning to establish a mechanism for supporting the professional development of information literacy.	The school librarian is able to facilitate informal PD by the circulation of professional reading to colleagues and educates teaching staff regarding issues such as copyright, intellectual property rights, and Freedom of Information.	The school librarian is able to facilitate informal PD by the circulation of professional reading to colleagues and educates teaching staff regarding issues such as copyright, intellectual property rights and Freedom of Information. The school librarian models PD by engaging in higher education, attendance at conferences, and networking both within and beyond the physical boundaries of the school.	The school librarian facilitates the formalisation of school-wide policy and practice through PD to educate teaching staff, eg. developing a plagiarism policy that acknowledges issues – copyright, intellectual property rights, and Freedom of Information – to underpin initiatives such as critical thinking and authentic assessment. The school librarian models PD by engaging in higher education, attendance at conferences, and networking both within and beyond the physical boundaries of school, and successfully integrates PD outcomes into current teaching practice/ learning programs.

After Henri, J. (1999). The information literate school community: Not just a pretty face. In J. Henri, & K. Bonanno, *The information literate school community: Best practice* (pp. 6-10). Wagga Wagga, NSW: Centre for Information Studies.

Engaging in normative thinking is much more difficult than engaging in structural thinking. “Normative thinking requires staffs to reflect critically about their schools as highly professional workplaces where teachers, students and principals form thoughtful caring relationships” (Keedy & Achilles, 1997, p. 107). Classroom observation and peer review have long been advocated as tools for teacher and school improvement, if not for transformation, but these approaches suffer from being intrusive and potentially frightening (particularly to those who may seem to need it most). However, there is a body of evidence to suggest that the formation and support of collaborative teams is a more effective, lasting, and certainly a less intrusive approach than peer coaching (Joyce & Showers, 1996), and this approach fits very well into the information literate school community model.

Many school restructuring efforts in relation to teaching for understanding have failed because structural thinking (deciding to implement collaborative planning) was confused with normative thinking (re-conceptualizing how the relationships between teachers, school librarians and students could be supported through collaborative planning). Just as students are unlikely to become inquirers, critical thinkers and problem-solvers through teacher “telling” so too are staff unlikely to change their traditions of “telling” as a result of the “telling” of the principal or the consultant or the professional developer. Teacher transformation, or changing the norms of teaching, comes about through staff working together to critically examine (inquiry-reflection-practice) their work in order to determine “(1) why they want to change; (2) what they want to achieve; and (3) how to go about the change process” (Keedy & Achilles, 1997, p. 116). This requires work that has the hallmark characteristics of constructivist learning: active engagement, inquiry, reflection, problem-solving and collaboration.

6.1.3 Assessment

Because assessment is a major driver of learning, and because of this it has a powerful influence upon the nature of that learning. The way a school assesses and reports learning will clearly indicate its status as an information literate school. As attention shifts toward gaining evidence that students have constructed knowledge, emphasis will shift away from quantitative assessment to more qualitative forms of assessment. Deep learning must be identifiable, and it must be rewarded. Attention to process becomes the fundamental issue in assessing deep learning. The adoption of new forms of assessment cannot be successful without changes in beliefs about what counts as evidence for learning. These changes in belief, like other normative changes, take time. It takes time for teachers to practice and learn new approaches. (Likewise, when students are engaged in inquiry-based learning, teachers must allocate time to all phases of the information process, and students’ out-of-school time required for gathering information must be minimized.)

6.1.4 School Librarian and Principal Leadership

This international study has demonstrated that typically principals have a better idea of ‘information literacy issues’ than one might expect. It has also demonstrated that the school librarian has the potential to influence a principal by educating the principal about information literacy concepts and issues, and by demonstrating competence in the use and adoption of ICT (information and communication

technologies). This process of advocacy alerts the principal to the downsides of separating ICT from more traditional information services. In particular, it encourages a holistic approach to information and unites IT coordinators, school librarians, directors of information services, and curriculum coordinators to work together within a powerful information literacy leadership team.

The instructional leadership of the principal is important. A dynamic and forceful principal, focused on student learning and curriculum change and knowledgeable about the school district and community, can build support for inquiry-based learning in the school and in the community. A principal can use routine administrative structures to emphasize teachers' use of the library, to encourage collaboration between the teachers and school librarian, and to reinforce student-centred teacher practice. Principal leadership is important, but leadership must be shared. The teamwork of the principal and school librarian can enable an instructional innovation such as inquiry-based learning to be implemented in a powerful way. The leadership of classroom teachers – as well as that of the principal and the school librarian – is important in implementing an instructional innovation such as inquiry-based learning. Shared leadership fosters and encourages collaboration and communities of practice. Schools that are places where people share their ideas and where there are structures in place to facilitate teachers' working together are more able to implement an instructional innovation such as inquiry-based learning. Flexible scheduling provides the opportunity for teachers to use the library in a more integrated way and to work together to develop a deeper understanding of inquiry-based learning. Teachers are busy professionals who need opportunities to learn. Staff development is more powerful if it is a part of the instructional practice of the school. Staff members will progress in their learning at individual rates and in personal ways. There is no one-size-fits-all staff development.

6.2 Recommendations Regarding Replication and Management of Research Projects

6.2.1 General Issues

Initiating and managing a large-scale research project within schools is a difficult task. While replication of such research with principals and school librarians may seem a simpler task, since the hard work of creating the questionnaires has been done, there are a number of factors that ought to be considered.

The pilot questionnaires for this project were designed and tested in Australian English. No matter how similar the English may seem in English-speaking countries, there are always some cultural and technical differences. Some of these differences will be quickly identified by a careful 'reading' of the instruments by an expert in the field. However, piloting the instruments is still essential, not only to test understanding and ambiguity of the questions, but also to discover 'missing' questions. The same English words and concepts can have quite different meanings in different countries. A simple example would be the term 'teacher librarian.' This means something entirely different in Scotland than it does in Australia. Translating English words and concepts into other languages is quite difficult. First it is imperative that the original meaning is understood. Take the position title, 'teacher librarian' or 'school librarian.' Does the position title of librarian have the Australian meaning (a teacher with education in librarianship) or the Scottish meaning (a librarian without education as a teacher)? Some words and concepts cannot be easily translated even when the meaning of the original is understood. Translating 'information literacy' or 'information literate school community' can be very difficult because sometimes there is no local equivalent in another language or culture.

Sometimes it is possible to provide a translation that is understood by the specialists across countries but that translation will not necessarily be understood by other respondents. In the

case of this study, for example, the school library professionals designing the instruments may understand the translation for 'information skills' or 'cooperative planning and teaching,' but principals may not so readily understand the nuances of meaning implied in such labels. This means that it is important to pilot the instruments with all respondent groups.

The educational culture, the administration of school districts and individual schools, and the role of principals and school librarians differ not only between countries but also among jurisdictions and individual schools. Prior to deciding on the form of the instruments and where they will be piloted, it is essential to undertake background research about the system that is being investigated. Likewise, it is important to take appropriate action to ensure a high response rate since this is critical to the trustworthiness of any findings.

6.2.2 Response Rate Issues

The factors that could affect response rate must be identified prior to the administration of a research project. In the case of this project, these factors varied across countries. Checking with school systems to identify the permissions that must be achieved for a green light to the project is essential. Sometimes this process can be complex and lengthy, especially if any problems are encountered. Sufficient advance warning and preparation time must be allocated to enable the administration of the project at a time that is within school term time but not coinciding with major local dates or events.

Sometimes processes that are designed to meet the researchers' needs may have a negative effect on response rate. For example, in the case of the Scottish project, the researchers requested that the principals hand their completed instruments to the school librarians for return to the researchers. This process turned out to be a mistake, the assumption being that the principals did not want the school librarians to see their responses. Although the researchers had designed a process that was cost effective and linked the responses of the principal and school librarian by school, the process was not sensitive to the way in which some of the respondents thought about their roles in schools.

It is wise to make the completion of the instruments as simple as possible. Where appropriate, providing annotations and definitions will be helpful, but the major factor is the time that the completion of the instrument takes. To this end, making the instruments attractive and very self-explanatory is essential. Consideration must be given to identifying any incentives that can be provided to provoke a desire to complete and return the instruments. Consideration might be given to offering a prize to some or all of the early respondents. Educating respondents about the importance of the project is a further possibility that may enhance return rates. Follow-up communication with tardy respondents also may increase response rates.

6.2.3 Project Management Issues

The general factors identified above must be considered for a one-time replication, but for an international replication each point becomes more complex and more important. For example, it is essential that the meaning of the questions are as identical as language translation can allow, otherwise it will be impossible to make meaningful comparisons of findings. Protocols for gaining permission to conduct research will vary among participating countries, and schedules must be allowed to facilitate a timely administration of the project. School years vary across the world and finding an ideal common time to undertake the project will be a challenge. It may be necessary to administer parts of the project at different times.

This international project demonstrated the fact that participating countries (that is, the local groups administering the study within each country) may have quite different reasons for involvement than have the initiating researchers. In these circumstances, it is important that

contractual agreements are in place to sort out issues of copyright and intellectual property rights.

Project managers for an international study must maintain control of the project and ensure that participating countries agree to a common manifesto and purpose. Likewise, participants must be willing to be collegial and to spend time getting to understand the nuances of the research. The project managers can assist this process by providing time to mentor and coach the key participants through the process. To this end, face-to-face communication, or at least real time interaction, is preferable.

The costs of mounting an international study are substantial and must not be underestimated. This is likely to mean that each participant must be willing to commit funds to the implementation of the project. Success is enhanced where participating countries have support from a local research unit. However, each participant must be willing to share data, so that appropriate cross-country analysis can be undertaken. Again, this should be dealt with by way of agreement prior to implementation; when this is identified as a problem late in the process, it is almost impossible to negotiate to the satisfaction of all concerned.

Problems that arise during an international study are likely to be more readily resolved if they have been anticipated and prepared for. Problems can be more easily resolved if the key participants are already known to each other (or at least known by the project manager) and if the key participants are part of an organisation that is able to find a replacement for them should circumstances dictate that need.

The issues mentioned above lead to the recommendation that the appointment of a project manager with a supporting committee is an essential aspect of an international study. The project manager must be a well-organised person who is an effective communicator, whether using traditional means or using electronic tools. The project manager must have the professional standing to gain the respect and cooperation of the team and, when necessary, to be able to resolve conflicts.

The following is an example of the detailed communication that is required:

Selection of sample to be surveyed

1. Select the survey sample or population with the goal of getting an appropriate number of responses. You should get at least 150 responses if you are surveying both elementary and secondary level schools. If you are surveying only secondary schools, your goal should be to get at least 75 responses.
2. For a response to be counted or included in the research data, the school must have submitted a response from both the principal and the school librarian.
3. Select your survey sample or population in such a way that the phenomenon that we are studying – the relationship between the principal and the school librarian – can be explored. This means that the school librarian needs to have a significant amount of time allocated to library and information literacy-related duties. For example, in the Canadian study, only schools with half-time teacher-librarians will be surveyed. However, each researcher is in the best position to decide on the appropriate group to be surveyed because of the unique contexts of each country or region.
4. Select your survey sample or population in such a way that the context within which the survey respondents work in as similar a context as possible. This will reduce the number of outside variables that could influence the nature of the phenomenon that we are studying – the relationship between the principal and the school librarian. These variables might be such things as government policy or local hiring practices. For countries where educational decision-making is done at the provincial or regional level, for example, it would be best to select the survey sample or population from one region.

5. Work to maximize your response rate. Again, your knowledge of the local context will be the best guideline for how to do this. It may mean getting a letter or statement of support from appropriate educational authorities to include with or in the letter to potential research participants. It may mean sending a follow up reminder, conveying a message that goes something like: "Thank you for participating – but just in case you haven't already participated, would you please participate now because your participation is important." You will know the tone and words that work best in your context!

6. All data needs to be entered on the website at <http://farrer.riv.csu.edu.au/principal/survey> by December 31, 1997.

Obtaining Permissions

1. In most countries, you will need to have the study reviewed by a local body to ensure that it meets standards for ethical research, such as guaranteeing the confidentiality of data provided and the anonymity of respondents to all but the researchers (Lyn Hay and James Henri) who will be dealing with the website responses.
2. Permissions may also need to be obtained from the governing bodies within the educational system.
3. Gaining permissions and going through an ethics review can involve a lengthy process so begin early.
4. The research instruments are copyrighted. If others are interested in replicating the study using these instruments, they must obtain the permission of the researchers who developed the instruments (James and Lyn).

Data Analysis and Reporting

1. The quantitative data will be analyzed by Lyn and James using SPSS and will be available to the coordinators by January 1998.
2. An outline for the 'chapter' report, developed by James, will be provided to everyone at that time, and the coordinators can begin to write their reports.

3. The qualitative data will be analyzed by Dianne. Analysis of qualitative data takes longer to complete generally, and the many languages involved in this project makes the process much more complex. However, the process will need to be completed by May 30, 1998.
4. The coordinators will be analyzing the qualitative data using a process outlined by Dianne. Dianne will begin with the Canadian data and then provide that data and her analysis of it as a model to consult. Coordinators will begin with the categories identified by Dianne from the Canadian data. Other categories may emerge in an individual coordinator's data. These categories will be shared among the coordinators in order to refine the categories and to identify the common categories to be used in all the reports and any unique categories that may appear in individual reports.
5. The final versions of all reports going on to the website and presented at the IASL and IFLA conferences will need to be written in English.

Disseminating Data and Findings

1. Local Reports - You may be required or requested to provide reports of the data and findings from your location to the local educational governing bodies or to other local communities. You are encouraged to do so but should discuss the nature of the reports you will be preparing with Dianne Oberg. Dianne will be willing to vet reports (unfortunately only if the report is in English, however). In many cases, the 'chapter' report that will be prepared prior to the 1998 IASL Conference in Ramat Gan, Israel and the 1998 IFLA Conference in Amsterdam (and that will eventually be a chapter of the book planned about the research) will be appropriate for sharing with the local audience. The chapter needs to be completed and posted to the IRRG listserv in 'rich text format' between June 15 and July 15, 1998.
2. IFLA Professional Paper - Lyn Hay, James Henri, and Dianne Oberg will propose to IFLA the publication of a short monograph including the research process, the research instruments, and the research findings and implications (guidelines for school librarians in their work with principals). The IFLA Professional Paper was part of the application for funding for the

research and IFLA has 'right of first refusal' on this paper. The paper will be prepared by Lyn, James, and Dianne.

3. 1998 IFLA Conference Presentation - There will a panel presentation in Amsterdam (conference dates - August 16-21) involving all of the researchers. A short paper (10 minutes) from each researcher (research highlights) will need to be sent via email to James <jhenri@csu.edu.au> by July 15, 1998. The proposal for the IFLA conference presentation is being handled by Lyn.

4. 1998 IASL Conference presentation - There will be a paper presented in Ramat Gan, Israel (conference dates - July 5-9) by Dianne and James, reporting the Canadian and Australian findings (and including any other country's findings where the coordinator was able to provide the 'chapter' report by mid-June). The proposal for the IASL conference presentation is being handled by Dianne.

6.2.4 Instrument Design Issues

Instrument 1 – Demographics

1. Reduce the data input burden for both principals and school librarians

Instrument 1 was designed to identify demographic variables for each of the country samples including the personal and professional characteristics of the principals and librarians and the characteristics of individual schools. Principal and school librarian respondents were required to complete different versions of Instrument 1. Both principals and school librarians were required to provide their own personal and professional details. In addition, the principals were asked to provide some whole school data, while the librarians were asked to provide specific school library data. The researchers decided to split the demographic data across both versions of Instrument 1 to avoid duplication of school-based demographic data and to reduce the data input burden for both principals and school librarians.

2. Customize terms used for the values for items

A standardized set of values – ‘government’, ‘community’ and ‘private’ – was devised to define the different types of school systems, and then the labels of these values were edited into the preferred terminology of the educational system for each country. For example, the Australian principal instrument used only the two values of ‘government’ and ‘non-government’, whereas the Finland instrument used all three standardized values. The Finland version also asked for two additional types of values: (a) whether the school was identified as a ‘specialty’ school (ie. arts, sports, etc.); and (b) whether the school was included in the experimental school reform movement – both specific to current educational administration in Finland.

A set of values for the grade variable type was also ‘customized’ to reflect the climate of each country’s school system, and included an additional ‘open’ value of ‘Other’ to ensure that all grade ranges were identified correctly. For example, the Canadian instrument listed the range of grade values as ‘K-6’, ‘7-12’ and ‘Other’, whereas the Japan instrument used the values ‘1-6 elementary’, ‘1-3 middle school’, ‘1-3 high school’ and ‘Other’. The customisation of Principal

Instrument 1 for each country lead to a total of 8 grade level values across the seven nations including K-6, 1-6, K-10, 7-9, 7-10, 7-12, 10-12 and 11-12. The integrity of each of these values was kept, rather than collapsing them into, say, three standardized values, for the purpose of permitting more meaningful future analyses, for individual countries and for cross-country comparisons.

3. Avoid the use of open field responses

Questions 5 and 6 were also closed choice questions for the variables of principal age and gender. Respondents were asked to select from the age range scale of '20-29,' '30-39,' '40-49,' '50-59' and '60+' years, and from the gender scale of 'Female' or 'Male.' All other questions were answered using an open field, rather than closed value scales. Some countries encountered problems with the open field design of the second variable in Question 2 where principals were asked to identify the number of days or hours per week worked by the school librarian where the position was not full-time, ie. 5 full school days per week. Some respondents indicated a number without clarifying whether that value was representing either a unit of one day or a unit of one hour. The data entered by respondents was 'open', and the instrument designers had not foreseen the number of ways this data could be packaged. For example, a school librarian who taught for 3 days a week could be entered as either: (a) 3 days; (b) 0.6 of a position, or (c) 18 hours per week. While the majority of data could be coded correctly, some response data was ambiguous and could not be used as an accurate measure. This was the major flaw in the Principal Instrument 1. This flaw led to the data for this variable being invalid for the country of Japan, whereas this problem did not arise for South Korea because only those schools employing a full-time school librarian were surveyed.

Questions 3 and 4 required principals to record the total number of Internet connections in the school and the total number of Internet access points (or computer terminals) in the school. These questions were designed to identify the extent of Internet access throughout the school. However, both questions caused some confusion for respondents in that some respondents could not make a distinction between the terms 'connection' (the number of connections via a modem pool or dial-up connections available at any one time) and 'access points' (the number of terminals throughout the school that allowed users to access the Internet). As a result, the data from Questions 3 and 4 could not be reliably used. However, the term 'access points' seemed to better understood by respondents in most countries and, therefore, the Question 4 data seems to reflect more accurately the level of Internet access for each country.

Instrument 2 – Perceptions and Beliefs

This instrument seemed to be non-controversial. No major recommendations for improvement were received by the research team or from respondents.

Instrument 3 – Additional Information

Instrument 3, composed of open-ended questions, was designed to elicit additional information from principals and school librarians in a narrative

format. Nine of the open-ended questions were the same for principals and school librarians. These questions invited respondents to make comments related to the strengths and challenges of the school library, the contributions of school librarians to teaching and learning, the nature of information literacy, barriers to integration of information skills, the promotion of the school library, and the respondents' roles in developing and supporting an information literate school community. School librarians were asked two extra questions related to strategies they used to maintain their credibility, and ways that their principals could provide them with additional support. In retrospect, asking principals the two extra questions would have provided useful information about school librarian credibility and about the nature of principal support. The level of response to these open-ended questions varied from country to country with the Canadian and Australian respondents providing the most lengthy and detailed comments. This raises some interesting questions. This may have been related to the fact that the Australian researchers framed the open-ended questions. The questions may have been framed in terms that were more meaningful for the Australians and Canadians, two respondent groups with more similar educational systems than those of the other countries.

6.2.5 Online Approach to Data Collection

In-school research is typically slow because of the approval protocols and because the candidate respondents are usually very busy professionals. It was with these factors in mind that the decision was made to transfer the administration of the questionnaires from a 'snail-mail', paper-based approach to an online, Web-based approach. Each country was given its own homepage on the data collection site. This was designed to provide a direct gateway for respondents wishing to submit their answers to questions online. The format of the Australian homepage on the IRRG Data Collection site became a template for all other country homepages (see Figure 3.2 in Chapter Three). Each school was assigned a School Identification Number (SIN). This was an essential requirement for online data entry. The principal and librarian of a school were given the same number, ensuring the data sets from each could be electronically matched and manipulated in preparation for the data analysis phase.

The main challenge in designing the online data collection site was making sure the complex questionnaires had unique field names for each of the questions. In future, it would be preferable to write a script to generate the HTML questionnaires. A questionnaire could be marked up according to an Extensible Markup Language, DTD, and a script written to generate the final online document. XML is a simplified version of SGML designed for online applications. It is likely to replace HTML as it is much more versatile.

Just as the administering of a traditional postal mail-based questionnaire is fraught with possible delays, for example, postal strikes, non-delivery, incorrect delivery, and so on, so too is an online product. This case was no exception, and there were a number of minor problems typically associated with the online operation. The server was subject to several power failures (as part of ongoing building construction at Charles Sturt University) and outages (as networks systems were being improved). The unique SIN would have been more reliable had it included a check digit that would have guarded against a respondent entering an incorrect number. Although the postal mail versions of the instruments were tested through the pilot process, the online versions received only in-house testing. Previous experience with programming of online instruments had ensured that the system was robust enough to cope with the typical errors (although the original error message was the somewhat facile

“programmer error”). Error reports from some respondents indicated that more robust public testing of the online versions would have been beneficial.

One potential problem, associated with the online version of Instrument 2, was related to the choice of default. When designing the online version the default had been set at *a lot* and *strongly agree* with the thought that this would force respondents to make a choice. What had been overlooked was that a respondent who ignored a question would (by default) be entering a value. Fortunately, a careful inspection of the data showed that this did not happen. However, in future, the default should be set at ‘Please Select’. Another way to address this problem might be to replace the pull-down menus with radio buttons, which would save respondent time and which would be more user-friendly to Internet novices.

Some participants used ‘hard returns’ as they keyed in their comments into the boxes provided for open-ended responses, and this caused problems for data importation in preparation for data analysis. A hard return was read by the program as being a discrete, new piece of data when in actual fact it could have been one of a series of points entered as an answer for one question. On identification of this problem, a script was written to correct this problem.

In addition to the problems associated with minimal testing of the online version of the questionnaires, as noted above, some additional problems should be mentioned. Many respondents did not have sufficient skills to independently enter all of the required data and submit their surveys successfully. The online approach is dependent upon the robust nature of individual schools’ Internet connections. If all data were not entered prior to a connection failure, schools lost what they had previously entered on the instrument on which they were currently working. Should this happen a number of times to the one respondent, it would be unlikely that s/he would submit the data. If respondents did not enter a SIN, their completed instrument could not be submitted. (While this represents a frustration, a submitted instrument without a SIN would prevent pair matching and would therefore be less valuable.)

A tabular summary of all data entered was monitored via a ‘Principals’ Survey Submission List’ Webpage at http://farrer.riv.csu.edu.au/principal/survey/list_surveys.cgi.

Figure 6.1 illustrates the effectiveness of the data collection script in monitoring and managing the online data collection process regarding pair matching.

Figure 6.2 Example of Principal Survey Submission List

```
ca0005 TL1 TL2 TL3 PR1 PR2 PR3
ca0006 TL1 TL2 TL3
ca0007 TL1 TL2 PR1 PR2
ca0008 TL1
ca0009 TL1 TL2 PR1 PR2 PR3
ca0013 TL1
ca0014 TL1 PR1
ca0015 TL1 TL2
ca0017 PR1
ca0020 TL1 TL2 TL3 PR1 PR2 PR3
ca0021 TL1 TL2 PR1 PR2
ca0022 TL1 TL2 TL3 PR1
```

ca0026 TL1	PR1 PR2 PR3
ca0028 TL1 TL2	
ca0029	PR1 PR2 PR3
ca0032 TL1 TL2 TL3	
ca0035 TL1 TL2 TL3 PR1 PR2 PR3	
ca0036 TL1	
ca0037 TL1 TL2 TL3	
ca0041 TL1 TL2	PR1 PR2 PR3

This allowed the research coordinators in each country, as well as the project managers, to monitor the percentage of data collected since it allowed simple and quick identification of missing instruments and SINS that had not been submitted. For example, in Figure 6.1, the schools with SINS ca0005, ca0020 and ca0035 have submitted all three instruments for both principal (PR) and school librarian (TL) respondents, whereas the school librarians at schools ca0006, ca0032 and ca0037 have submitted all three instruments while the principals at these schools have failed to submit any instruments. A significant benefit of this is that it facilitated the follow-up of outstanding surveys from schools. In the Canadian study, in a province where Freedom of Information and Privacy legislation limits researchers' matching of respondent names with their responses, the 'Principals' Survey Submission List' was included in the second reminder letter to schools so that schools could check their own submission status. The success of some aspects of the project hinged, on the successful completion of instruments by both the school librarian and principal of each participating school. The involvement of both allowed for analysis on paired responses. If only one of the pair returned his or her data, other analysis could be successfully undertaken, but the value of the study would be diminished somewhat.

Notwithstanding the problems noted above, the use of a Web-based approach to data collection has a number of significant advantages and enormous potential for future large international collaborative research projects. Perhaps most importantly, the approach allows the standardization of survey instruments and coding of data across countries. Likewise, all data from the participating countries can be collected and backed up on one server.

In addition, data collection methods can be standardized across participating countries allowing data to be imported into the SPSS data analysis program. This is particularly useful because it facilitates standardized data testing and analysis across all countries and allows for simplicity in future comparative data analysis. These commonalities enhance the management of the project and enable ready monitoring of the progress and the timely identification of problems affecting all participating countries or arising from individual countries (if any).

The timeline for data collection time is reduced as respondents enter data directly to the server rather than onto paper and thereby avoiding the requirement of having another person to key in data. When funding is an issue, this is of special benefit. In addition, all data entered via the Web are automatically formatted, ready for importing into a data analysis program.

Respondents were able to complete each of the three survey instruments separately which gave them the flexibility of time to enter as they wished, as against sitting at their PC for a substantial block of time. This approach was evident in a number of cases where respondents submitted half of the items on an instrument and then came back later and submitted the remaining data. Using the SIN and instrument tag, data

collectors were able to successfully match the two pieces of data. This flexibility in data input may have enhanced the qualitative data entered in the third instrument. This also may help to explain why the Canadian respondents, the majority of whom were responding online, provided the most lengthy and detailed responses to Instrument 3 (see, for example, Figure 6.2).

Figure 6.3 Example of Response to Principal Instrument 3

<comments01>*strong leadership from the TL *collaboration between teachers and TL *link between resources and curriculum *organization and accessibility of resource materials *belief in importance of the learning resource centre by all staff, parents, students *funding supports learning resources needs

<comments02>*aligning the collection with curriculum *providing time for TL preparation/planning with teachers *making the collection attractive, accessible *having enough staff and/or volunteers in a small school to keep the library open at all times *flexible timetables *funding to support technology needs

<comments03>*knowing curriculum *communicating with teachers, staff, students, parents *being accessible to all *creating schedules and timetables so all needs to the library are met at all times *marketing the collection *keeping herself and us updated re: policy *managing within budget restrictions and seeking outside sources of financial support (e.g., book fairs)

<comments04>This would be an enormous statement to the students that their reading/writing/researching needs were somehow not considered important. They would feel very offended; it would be like cutting off the means to their learning (like blood or oxygen to their bodies). They would seek and get outside support.

<comments05>There would be no one to motivate their reading programs. They would miss the help they receive when they need multiple sources of information. They would not have their lessons on "learning resources" skills. The teachers would miss the daily presence of the TL around the staff room table at recess and at noon, giving them informal and formal information on What's New in the Learning Resource Centre or What's the Latest to Be Accessed on the Internet. A lot of talk about curriculum content, instruction and assessment would be missing.

<comments06>A supply TL or teacher would be called in. We also have a secretary (who entered our collection) who could provide non-instructional assistance for a time.

<comments07>--essential skills for all members of the school community for life-long learning --the link between all curriculum programs --something the young ones can teach the old ones about

<comments08>teachers not believing that "working together" can produce huge benefits time to plan collaboratively (i.e., we do not have "early dismissals") and the funding to provide the time funds for professional development (consultant time and release time)

<comments09>*program budget--maintaining funds for a TL *promoting beliefs that a TL knows curriculum, instruction, assessment in ways that a technician cannot *TL continues to teach all children some skills needed for accessing learning resources *supporting all fund raising *funneling donation dollars to learning resources *TL gets a permanent spot on the staff meeting agenda *Library needs get priority in School Council meetings *School professional development days (at least one/year) has a component of curriculum content or skill with technology which directly relates to learning resources needs

<comments12>*our library is the physical and philosophical centre of our "school" *library is a true learning resources centre with the student computer lab adjacent to it *information retrieval, sorting, categorization, evaluation, reporting, etc. are critical skills for all of us to have *the TL role is a leadership role *staff, students, parents and the community are convinced of the priority of the LR centre in our school *professional development priorities and funding support these needs

</survey>

The online approach provides advantages to both the respondents and the researchers particularly in a multi-country project where a number of languages are employed. The significant reduction in data entry time and the collection of all data together at a convenient point that enables a range of time savings and enhancements cannot be overvalued. Like all cutting edge approaches, however, the online approach did create challenges for those respondents who were not regular online users. Improvements in off-the-shelf software will enable enhancements to the approach to be made. A system could be developed where a questionnaire is typed into a word processor using special markers from which an online questionnaire could be generated. The resulting entered data then could be automatically prepared for processing using SPSS.

6.3 Conclusions

6.3.1 International Research

The principal study provides a model of how international research can be fostered. The collaboration of the co-investigators (Hay and Henri from Australia and Oberg from Canada) supported the administration of a complex project and drew on their different strengths in research knowledge and in resource availability. Hay and Henri brought expertise and experience in quantitative research methods and in web-based surveys. Oberg brought expertise and experience in qualitative research methods, including research design, data collection, data analysis, and reporting of findings. Such a collaborative project requires high-level project management skills, energy, commitment, and good political sense. The risks are high, but the potential rewards are significant, not only for the project group, but also for individual members of the team.

The rewards for the team come in part from the research output of the research, which is itself considerable. In addition such projects provide the basis for the forging of partnerships and synergies beyond the particular project. Each of the team members benefits from the synergies of the project but in addition each gains individual benefits. Some of the members of the IRRG were able to utilize their involvement in the international study to move forward national and local agendas related to school libraries and information literacy. For example, the Finnish researcher, Liisa Niinigungas, used information provided by the Canadian researcher to bolster the arguments she was presenting to legislators in support of new educational legislation that recognized the role of school libraries in the education of Finnish young people. Her June 1998 email to the Canadian researcher stated: "in the Finnish Parliament they had the final voting about new educational legislation, and [June 18] it passed with the statement of school libraries and their funding! It was a great victory, since for the first time in our history we have got school libraries so visible" (Oberg & Henri, 2002, pp. 47-48). Even the process of obtaining consent for the study had the effect of increasing awareness of school libraries. For example, the Finnish researcher reported that the principal of the leading school in one city wrote in his letter of consent, "These questions seem to reflect a reality totally different from Finland with working possibilities totally different from ours, yet it may be that just the things worth developing became visible in this questionnaire." Later that year, the Finnish researcher published an article in the *Finnish Library Journal* advocating the support of school libraries in the country, which caused considerable debate in the Finnish library community. In this way, the researchers raised the profile of school libraries in their communities.

Other researchers commented on the way in which their involvement with the project was useful in developing a richer understanding of the role of school libraries in their communities. James Herring, from Scotland, commented that his involvement had “highlighted a number of issues of concern to both school librarians and headteachers and these include: the perception of the importance of information skills in schools; the need for effective staff training relating to the use of the Internet in schools; the qualifications of school librarians, i.e., should school librarians be qualified both as teachers and as librarians; and the role of the school librarian in curriculum development and the use of resources in the curriculum” (Oberg & Henri, 2002, pp. 47-48).

6.3.2 Information Literate Schools and Change

In her preface to this publication, Willars noted some universal realities about school library development. She noted that the global situation for school librarians is disturbingly similar. Willars also referred to the *IFLA/UNESCO School Library Manifesto* and, in particular, to the claim that, “It has been demonstrated that when librarians and teachers work together, students achieve higher levels of literacy, reading, learning, problem-solving and information and communication technology skills.” The findings from this study provide some support to the view that the development of an information literate school community, in which school librarians play a major role, are much more likely to be a reality when the principal and school librarian form a strong team, united by a common philosophy about information literacy and student learning.

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APPENDIX

1. Introduction

This appendix presents the Australian instruments and identifies the variations that were adopted in the Canadian and Scottish instruments. These variations are identified by (C) and (S). In addition to the highlighted variations it should be noted that the Canadian Instruments used the nomenclature ‘teacher-librarian’ rather than teacher librarian. The Scottish instruments used the term ‘head teacher’ rather than principal, and ‘school librarian’ and ‘school library’ rather than teacher librarian and library resource centre. Please note that layout and spacing of fields within this sample have been reduced for the purpose of publishing these documents within this report. Copies of actual (and preferred) layout and design can be found in the online versions of these instruments at <http://farrer.riv.csu.edu.au/principal/survey/>

1.1 Principal Instrument

To be completed by the School Principal

A. Demographics

Please enter your school's six-digit Survey Identification Number provided by your Survey Coordinator here:

Please provide the following data which will provide a basis for understanding your answers to the questionnaire. Tick or provide data as required.

1. Type of school:

- (a) System: government non-government
- (b) Grade: K-6 7-10 7-12 11-12 Other _____
- (c) Location: rural urban

2. Size of school:

- (a) Number of teachers _____
- (b) Number of students _____
- (c) Number of teacher librarians _____ (Note: if less than one full-time position, please indicate number of days/hours per week)

3. Number of Internet connections in the school:

4. Number of Internet access points (terminals) in the school:

5. Your age:

- 20-29 years 30-39 years 40-49 years

50-59 years 60 years and over

6. Gender: Male Female

7. Your academic qualifications: _____

8. Your number of years of teaching prior to appointment as a principal:

9. Number of years in your current position:

10. Your number of years in Executive positions:

11. Number of teacher librarians you have worked with since becoming a principal:

12. Your membership in professional associations (please name):

B. Perception Factors

Please identify how much attention you give to each item at present using the scale:

A Lot – Some – Little – None – Cannot Comment

Then identify how much attention you would like to give each item in the future again using the scale:

A Lot – Some – Little – None – Cannot Comment

Please circle the value that best describes your level of attention to each of the items below for both the present and future:

1. I advocate and facilitate the development of an information literate school community.

Present: a lot some little none cannot comment

Future: a lot some little none cannot comment

2. I ensure that the attainment of information literacy is part of the school plan.

3. I encourage and facilitate the professional development of staff.

4. I understand and advocate the role of the teacher librarian (as per ministry/system policies) in the school's instructional program.

5. I demonstrate support for collaboration among the teacher librarian and teaching staff.

6. I ensure that the school library resource centre objectives reflect school goals.

7. I ensure that the teacher librarian has an appropriate allocation of support staff.

8. I allocate adequate, flexible time for the teacher librarian to administer the library resource centre.

9. I encourage the teaching staff to involve themselves in the development of library resource centre policies and programs.

10. I encourage the teaching staff to invest time in cooperatively planning and teaching with the teacher librarian.

11. I encourage and facilitate the professional development of teaching staff to enhance their understanding and use of information technology.

12. I inform new staff about the importance of collaborating with the teacher librarian.

13. I support the development of a resource collection that is current and relevant to the curriculum needs of the school.

14. I encourage staff debate about information policy.

15. I ensure that significant funding is allocated to the library resource centre budget.

16. I actively seek outside school funding possibilities that can be used to supplement the library resource centre budget.
17. I engage in regular and timely communication with the teacher librarian.
18. I visit the library resource centre to observe the work of the teacher librarian.
19. I encourage the teacher librarian to debate and justify current practice.
20. I ask questions of the teacher librarian about teaching and learning.
21. I rely on the teacher librarian to keep me abreast of developments that affect his/her role.

22. I seek advice from the teacher librarian with respect to issues of whole school information management.

23. I encourage the teacher librarian to take risks.
24. I encourage teachers to employ a wide range of information resources in their teaching programs.

25. I encourage the teacher librarian to take a leadership role in the development and maintenance of a school wide information skills continuum.

26. I work with the teacher librarian to develop his/her personal professional development plan.

27. I advocate that the teacher librarian be a member of key school committees to tap into his/her expertise and schoolwide perspective.

28. I encourage teachers to incorporate the learning and use of a range of information skills into their teaching programs and to assess process skills as well as content.

29. I provide time release and funding to the teacher librarian to undertake ongoing professional development.

30. When the teacher librarian is not represented on a key committee I ensure that the needs of the library resource centre are addressed.

31. I seek feedback from staff about their impressions of the quality of library resource centre services.

C. Belief Factors

Please indicate the strength of your belief for each of these items using the scale:
Strongly Agree – Agree – Disagree – Strongly Disagree – Cannot Comment

Please circle the value that best describes your strength of belief for each of the items below:

32. I believe that the teacher librarian should be a key player in the school's information literacy programs.

I: strongly agree agree disagree strongly disagree cannot comment

33. I believe that a teacher librarian ought to have a qualification in education and librarianship.

34. I believe teacher librarians ought to be appointed according to a merit selection process.

35. Should an unqualified teacher librarian be appointed to my school, I would expect that s/he undertake a specialist qualification in teacher librarianship.

36. I expect the teacher librarian to spend all of his/her day in the library resource centre.

37. I believe that staff development plans should address the development of teachers' information literacy.

38. I believe that the teacher librarian should be timetabled to cover classroom teachers' relief from face-to-face time.

38(C). I believe that the teacher-librarian should be timetabled to cover classroom teachers' preparation time.

39. I identify the teacher librarian as an information technology (IT) leader in the school.

40. I believe that the teacher librarian should provide a flexible timetable that best meets the needs of individual students, groups, and whole classes.

41. I believe that Internet access should be available through the library resource centre.

42. I believe that students should have individual access to the library resource centre during class time.

43. I believe that the principal should supervise the teacher librarian.

44. I believe that the teacher librarian should provide appropriate inservicing to the teaching staff.

45. I believe it is important that principals act as role models and mentors to staff who are reticent about the appropriate instructional use of information technology.

46. I believe that cooperative planning and teaching should occur in the classroom as well as in the library resource centre.

47. When the teacher librarian is absent, I believe that it is necessary to fill his/her position with a suitably qualified replacement.

48. I believe that teacher librarians should be supported to achieve Advanced Skills Teacher (AST) status and appropriate executive positions.

48(C). I believe that teacher-librarians should be supported to serve as a school or district curriculum leader and/or to attain appropriate administrative positions.

49. My acceptance of the teacher librarian's professional judgement relates directly to his/her credibility.

50. I believe that I am well placed to judge the teacher librarian's professional competence.

D. Open-ended Questions

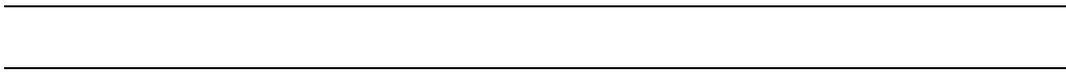
The following questions allow you to provide the researchers with additional information.

1. From my perspective the strengths of the library resource centre are:

2. From my perspective the challenges that face the library resource centre are:

3. The following things that the teacher librarian does are critical to the quality of teaching and learning:

4. If the library resource centre were closed for more than two weeks the form and quality of teaching and learning would be affected in the following ways:



5. If the teacher librarian were absent from school for more than two weeks the form and quality of teaching and learning would be affected in the following ways:

6. When the teacher librarian is absent the following arrangements ensure access to the library resource centre:

7. I see information literacy as:

8. I see the following as the major barriers to the integration of information skills across the curriculum:

9. I promote the role of the library resource centre through school committees in the following ways:

10. In conclusion I would like to make the following points about my role in developing and supporting an information literate school community:

Thank you for your participation.

If you have any problems completing this survey please contact your Survey Coordinators James Henri on ph (02) 69332468 or Lyn Hay on ph (02) 69332808 or fax (02) 69332733.

1.2 Teacher Librarian Instrument

To be completed by the Teacher Librarian

A. Demographics

Please enter your school's six-digit Survey Identification Number provided by your Survey Coordinator here:

Please provide the following data which will provide a basis for understanding your answers to the questionnaire. Tick or provide data as required.

1. Number of Internet connections in the library resource centre:

2. Number of Internet access points (terminals) in the library resource centre:

3. Your age:

20-29 years 30-39 years 40-49 years

50-59 years 60 years and over

4. Gender: Female Male

5. Your academic qualifications: _____

6. Your number of years of teaching prior to appointment as a teacher librarian:

7. Number of years in your current position:

8. Were you appointed to an advertised position?: Yes No

9. Are you an Advanced Skills Teacher (AST)?: Yes No

10. Number of years served in Executive positions:

11. Your membership in professional associations (please name):

12. Do you subscribe to a listserv for teacher librarians?: Yes No

If Yes, please name these listservs:

13. Which teacher librarian journals do you read? (please name):

B. Perception Factors

Please identify how much attention you give to each item at present using the scale:

A Lot – Some – Little – None – Cannot Comment

Then identify how much attention you would like to give each item in the future again using the scale:

A Lot – Some – Little – None – Cannot Comment

Please circle the value that best describes your level of attention of each of the items below for both the present and future:

1. The Principal advocates and facilitates the development of an information literate school community.
1(S). The headteacher advocates and facilitates the development of information skills across the school community.

Present: a lot some little none cannot comment

Future: a lot some little none cannot comment

2. The Principal ensures that the attainment of information literacy is part of the school plan.
2(S). The headteacher ensures that the acquisition of information skills is part of the school plan.
3. The Principal encourages and facilitates the professional development of staff.
4. The Principal understands and advocates the role of the teacher librarian (as per ministry/system policies) in the school's instructional program.
4(S). The headteacher understands and advocates the role of the school librarian in the school's instructional program.
5. The Principal demonstrates support for collaboration among the teacher librarian and teaching staff.
6. The Principal ensures that the school library resource centre objectives reflect school goals.
6(S). The headteacher ensures that the school library objectives reflect school goals.
7. The Principal ensures that the teacher librarian has an appropriate allocation of support staff.
8. The Principal allocates adequate, flexible time for the teacher librarian to administer the library resource centre.
9. The Principal encourages the teaching staff to involve themselves in the development of library resource centre policies and programs.
- 10. The Principal encourages the teaching staff to invest time in cooperatively planning and teaching with the teacher librarian.**
- 11. The Principal encourages and facilitates the professional development of teaching staff to enhance their understanding and use of information technology.**
- 12. The Principal informs new teaching staff about the importance of collaborating with the teacher librarian.**
- 13. The Principal supports the development of a resource collection that is current and relevant to the curriculum needs of the school.**
- 14. The Principal encourages teaching staff debate about information policy.**
- 15. The Principal ensures that significant funding is allocated to the library resource centre budget.**
- 16. The Principal actively seeks outside school funding possibilities that can be used to supplement the library resource centre budget.**

17. The Principal engages in regular and timely communication with the teacher librarian.

18. The Principal visits the library resource centre to observe the work of the teacher librarian.

19. The Principal encourages the teacher librarian to debate and justify current practice.

20. The Principal asks questions of the teacher librarian about teaching and learning.

21. The Principal relies on the teacher librarian to keep him/her abreast of developments that affect the teacher librarian's role.

22. The Principal seeks advice from the teacher librarian with respect to issues of whole school information management.

23. The Principal encourages the teacher librarian to take risks.

24. The Principal encourages teaching staff to employ a wide range of information resources in their teaching programs.

25. The Principal encourages the teacher librarian to take a leadership role in the development and maintenance of a school wide information skills continuum.

26. The Principal works with the teacher librarian to develop the teacher librarian's personal professional development plan.

27. The Principal advocates that the teacher librarian be a member of key school committees to tap into his/her expertise and schoolwide perspective.

28. The Principal encourages teaching staff to incorporate the learning and use of a range of information skills into their teaching programs and to assess process skills as well as content.

29. The Principal provides time release and funding to the teacher librarian to undertake ongoing professional development.

30. When the teacher librarian is not represented on a key committee, the Principal ensures that the needs of the library resource centre are addressed.

31. The Principal seeks feedback from staff about their impressions of the quality of library resource centre services.

C. Belief Factors

Please indicate the strength of your belief for each of these items using the scale:
Strongly Agree – Agree – Disagree – Strongly Disagree – Cannot Comment

Please circle the value that best describes your strength of belief for each of the items below:

32. I believe that the teacher librarian should be a key player in the school's information literacy programs.

I: strongly agree agree disagree strongly disagree cannot comment

33. I believe that a teacher librarian ought to have a qualification in education and librarianship.

34. I believe teacher librarians ought to be appointed according to a merit selection process.

35. Should an unqualified teacher librarian be appointed to a school, I would expect that s/he undertake a specialist qualification in teacher librarianship.

35(S). Should an unqualified school librarian be appointed to a school, I believe that s/he should undertake a specialist qualification in school librarianship.

36. As the teacher librarian I expect to spend all of my day in the library resource centre.

37. I believe that staff development plans should address the development of teachers' information literacy.

38. I believe that a teacher librarian should be timetabled to cover classroom teachers' preparation time.
38(S). I believe that a school librarian should be timetabled to cover classroom teachers' release from teaching time.

39. I believe the teacher librarian should be identified as an information technology leader in the school.

40. I believe that teacher librarians should provide a flexible timetable that best meets the needs of individual students, groups, and whole classes.

41. I believe that Internet access should be available through the library resource centre.

42. I believe that students should have individual access to the library resource centre during class time.

43. I believe that the Principal should supervise the teacher librarian.

44. I believe that teacher librarians should provide appropriate inservicing to the teaching staff.

44(S). I believe that school librarians should provide appropriate inservice to teaching staff.

45. I believe it is important that Principals act as role models and mentors to staff who are reticent about the appropriate instructional use of information technology.

46. I believe that cooperative planning and teaching should occur in the classroom as well as in the library resource centre.

47. When the teacher librarian is absent, I believe that it is necessary to fill his/her position with a suitably qualified replacement.

48. I believe that teacher librarians should be supported to achieve Advanced Skills Teacher (AST) status and appropriate administrative positions.

48(S). I believe that school librarians should be supported to achieve promoted post status and appropriate management positions in the school.

49. I believe that the Principal is well placed to judge a teacher librarian's professional competence.

50. I believe that it is the teacher librarian's responsibility to educate the Principal about the role of the teacher librarian.

51. I believe that the teacher librarian should inform the Principal about issues affecting the potential of library resource centres.

52. I believe that the teacher librarian is good preparation for the position of Principal.

52(S). I believe that the position of school librarian is good preparation for the position of head teacher.

53. Teacher librarians seek mentorship from teaching staff in addition to that provided by the Principal.

D. Open-ended Questions

The following questions allow you to provide the researchers with additional information.

1. From my perspective the strengths of the library resource centre are:

2. From my perspective the challenges that face the library resource centre are:

3. The following things that the teacher librarian does are critical to the quality of teaching and learning:

4. If the library resource centre were closed for more than two weeks the form and quality of teaching and learning would be affected in the following ways:

5. If the teacher librarian were absent from school for more than two weeks the form and quality of teaching and learning would be affected in the following ways:

6. When the teacher librarian is absent the following arrangements ensure access to the library resource centre:

7. I see information literacy as:

8. I see the following as the major barriers to the integration of information skills across the curriculum:

9. I promote the role of the library resource centre through school committees in the following ways:

10. I maintain my credibility as a teacher librarian in the following ways:

11. The principal could provide the following additional supports to me as teacher librarian:

12. In conclusion I would like to make the following points about my role in developing and supporting an information literate school community:

Thank you for your participation.

If you have any problems completing this survey please contact your Survey Coordinators James Henri on ph (02) 69332468 or Lyn Hay on ph (02) 69332808 or fax (02) 69332733.