

**Unlocking the potential of school libraries:
What actions are New Zealand primary school principals
taking to integrate the school library in
information literacy initiatives?**

Final report

by

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Submitted to the School of Information Management,
Victoria University of Wellington
in partial fulfilment of the requirements for the degree of
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VICTORIA UNIVERSITY OF WELLINGTON
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integrate the school library in information literacy initiatives?**

(hereafter referred to as 'The MIS Research Project')

being undertaken by

Elisabeth Mei-Xing Ngan

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Abstract

Information literacy is implicit in the national education curriculum's key competencies for students, yet primary schools lack an explicit path to develop students' information skills. The literature shows that school library programs can foster information literacy and improve student achievement, with the principal's support identified as a significant factor. This study investigates the actions of New Zealand primary school principals to integrate the school library in information literacy initiatives. An online survey collected quantitative and qualitative data from a random sample of primary school principals, stratified by decile rating to reflect the school population in microcosm. Sixty-nine responses were collected and the low response rate meant it was not possible to generalise the results of the survey.

Key findings of the research were that a majority of principals supported information literacy initiatives through advocacy; professional development; use of external support; student assessment; separate library budgets; and reasonable library opening hours. A minority maintained a separate information literacy policy; adequately resourced the library with trained staff; or promoted collaborative planning between teaching and library staff through flexible scheduling of class library time. Actions were not affected by decile rating but differences by school size and locale were identified, particularly for small and rural schools. Principals' perceptions of information literacy did not appear to affect their actions. Suggestions for further research are made to expand upon the findings.

Keywords

Information literacy, school libraries, primary school principals

1. Problem statement

School children in today's information age require specific skills to deal with a startling array of information sources as they undertake formal education and prepare to participate in society. The concept of information literacy is broader than just problem-solving, knowing about information and communication technologies, or having library skills. It is the ability "to recognize when information is needed, and have the ability to locate, evaluate and use effectively the needed information" (American Library Association, 1989). An effective way to develop these critical thinking skills is when students are motivated to find and use information within the learning requirements of the school curriculum, and build on what they know already (Bruce, 2002; Doyle, 1994, pp.1-2; Kuhlthau, 1989).

In the New Zealand education curriculum, information literacy is implicit in two of the five key competencies that prepare students for living and lifelong learning. *Thinking* is identified as creatively and critically seeking, using and making sense of information; while *using language, symbols and texts* is understanding and working with information in different formats (New Zealand Ministry of Education, 2007). Yet no explicit path exists to map the key competencies to specific learning areas, such as English, maths, or the arts, so that schools can develop students' information literacy skills within curriculum teaching (Probert, 2009a, p.25).

This unstructured approach to information literacy may be contributory to the 2009 assessment of New Zealand pupils' information skills at years 4 (8-9 year olds) and 8 (12-13 year olds). Students were found to be eager to seek, use and share information but were not adept at evaluating its merits, comparing multiple sources, or organising and using it effectively (Smith, Crooks, & Allan, 2010, p.3). The study, part of the National Education Monitoring Project assessing primary school children in all curriculum areas on a four-yearly cycle, showed that in the 12 years since the initial 1997 assessment of information skills, year 4 performance improved by less than 5%, while year 8 performance was unchanged. Further, the report noted that students were more likely to use the internet as an initial information source, while school library use had diminished significantly (Smith, et al., 2010, p.4).

Yet research shows that school library programs that support information literacy contribute to improved student achievement and that principals can create a climate for this to occur through their vision, planning, problem-solving and support (U.S. National Commission on Libraries and Information Science, 2008, p.4; Loertscher & Woolls, 1999, p.66), in their role as the school's instructional leader who is "responsible for the opportunities for everyone's success" (Wilson & Lyders, 2001, p.33).

However, no recent research was found that explored specifically the role of primary school principals in integrating school libraries in information literacy initiatives within New Zealand's context of school self-governance and the national curriculum's implicit information skills. The lack of information on how school principals are using available library resources is a gap in understanding how primary schools are responding to teaching curriculum-based information skills to students.

This research aims to explore ways that New Zealand principals are using the school library within the context of information literacy, in order to build a clearer picture not only for other principals but also organisations providing external support to schools, such as National Library's *Services to Schools* and the School Library Association of New Zealand Aotearoa (SLANZA). Understanding ways that principals can unlock the potential of existing school libraries and the teaching infrastructure could lead to improved student achievement within the national curriculum and make the goal of lifelong learning more attainable.

2. Review of the literature

Information literacy as a concept includes theory and research about its benefits, the obstacles in applying it to the education and library sectors, and detailed studies of specific school applications and the effect on student achievement. Literature relevant to this study examines information literacy as the key to lifelong learning, and as a catalyst for student achievement; the collaborative nature of information literacy education; the role of the principal in creating infrastructure; and the New Zealand context for primary school libraries and research on information literacy.

Lifelong learning

Zurkowski (1974, p.6) coined the term “information literacy” to describe the skills needed by people to use information effectively for problem-solving as information itself becomes more valuable and complex to access, for example in computerised databases. Moore (2002, p.10) observes that information literacy is a complex concept encompassing a range of skills to help people to find and use information as they need

it, with Doyle (1994, pp.2-3) and Kuhlthau (1987, p.2) expanding the definition to include skills from disciplines engaged in the creation, handling and dissemination of information, particularly computer literacy, library location and interpretation skills and critical thinking processes. Widespread agreement (American Association of School Librarians, 1998, p.vii; Breivik, 1991; Bruce, n.d.; Kuhlthau, 1993, pp.12-13; Kuhlthau, Maniotes, & Caspari, 2007, p.2) asserts that information literacy is not an end in itself but a process of acquiring skills through education that are applicable to lifelong learning in order for people to participate fully in society.

Improving student achievement

Evidence-based research (Queen's University & People for Education, 2006, p.2; Lance, Rodney, & Hamilton-Pennell, 2000, pp.6-8; U.S. National Commission on Libraries and Information Science, 2008, pp.4-5) indicates strong links between effective school library programs for information literacy with qualified staff and improved student achievement. Kuhlthau, et al. (2007, p.6) point out that students can learn strategies and skills that are transferable to other situations where information is needed, leading to independence in research and learning. Todd & Gordon (2010, p.2) discuss the correlation between higher test scores for students and a range of factors affecting the school library, e.g. number and training of school library staff; frequency of library-centred instruction; level of collaboration between library and teaching staff; size and currency of library collections, including databases; flexible scheduling of class library time; and levels of school library spending. However, research (Moore & Trebilcock, 2003, p.7) suggests that this correlation with learning outcomes is less well-understood in New Zealand schools.

Collaboration

Kuhlthau, et al. (2007, pp.52-53) observe the collaborative effort of information literacy education with critical roles for the instructional team members – teachers, library staff, and administrators. Further collaboration with others can deliver a dynamic learning environment to meet students' learning needs, e.g. with technology specialists, curriculum designers, policy makers, public libraries, or museums. The literature shows that teachers, library staff, and students work together at the heart of the process (Bruce, 2002; Doyle, 1994, p.7), while principals as school administrators can provide a thriving information literacy climate, through advocacy, policy adoption, intellectual and financial support, and development of infrastructure (American Association of School Librarians, 1998, p.100; Kuhlthau, et al., 2007, p.55; Moore, 2005, p.15).

Role of the school principal

International research identifies the key contribution of school principals to successful information literacy initiatives with Loertscher & Woolls (1999, p.66) observing that a strong librarian cannot overcome a principal's lack of vision about school library programs, requiring instead a shift in attitude or personnel to improve the situation. One set of studies (Lance, et al., 2000; U.S. National Commission on Libraries and Information Science, 2008) includes the role of principals within a macroscopic view of school library contribution to information literacy, with advocacy, policy-making and adoption of collaborative practices emerging as a strong theme for school administrators. The beliefs and behaviours of principals are investigated in research (Lance, Rodney, & Russell, 2007; McGregor, 2002; Sykes, 2010) that suggests the importance of the principal's advocacy and facilitation of an information literate school community to underpin the curriculum; support for collaboration between teaching and

library staff; focus on student outcomes; adequate resourcing and staffing of the library; and support for flexible scheduling of class library time.

Henri, Hay, & Olberg (2002, pp.1-2) surveyed principals and librarians in seven countries with differing school library infrastructures, about the perceived amount of time a principal spent on information literacy program-related tasks. Their findings show that though both groups agreed on the role of the principal, in six of the countries a divergence occurred where principals believed they spent more time on the tasks than librarians perceived them doing. This suggests a disconnection between principals' beliefs and their behaviours and that belief alone may not translate into task-oriented actions. Other studies look at the implied role of the principal, e.g. through budget control or having a vision for information literacy, without focusing specifically on principals' contributions (Queen's University & People for Education, 2006; Todd & Kuhlthau, 2004; UNESCO, 2006).

New Zealand primary school libraries

In New Zealand, schools are self-governed by boards of trustees, with the principal as “the board’s chief executive, professional advisor and educational leader” (New Zealand Ministry of Education, 2011a), managing the teaching and learning programs. The literature shows that primary school libraries vary in quality and size, with many characterised as under-resourced and understaffed, and focused on supporting positive reading attitudes rather than information literacy skills (Moore, 1998, pp.85-89; Slyfield, 2001b, p.47; *Student learning in the information landscape*, 2005, p.55).

In 2001, only 9% of primary schools surveyed had a qualified librarian or teacher-librarian position, with most day-to-day library management by teachers with library responsibility, teacher aides, or library assistants, who rely on release time from other duties (Slyfield, 2001b, p.18). The median for primary school library staffing hours was 6 hours per week, compared with 40 hours per week for secondary schools (Slyfield, 2001b, p.29). This may reflect the generally part-time nature of the role at primary school level and implies a library's limited ability to participate in information literacy initiatives for students who are at the early stages of developing information skills. Even in schools considered to have a reputation for excellence in school librarianship, "students are not systematically exposed to crucial skills and knowledge of the information world" (Moore & Trebilcock, 2003, p.183).

New Zealand information literacy research

Three broad categories of New Zealand-specific research are noted in the literature. Firstly, there is research on information literacy, schools, and school libraries (Chalmers & Slyfield, 1993; Slyfield, 2001b), including data gathered from or about principals to examine attitudes to information literacy, the library, teaching and library staff, release time and access to resources. Slyfield's survey of National Library advisers and centre managers identifies the importance of principals' understanding and support for effective information literacy programs (Slyfield, 2000, pp.13-14, 23). The research also notes the need for infrastructure development, including teacher pre-service training in information literacy, ongoing professional development, and advocacy and use of practical teaching models (Slyfield, 2000, p.32; Slyfield, 2001a, p.v; *Student learning in the information landscape*, 2005, p.58).

The second category is action research in selected schools exploring how professional development of teachers' information literacy skills influences the learning community, e.g. a whole-school focus on thinking and learning models supported by workshops, development, and resource sharing (Moore, 1998; Moore, 2000; Probert, 2009b). These studies concentrate on the practical application of information literacy teaching in the classroom rather than examining in-depth the principals' acknowledged commitment of time and resources to the projects. The last category investigates the contribution to information literacy education by particular groups such as teachers, teacher-librarians and school library teams, with an assessment of the principal's role in relation to the group (Lealand, 1990; Moore & Trebilcock, 2003; Probert, 2009a). While the principal's positive and material support is linked to successful outcomes, it is not a focus of the studies.

In conclusion

The literature suggests that information literacy education benefits student outcomes and that collaborative school library programs can be effective in integrating information literacy within curriculum teaching. Additionally, the actions of school principals appear to contribute to successful information literacy initiatives through advocacy and material support of the program infrastructure. However, there is a gap in recent research on how New Zealand primary school principals are using their libraries to respond to the information literacy implications of the current national education curriculum.

3. Research objectives

The objective of this study is to investigate the actions of New Zealand primary school principals to integrate the school library in information literacy initiatives, by:

- a) Collecting school demographic data, i.e. decile rating, roll size, locale
- b) Examining library infrastructure, e.g. number of library staff, hours per week library is open
- c) Gauging perceptions about the role of information literacy and the school library in the national curriculum
- d) Measuring the existence of effective information literacy practices identified in the literature (Chalmers & Slyfield, 1993, pp.170-173; Henri, et al., 2002, p.10; Lance, et al., 2007, pp.6-7; McGregor, 2002, pp.81-82; Sykes, 2010, pp.6-7):
 - advocacy of information literacy in the wider school community
 - defined information literacy policies
 - separate library budgets
 - staff professional development opportunities
 - external support for information literacy, e.g. other libraries, SLANZA
 - flexible scheduling of library time
 - assessing student outcomes from information literacy initiatives
- e) Examining any relationships between actions, perceptions, and school demographics (*Student learning in the information landscape*, 2005, pp.54-55)

4. Research questions

In seeking to fill the gap in understanding about New Zealand primary school principals' actions, this study asks the following questions:

- What are the most common actions taken by school principals to support the school library in information literacy initiatives?
- Are information literacy actions by school principals related to school demographics, i.e. decile rating, roll size, locale?
- Do the perceptions of school principals about the place of information literacy in the national curriculum affect their actions in supporting the school library?

5. Theoretical framework

The framework for this research is the *information power* approach to information literacy developed by the American Association of School Librarians. Since the 1920s, these guidelines have been defining the service functions of school libraries, librarians, and their programs. During this time, the education focus has shifted from providing resources to students, to developing students into lifelong learners cognisant of the processes for accessing and using information (American Association of School Librarians, 1998, pp.v-vii). This holistic view of information literacy education allows for changing information needs to be met even as information resources advance and diversify in content and format.

The basis of information power is assisting students to fully participate in the learning community, with the school library at the heart. For library programs, it consists of three essential elements:

1. *learning and teaching* integrated with the curriculum and promoting student achievement (American Association of School Librarians, 1998, p.58)
2. *information access and delivery* supporting the curriculum and students' diverse learning needs (American Association of School Librarians, 1998, p.83)
3. *program administration* supporting the school's mission and aim for continuous school improvement (American Association of School Librarians, 1998, p.100)

Integral to the role of the library staff and the delivery of the library program are *collaboration* with learning community members, i.e. students, teachers, administrators and parents; curricular and instructional *leadership* in technology, information-based learning and staff development; and instruction in and use of *technology* to enhance learning (American Association of School Librarians, 1998, pp.50-54).

The first two elements of information power are grounded in information literacy theory and research, including Kuhlthau's *information search process* (Kuhlthau, 1993) and Eisenberg and Berkowitz's *Big Six information skills* model (Eisenberg & Berkowitz, c1990). Kuhlthau's work combines search tasks with a student's associated feelings in a six-stage process, identifying the benefits of guidance by teachers and librarians at the *exploration* and *formulation* stages, where confidence may dip and the search may falter. In the Big Six model, Eisenberg and Berkowitz describe the process of students acquiring information skills, with teachers and librarians cooperating to integrate information literacy in the curriculum.

Problem-solving is divided into steps to identify, find, assess and evaluate relevant information. This body of research is linked to information power's collaborative approach to curriculum teaching, with information accessed and delivered according to the needs of students, promoting individual understanding and achievement.

This study focuses on the program administration element of information power, which is synthesised from research into the roles and characteristics of school administrators who support effective school library programs (e.g. Haycock, 1989; Haycock, 1995; Jay, M.E. & Jay, H.L., 1990, as cited in American Association of School Librarians, 1998, p.118). As a program administrator, the school principal has the overarching responsibility for the planning, management and pedagogical support of the school library program. The program administration principles comprise information literacy as part of the school's mission; employing qualified library staff and administrative support; collaborative, strategic long-term planning; ongoing program assessment; sufficient funding; staff development of information literacy skills; advocacy of the program's function and impact; and management of staff, financial and physical resources (American Association of School Librarians, 1998, p.100).

These principles closely match the variables identified in the literature as practices by school principals who initiate and maintain effective school library programs and therefore present a valid framework to measure the extent of support by New Zealand primary school principals for information literacy initiatives using the school library.

6. Definition of terms

Decile: School rating used for funding purposes, calculated from 5-yearly census information by the Ministry of Education. Ratings contain approximately 10% of schools, indicating the extent of low socio-economic communities in a school's catchment area (New Zealand Ministry of Education, 2009a)

Flexible scheduling: Allowing teachers and students to access library resources at the point of need. Requires collaboration and planning between teaching and library staff to schedule library time and materials on the basis of curriculum learning (McGregor, 2002, p.72)

Information literacy: To recognize an information need and be able to locate, evaluate and use the needed information effectively (American Library Association, 1989)

Information power: Information literacy standards for student learning developed by the American Association of School Librarians

LIANZA: Library and Information Association of New Zealand Aotearoa

Librarian: In this study, a librarian is the designated person in charge of the school library, regardless of qualifications, e.g. **teacher-librarian, teacher with library responsibility, teacher aide**, qualified librarian, library assistant.

Lifelong learning: Process of learning through critical thinking, gathering, analysing and assimilating information to build on existing knowledge in order to meet diverse information needs throughout life

PATs: Progressive Achievement Tests for year 4-10 students to determine levels of achievement; check progress; identify if further help is needed

Primary school: For students from years 1- 6 (contributing primary schools) or years 1- 8 (full primary schools). Composite and area schools provide both primary and secondary education (New Zealand Ministry of Education, 2009b)

Services to Schools: A range of National Library of New Zealand services supporting literacy and learning for schools, learners and educators

SLANZA: School Library Association of New Zealand Aotearoa

Teacher aide: Unqualified teaching assistant

Teacher with library responsibility (TLR): Teacher in charge of the library using release time from teaching duties. Generally a part-time role with no library qualifications necessary

Teacher-librarian (TL): Staff member with dual teaching and library qualifications

7. Research paradigm

This research is within the post-positivist paradigm as it attempts to quantify variables related to actions taken by primary school principals to integrate the school library in information literacy initiatives, with theory preceding and guiding the collection of data. As a study of human behaviour and actions, the results gathered are open to interpretation and may never be completely known. The researcher cannot be totally objective in understanding the nature of reality, as in a positivist paradigm, nor are the results generated the product of subject-investigator interaction to any extent, as in interpretivism. The research variables tested are predominantly quantitative; context was taken into account; statistical analysis occurred; and attempts were made to generalise the findings (Creswell, 2009, pp.6-7; Pickard, 2007, pp.7-11).

8. Methodology

Within the post-positivist paradigm, the methodological approach of this research began with the framework of information power theory and generated quantifiable variables about actions taken by primary school principals related to the school library and information literacy. Data on these variables were collected to confirm or counter the theory and the results interpreted to gain an understanding of how principals are integrating the school library in curriculum-based information literacy initiatives. The research builds on previous quantitative studies to gain a contemporary view across a sample of New Zealand primary schools. Due to time and resource constraints, and the ability of the researcher to sustain the project, a regional survey was used to investigate the current practices of principals, with the intention of generalising the findings from the sample to the wider school population. As the survey involved human subjects, research approval was obtained from the Victoria University of Wellington School of Information Management Human Ethics Committee.

The audience for the research is Victoria University of Wellington's School of Information Management; school principals interested in the relationship between the school library, information literacy education, and the national curriculum; SLANZA; and others working in the field of information literacy and school libraries.

9. Method

9.1. *Survey instrument*

A sample of primary school principals were surveyed about information literacy through a short, online questionnaire using Qualtrics software. The questionnaire was available for two weeks in July 2011, with a reminder email sent to increase the response rate. Responses were anonymous. The eighteen-question survey was in five sections (see Appendix A):

- 1) information sheet and consent form
- 2) school characteristics such as decile rating, roll size and locale
- 3) school library information, e.g. number of staff, opening hours
- 4) perceptions of the school library and of information literacy
- 5) actions by principals in relation to information literacy

The survey was designed as a series of closed questions with forced-choice answers to gather factual data about the school and library, and a five-point Likert scale used to measure perceptions of information literacy. Included were two optional open-ended questions designed to elicit opinions on actions and opportunities the principals considered important. Prior to the survey proper being administered, a pilot survey was undertaken with a limited number of volunteers to test the logistics of the survey software, the clarity of the questions, and the form of the response data. No major issues were raised by the pilot.

The evaluation criteria for the research are reliability, replicability, and validity. The measurable variables chosen are considered reliable as they are stable over time. For internal reliability, or how coherently multiple measures relate to a concept, Cronbach's alpha was calculated with a satisfactory level of reliability of 0.79 achieved.

Replicability is addressed in the report's detailed procedures of sample population selection, survey design and administration, and data analysis. Internal validity, or whether finding a causal relationship between two variables is sound, is a weakness of cross-sectional research; however external validity, or the ability to generalise results beyond the study sample, was anticipated due to the random selection process (Bryman, 2008, pp.31-33,45-46,149-151).

9.2. Sample population

Data were collected from a stratified, random sample of 69 New Zealand primary school principals, derived from the publicly-available *Schools Directory* (New Zealand Ministry of Education, 2011b) which lists all New Zealand schools as at June 2011 and includes information on locale, decile rating, and roll size, as well as contact details.

With resource constraints, the Northern region was chosen as the population sample base for schools catering to year 1-6 students and includes contributing primary schools (years 1-6), full primary schools (years 1-8) and composite schools (years 1-13).

Table 9.2.1. New Zealand primary school numbers by region at June 2011

	Number
Southern	545
Central south	434
Central north	525
Northern	530
National total	2034

As an online survey, schools without email addresses supplied were removed giving a working population of 430 schools. The research aimed for 203 respondents to give a 95% confidence level of statistical accuracy with a margin of error of $\pm 5\%$ (CustomInsight, n.d.). It was estimated that a 60% response rate was achievable, equating to a survey sample size of 339 schools, rounded-up to 350. Schools were stratified by decile rating to reflect the nature of the national population and selected using a random number generator.

Table 9.2.2. Sample stratified by decile rating

	Stratified sample		% at Jun 2011	
	Number	%	NZ	Northern
Low (decile 1-3)	106	30%	30%	38%
Medium (decile 4-7)	126	36%	37%	29.5%
High (decile 8-10)	115	33%	32%	32%
No decile given (= 99)	3	1%	1%	0.5%
Total	350	100%	100%	100%

9.3. Response rate

The response rate to the survey was 20% - well below the 60% required for statistical accuracy. This was despite efforts to boost the response rate using clear instructions and design; follow-up reminders; a perceived adequate sample size; and pilot testing the survey prior to data collection proper (Bryman, 2008, pp.220-221).

Table 9.3.1. Estimated versus actual statistical accuracy of sample data

	Estimated response rate	Actual response rate
Confidence level	95%	95%
Margin of error	$\pm 5\%$	$\pm 10.8\%$
Survey sample size	350	350
Response rate	58%	20%
Participant responses	203	69

The survey was voluntary with a self-selecting sample population. Once consent was given, respondents were required to answer all closed questions to successfully complete the survey. The low response rate could be due to factors that can affect self-completion questionnaires: unwillingness to respond to an unsolicited survey; lack of time to start or complete the survey; lack of motivation to complete the survey – no incentives were offered bar an appeal for research assistance; or, an inability to clarify questions or responses (Bryman, 2008, pp.218-219).

During the design and pilot testing phases, the nature of the population was noted as a significant factor contributing to a possible low response rate. Principals as school leaders have many calls on their time and the ability to add even a short survey to the working day may be limited. However, it was important for this research to gather data from the principals themselves, despite the potential for response bias from a low response rate. While non-respondents' participation may have substantially changed the results, thereby not making the results generalisable to the primary school principal population as a whole (Creswell, 2009, p.151), light can still be shed on how the sample principals perceived information literacy and the role of the school library in curriculum teaching, providing a basis for further research.

Future studies could boost the response rate by generating a larger sample from the entire primary school population, using an anticipated response rate of 10-20%; gaining prior support from national bodies such as the Ministry of Education, New Zealand Principals Federation, National Library, SLANZA, Education Review Office, or the New Zealand Council for Educational Research; or including the survey with other national survey or review initiatives.

9.4. Sample characteristics

The following tables and graphs compare characteristics of the sample schools with the national primary school population.

Table 9.4.1. Decile rating

	Sample number	Sample %	National %
Low (decile 1-3)	15	22%	30%
Medium (decile 4-7)	23	33%	37%
High (decile 8-10)	24	35%	32%
No decile given (99)	7	10%	1%
Total	69	100%	100%
Mode = decile 10 Median = 6.5 Mean = 6.13 Std deviation = 2.97			

The decile data show that the sample was fairly representative of the national primary population. The standard deviation indicates the distribution of responding schools clustered around medium-high decile ratings. Where no decile was given, respondents returned only partial survey data.

Figure 9.4.1a. National / sample primary schools by decile rating

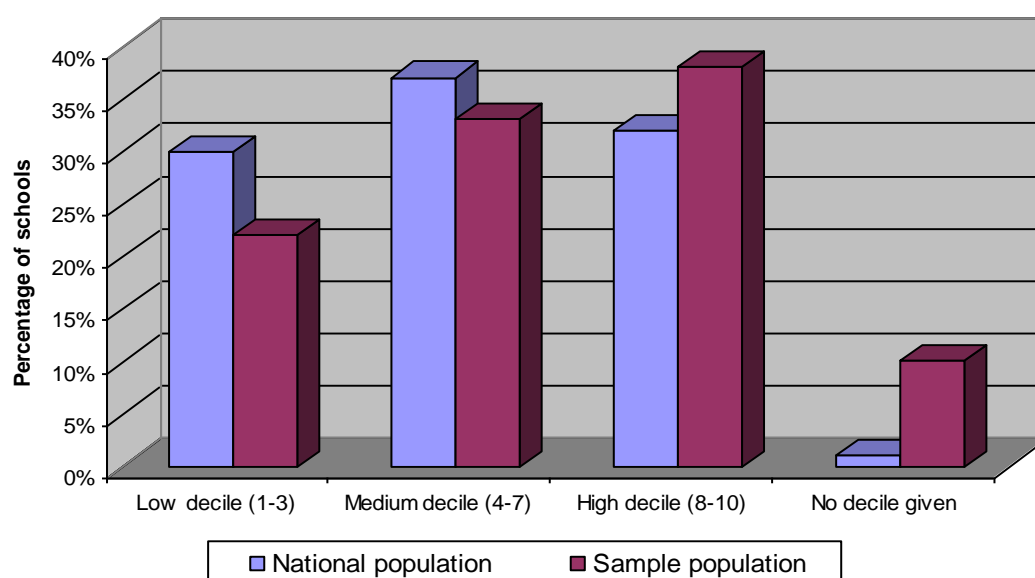


Table 9.4.2. Roll size

	Sample number	Sample %	National %
Small (< 150 students)	9	13%	50%
Medium (150-300 students)	17	25%	26%
Large (> 300 students)	36	52%	24%
No roll size given	7	10%	1%
Total	69	100%	100%
<i>Lower quartile</i> = medium roll <i>Upper quartile</i> = large roll <i>Median</i> = large roll			

The roll size data show that small schools were less likely (-37%) and large schools more likely (+28%) to respond to the survey compared to their distribution in the national population. This effect has been noted in other New Zealand primary school library research, where small schools tended to be under-represented and large schools over-represented (*Student learning in the information landscape*, 2005, p.13; Slyfield, 2001b, p.4). The effect in this research may be more marked due to the survey's self-selection process.

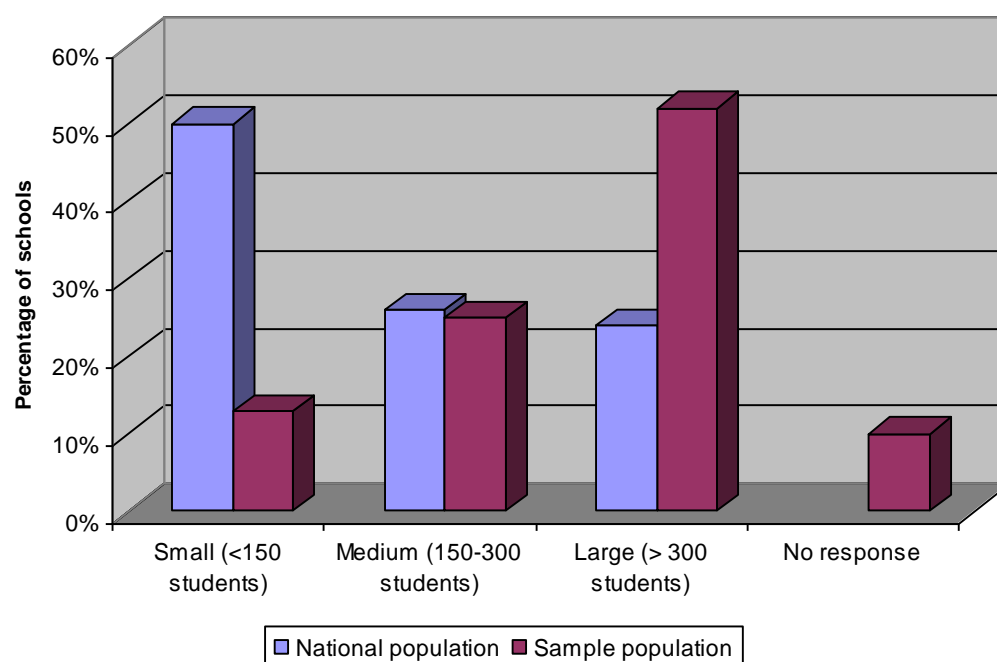
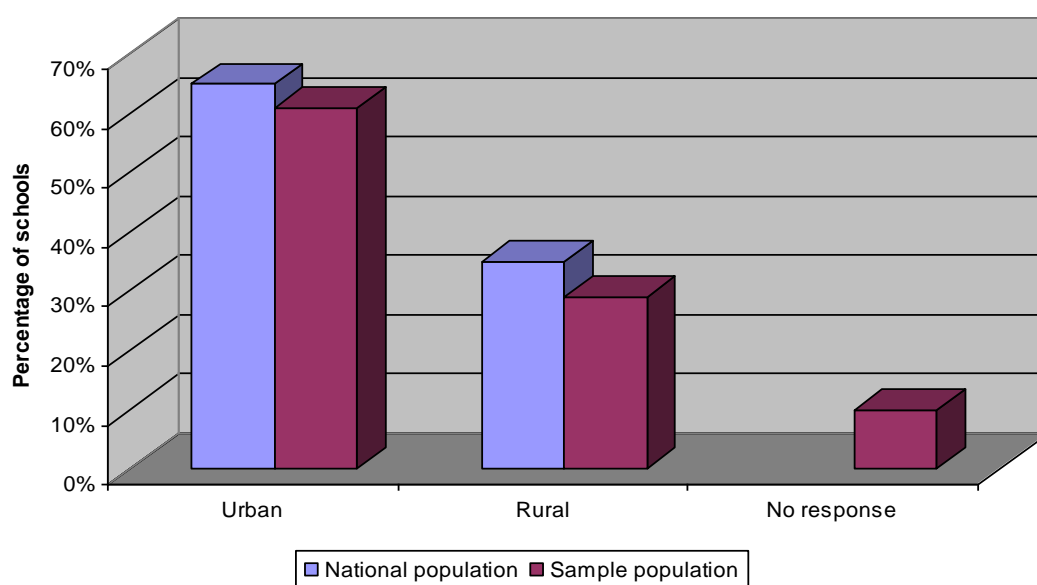
Figure 9.4.2a. National / sample primary schools by roll size

Table 9.4.3. Locale

	Sample number	Sample %	National %
Urban	42	61%	65%
Rural	20	29%	35%
No locale given	7	10%	0%
Total	69	100%	100%
<i>Mode</i> = urban schools			

The locale data show that the sample population was similar to the national population.

Figure 9.4.3a. National / sample primary schools by locale



10. Findings and discussion

10.1. School libraries

Table 10.1.1. How many people are on the staff of the library?

0	1	2	3	4	5 or more
7	34	15	3	2	1
11%	55%	24%	5%	3%	2%
Mode = 1 person		Median = 1 person		Mean = 1.39	
Std deviation = 0.98					

More than half of the primary schools had one library staff member, with about a quarter having two. Two schools with 4 or more staff were large schools, while the third was a small, low decile school with a trained librarian in charge. Of the 11% without library staff, one small-size, medium decile school had closed their library, redistributed the books and now worked closely with the local public library to meet students' reading and curriculum needs. In later responses, the other six schools indicated that someone was nominally in charge of the library, ranging from teacher aides to teachers/principals with library responsibility, so a zero-rating for library staff numbers may reflect the part-time nature of the role. These schools commented on a desire for a fulltime librarian but mentioned small school size or lack of funding as issues.

The variation in staff levels across schools reflects earlier research suggesting that without national guidelines for library and information services some schools may not adequately support students' learning requirements (Slyfield, 2001b, p.47). Although a school library framework has since been developed by the National Library and the Ministry of Education (National Library of New Zealand, n.d.-b), its guiding principals remain voluntary and may not be evenly applied across the school population.

Table 10.1.2. Who is the key person in charge of the library?

	Number	%
Teacher with library responsibility (TLR)	26	42%
Trained librarian	10	16%
Teacher aide	10	16%
Trained teacher-librarian	5	8%
Library assistant	4	6%
Principal / Deputy Principal with library responsibility (TLR)	3	5%
Other	3	5%
Volunteer	1	2%
Mode = Teacher with library responsibility (TLR)		

Only a quarter of schools had a trained librarian or teacher-librarian in charge of the library. The teacher-librarians were in low-medium decile, large, predominantly urban schools, while 70% of the trained librarians were in high-decile, large, urban schools. The majority of schools (76%) were run by staff that required release time from other duties to perform their role, e.g. TLRs; or had lesser library qualifications, e.g. a teacher aide, library assistant or volunteer. In two schools, the person in charge of the library was a tertiary student or the school secretary.

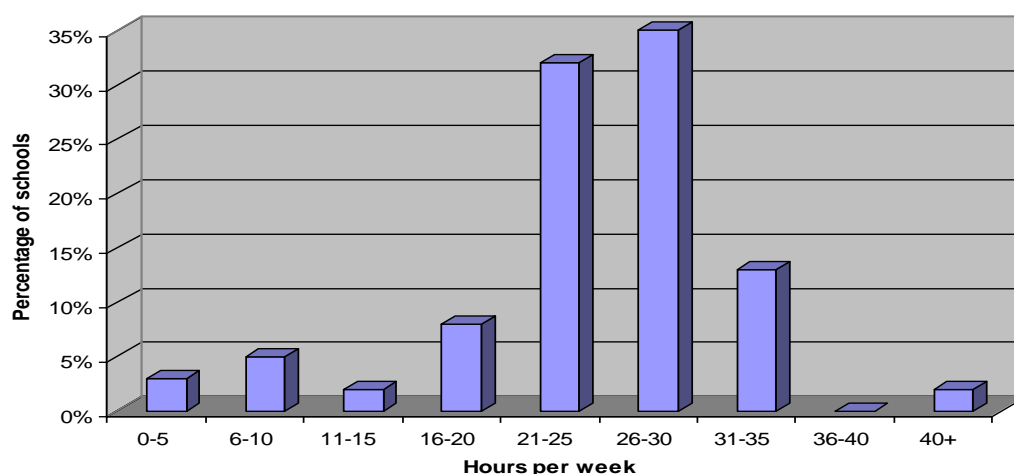
Although the experience and ability of the key library people sampled was not measured, earlier research shows that a lack of qualified staff in the library was considered by a majority of primary schools to be a limiting factor in the development of information literacy (Slyfield, 2001a, p.vi). Other research discusses the effectiveness of qualified library staff who can collaborate with teachers to contribute to improved student achievement and also manage the library's resources (*Student learning in the information landscape*, 2005, p.9).

Table 10.1.3. How many hours per week is the library open?

0-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	40+
2	3	1	5	20	22	8	0	1
3%	5%	2%	8%	32%	35%	13%	0%	2%
Lower quartile = 21-25 hrs			Upper quartile = 26-30 hrs			Median = 21-25 hrs		

Eighty percent of school libraries were open between 21-35 hours per week, and tended to be medium-large, urban schools. Ten percent were open for 15 hours or less per week and were more likely to be small, rural schools. Of the two schools open for 0-5 hours per week, one no longer had a school library and the other did not fully complete the survey. The library open for more than 40 hours per week was run by a teacher-librarian, had a strong inquiry learning culture, and was seen as a “centre of information in terms of book resources and computers”. Lower opening hours affect students’ attitudes to the school library, with research showing that primary school students display high enthusiasm for the library but become disappointed, and make less progress in reading, when their access is limited, especially during lunchtimes, out-of-school hours, and for independent use (*Student learning in the information landscape*, 2005, pp.3,32).

Figure 10.1.3a. Number of hours per week library is open



10.2. Perceptions of information literacy

To gauge perceptions about information literacy, respondents were asked their opinion on four statements after being given, firstly, a broad concept of information literacy taken from the National Library's *Services to Schools* programme (New Zealand Ministry of Education & National Library of New Zealand, 2002, pp.9-10):

- Be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information
- Processes used to construct personal knowledge and generate ideas

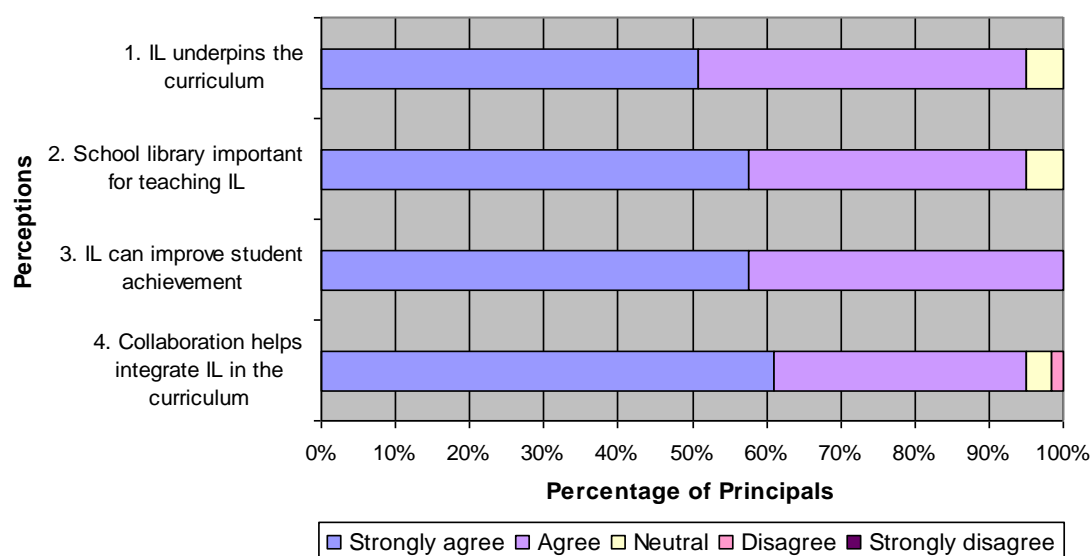
Then, information literacy was considered in the light of two key competencies from the New Zealand curriculum (New Zealand Ministry of Education, 2010):

- *Thinking* – creatively and critically seeking, using and making sense of information
- *Using language, symbols, and texts* – understanding and working with information in different formats

Table 10.2.1. Perceptions of information literacy and the school library

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1. Information literacy underpins the national curriculum	30	26	3	0	0
	51%	44%	5%	0%	0%
2. The school library plays an important part in teaching students to become information literate	34	22	3	0	0
	58%	37%	5%	0%	0%
3. Effective information literacy initiatives can improve student levels of achievement	34	25	0	0	0
	58%	42%	0%	0%	0%
4. To integrate information literacy in curriculum teaching it is important for school library staff and teachers to work together	36	20	2	1	0
	61%	34%	3%	2%	0%

Figure 10.2.1a. Information literacy (IL) and school library perceptions



The principals clearly perceived information literacy's value within the curriculum and the positive role played by the school library, as borne out by the dispersion of the data about the median.

Table 10.2.2. Perceptions – measures of dispersion and central tendency

	Lower quartile	Upper quartile	Median
1. Information literacy underpins the national curriculum	Strongly agree	Agree	Strongly agree
2. The school library plays an important part in teaching students to become information literate	Strongly agree	Agree	Strongly agree
3. Effective information literacy initiatives can improve student levels of achievement	Strongly agree	Agree	Strongly agree
4. To integrate information literacy in curriculum teaching it is important for school library staff and teachers to work together	Strongly agree	Agree	Strongly agree

10.3. Actions related to information literacy

Table 10.3.1. Who do principals promote information literacy to in the wider school community?

	Number
Teaching staff	52
Students	49
Parents or caregivers	46
Board of Trustees	45
Library staff	33
Others	2

All the sample principals advocated information literacy within their school communities to some extent, particularly to teaching staff and students but less often to library staff, despite the wide variation of trained and untrained staff in charge of the school library. Other members of the school community mentioned by principals included whānau, pre-school families and people accessing the school website.

Advocacy of the mission, goals, functions and impact of information literacy is an important part of developing and maintaining an effective information literacy infrastructure (American Association of School Librarians, 1998, pp.112-113).

Principals' advocacy can give teachers the context for educational theory and practice, even while their focus is on the needs of curriculum teaching. It also encourages a consistent and coherent integration of information skills in curriculum teaching where staff have a variety of skills and understanding about information literacy (Moore, 1998, p.vii). By clearly communicating the goals of information literacy, principals can create a positive instructional environment and build expectations within the school community, especially among students and staff.

Table 10.3.2. Do schools have a separate information literacy policy?

	Number	%
Information literacy included in another policy	19	36%
Separate policy exists; part of the review cycle	16	30%
Not included in the school's policies	12	23%
Separate policy exists; NOT part of the review cycle	6	11%

Around two-fifths of the sample schools had a separate policy for information literacy, with three-quarters of those reviewing the policy on a regular basis. About a third of the sample included information literacy within other policies, most commonly as part of curriculum delivery and implementation (14), or literacy (3). The schools that did not include information literacy in any policies were more likely to be medium-decile, large, urban schools. One principal commented that information literacy was “embedded in many learning areas” which negated the need for a separate policy or teaching programme.

A comprehensive policy covering the school's long-term information literacy strategy is seen as essential to running an effective school library program. For the benefit of the learning community, it should align with the school's overall mission and establish itself as a critical component (American Association of School Librarians, 1998, pp.106-107).

Table 10.3.3. Do schools have a separate library budget?

	Number	%
Separate library budget exists	50	94%
Separate budget exists for some items	2	4%
No separate library budget exists	1	2%

The majority of schools had a separate library budget, while a few had a separate budget for books, expendables and covering materials. The school without a separate budget had disbanded its school library and built a relationship with the local public library for its students instead. No measures were taken of the level of funding in school budgets, though comments by survey respondents indicated that adequately resourcing the library for staff and materials was considered by principals to be both the most important action taken, as well as the area that could make the most difference (see 10.6 Actions that make a difference).

Maintaining a sufficient level of funding is considered fundamental to a successful school library program (American Association of School Librarians, 1998, pp.109-110). A separate budget can provide a focus on how the library is supporting the needs of the learning community, with research showing that the level of the resource budget correlated with overall satisfaction with the library, as well as with information available for curriculum topics and information literacy (Slyfield, 2001b, p.45).

Table 10.3.4. What professional development opportunities are available?

	Number
Attending external courses, seminars, workshops or conferences	45
Attending internal courses, seminars or workshops	22
No specific professional development available	6
Other opportunities	5

External opportunities were used most commonly for information literacy professional development. Internal opportunities to develop staff skills included weekly professional learning, a facilitator working within the school and computer-based training associated with a school's library software. However, 8% of schools offered no opportunities, yet ongoing professional development is considered a cornerstone of an effective

information literacy program, for staff to develop and maintain knowledge required to teach information skills (American Association of School Librarians, 1998, pp.110-111). Earlier research consistently shows that New Zealand school staff would appreciate opportunities to improve their practical understanding of how to teach information skills (Moore, 1998, p.vii; Slyfield, 2000, pp.13,32; Slyfield, 2001a, p.v; Slyfield, 2001b, p.48; *Student learning in the information landscape*, 2005, p.24).

Table 10.3.5. Which of National Library’s Services to Schools are used to support information literacy?

	Use	Don’t use	Unsure
Website for tools, guides and research links	42	4	7
<i>Services to Schools</i> advisors	38	7	8
<i>Professional Learning and Development</i> courses	33	13	7
<i>Online Community</i> discussion forum	15	27	11

About 80% of the sample used National Library’s *Services to Schools* to support information literacy. 57% of schools used two available services, 40% used three services, and 17% used all four services. National Library’s services “offer advice on all aspects of school library development and management...providing professional development and targeted programs that support literacy and learning” (National Library of New Zealand, n.d.-a), and represent an important and accessible resource for all New Zealand schools and their libraries. An awareness of the services offered by National Library may be one reason why more schools, indeed all schools, are not using the range of support available to bolster their libraries.

National Library also runs a Focus Programme, as a two-year contract with a school to strengthen library support for teaching. Although not measured in this survey, earlier research shows that primary schools participating in the programme had higher

satisfaction with every aspect of their library, with higher budget and staffing levels, better collections, and a positive view of information skills (Slyfield, 2001b, p.45), while half of schools increased their information literacy skills and knowledge because of the expertise offered by National Library (Slyfield, 2001a, p.48).

Table 10.3.6. What other information literacy external support is used?

	Number
School Library Association of New Zealand (SLANZA)	34
Public library	28
Other school libraries	22
Ministry of Education	16
Library and Information Association of NZ Aotearoa (LIANZA)	13
Other support	3
No external support used	3

More than half the sample gained external information literacy support from SLANZA (64%) or from public libraries (53%). A quarter used support from both library associations, and 26% had support from both public and other school libraries. 30% of schools used two or more forms of external support, while 6% used none at all. This wide variation may be the result of primary schools' ad hoc approach to implementing the information skills implied in the national education curriculum (Moore, 1998, p.2).

While it is admirable that schools are seeking various forms of external support, it also suggests that across schools there may be inconsistencies in approaches to and strategies for information literacy, depending on the support sought and received.

Table 10.3.7. How do schools schedule library time for classes?

	Number	%
Fixed class schedule with additional time available to support curriculum teaching	45	85%
Fixed class schedule	5	9%
Flexible schedule according to curriculum needs	3	6%
Library time is not scheduled	0	0%

The sample predominantly used a fixed class schedule for library use with additional time in the library available as required to support the curriculum. Scheduling library time according to curriculum needs was practised by only 6% of schools, despite research on the advantages of flexible scheduling where “learning is most effective at the point of need” (McGregor, 2002, p.73), leading to students achieving better test results (Lance, et al., 2007). McGregor points out that flexible scheduling is effective in supporting the curriculum with relevant resources and learning opportunities through the dynamic use of the school library. However, its implementation requires leadership from the principal to support a team planning approach; fulltime librarians able to focus on information skills; and collaboration between library and teaching staff to plan for resources based on the curriculum. It may be that in the current New Zealand primary school environment, where library staff levels are low and trained librarians or teacher-librarians are in charge in only a quarter of libraries, opportunities to implement flexible scheduling effectively are few.

Table 10.3.8. How are information literacy skills of students assessed?

	Number	%
Teacher assessment	22	42%
Specific tests	15	28%
No assessment	9	17%
Other assessment	7	13%

Teacher assessment was commonly used to assess students' information literacy skills, while specific assessment tests included PAT Information Skills (9) and Essential Skills Assessment (3). Other assessment forms were curriculum reviews, units of work and as part of a literacy programme. The assessment of students' information literacy skills is an important part of a dynamic and effective school library program. Assessments can evaluate if a program's objectives are being met and changes can feed into the planning process (American Association of School Librarians, 1998, p.108).

10.4. Information literacy actions and school demographics

Moving beyond descriptive statistics, this section looks at any relationships between information literacy actions taken by principals and different school types. With predominantly nominal data involved, it was proposed initially to use contingency tables to analyse the relationships between pairs of variables; a chi-square test to establish a level of confidence that a relationship exists between variables and any possible statistical significance; and Cramér's *V* to show the strength, but not the direction, of the relationship. However, the low response rate meant cell frequencies often fell below 5, precluding accurate chi-square calculations with the exception of locale and policy. The contingency tables show column percentages, with some columns not totalling 100% due to rounding. The value of the cell frequencies used to calculate the contingency tables can be found in Appendix B1.

Table 10.4.1. Information literacy advocacy by decile, size and locale

Group	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Board of Trustees	20%	20%	19%	21%	20%	19%	20%	20%
Teaching staff	22%	24%	23%	21%	23%	23%	23%	23%
Library staff	11%	16%	15%	11%	12%	17%	15%	13%
Students	24%	22%	20%	25%	22%	21%	22%	22%
Parents / caregivers	22%	17%	23%	21%	22%	19%	20%	20%
Others	2%	1%	0%	0%	2%	1%	1%	1%

This table analyses school demographics and advocacy by the number of responses from principals and shows that regardless of the type of school, principals were fairly uniform in promoting information literacy to groups within the school community.

Table 10.4.2. Information literacy policy by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Separate policy	45%	41%	40%	57%	43%	37%	39%	47%
No separate policy	55%	59%	60%	43%	57%	63%	61%	53%
Inferential statistics								
Chi-square test (X^2)	n/a			n/a			0.32	
Degrees of freedom	n/a			n/a			1	
p-value	n/a			n/a			0.57	
Cramér's V	n/a			n/a			0.0777	

This analysis concatenates policy categories to show little difference among school types in creating a separate policy for information literacy. With the exception of small schools, more than half of all other school types had no separate information literacy policy. Yet communicating information literacy goals within a school's administrative context is regarded as a cornerstone of a learning community with a successful library program. Clear policy assists the integration of the library program into every aspect of the school, including assessment, technology, planning, and curriculum reform, and aligns it with the objectives of the school (American Association of School Librarians,

1998, p.102). Decile rating and roll size cell frequencies were too low to perform an accurate chi-square test for dependence between the cross-tabulated variables.

However, a chi-square test for a relationship between policy type and locale variables shows a failure to reject the null hypothesis, indicating that the sample outcome may be the result of chance. The Cramér's *V* calculation is closer to 0 than 1, suggesting that there is little association between the variables, and locale is not an influence on whether a school has a separate information literacy policy in the sample.

Table 10.4.3. Library budget type by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Separate budget	100%	91%	95%	71%	100%	97%	97%	88%
No separate budget	0%	5%	0%	14%	0%	0%	0%	6%
Separate for some items	0%	5%	5%	14%	0%	3%	3%	6%

Analysis of the relationship between types of budget and school demographics shows that the majority of the sample had a separate school library budget, regardless of the type of school, though small schools showed the lowest percentage (71%). This may be due to the lower library budgets of small schools (Slyfield, 2001b, p.v), making it less feasible to manage separately the library's finances.

Table 10.4.4. Professional development (PD) by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
External courses	56%	63%	53%	33%	75%	57%	59%	55%
Internal courses	25%	20%	38%	22%	13%	34%	33%	15%
Other opportunities	13%	7%	3%	0%	6%	8%	9%	0%
No PD	6%	10%	6%	44%	6%	2%	0%	30%

Analysis shows no clear relationship between professional development opportunities and decile rating. By size and locale, small and rural schools were least likely to offer staff professional development opportunities for information literacy. These reduced opportunities may be due to lower budgets and staff numbers, or distance from external courses, leading to less flexibility to release staff for training (Slyfield, 2001b, pp.v-vi).

Table 10.4.5. Use of National Library services by decile, size and locale

Service	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Website	64%	73%	95%	86%	72%	81%	81%	76%
Courses	64%	59%	65%	43%	64%	66%	64%	59%
Online forum	27%	23%	35%	29%	7%	38%	33%	18%
Advisors	73%	73%	70%	71%	79%	69%	75%	65%

This analysis shows the percentages of schools by type using a particular National Library service to support information literacy. Use of online services tends to increase with decile, possibly linked to higher ICT use. By size, smaller schools were less likely to participate in courses; while by locale, urban schools consistently used National Library's services more than rural schools, indicating possible access or awareness issues. Launched in June 2010, the *Online Community* forum showed the most variation across schools, suggesting an uneven awareness of the collegial support it offers.

Table 10.4.6. Other external support by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
SLANZA	35%	23%	32%	36%	28%	28%	27%	32%
Other school libraries	17%	15%	23%	9%	14%	22%	20%	15%
Public library	17%	27%	23%	18%	24%	24%	27%	15%
LIANZA	13%	12%	9%	18%	7%	11%	11%	12%
Ministry of Education	13%	13%	14%	0%	21%	13%	13%	15%
Other	0%	6%	0%	9%	0%	3%	2%	3%
No support used	4%	4%	0%	9%	7%	0%	0%	9%

Decile rating appears to have little relationship to types of external support used by schools. Larger or urban schools more often used support from a public or other school library; while smaller or rural schools used the library associations, or had no support at all. The Ministry of Education was used by all school types except for small schools. This suggests that access may be a factor in schools forming relationships with other libraries, and that national library associations are important for supporting small or geographically-isolated schools.

Table 10.4.7. Library scheduling by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Fixed schedule	27%	5%	5%	14%	14%	6%	8%	12%
Fixed + added time	73%	86%	90%	57%	86%	91%	89%	76%
Flexible schedule	0%	9%	5%	29%	0%	3%	3%	12%

The analysis shows that as decile rating or size increases or for urban locales, schools preferred fixed scheduling with additional library time to support curriculum teaching, while small and rural schools used more flexible scheduling. This suggests that school demographic differences may affect library scheduling practices, e.g. small and rural schools may have greater leeway in organising staff and student time at the library.

Table 10.4.8. Assessment by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Specific tests	18%	23%	25%	14%	14%	28%	31%	6%
Teachers' assessment	45%	50%	30%	57%	43%	37%	36%	53%
Other assessment	0%	14%	35%	14%	29%	16%	17%	24%
No assessment	36%	14%	10%	14%	14%	19%	17%	18%

Contingency table analysis shows that as decile increases, assessment was more likely to be by specific tests or other assessment tools; while a decrease in decile indicated less likelihood that assessment occurred at all. Larger schools preferred to use specific tests or used no assessment, while smaller schools more frequently used teacher assessment. Urban schools preferred to use specific tests, while rural schools favoured teacher assessment or other assessment tools. This suggests that school demographics may have some relationship to how information literacy skills are assessed, though the low response rate precluded calculation of the nature and strength of any relationships.

10.5. Information literacy actions and perceptions

This section looks at possible relationships between the information literacy perceptions of principals and their actions. While principals with a lack of vision about school library programs may impede information literacy initiatives (Loertscher & Woolls, 1999, p.66), the connection between a principal's beliefs about information literacy and subsequent actions is not clear-cut (Henri, et al., 2002, pp.1-2). The contingency tables analyse the relationships between pairs of variables and have percentages which may not total 100%, due to rounding. For the value of the cell frequencies used to calculate the contingency tables, see Appendix B2.

Table 10.5.1. Information literacy advocacy by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>Information literacy underpins the national curriculum</i>	56%	40%	5%	0%
<i>The school library plays an important part in teaching information literacy</i>	58%	36%	6%	0%
<i>Information literacy improves student achievement</i>	58%	42%	0%	0%
<i>Collaboration of library and teaching staff helps integrate information literacy in curriculum teaching</i>	60%	35%	4%	1%

The contingency table cross-tabulates principals' perceptions with the number of groups they advocated information literacy to, as a row percentage. It indicates that the more strongly a principal agreed that information literacy and the school library supported the national curriculum and student achievement, the more groups were included in their advocacy. For example, for the perception of collaboration between library and teaching staff, those who *strongly agreed* that this helped to integrate information literacy in curriculum teaching advocated to 136 groups, while those who *disagreed* advocated for information literacy to only three groups.

Table 10.5.2. Separate information literacy policy by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Separate IL policy	36%	48%	50%	0%
2. No separate IL policy	64%	52%	50%	0%
<i>School library important in teaching IL</i>				
1. Separate IL policy	45%	42%	0%	0%
2. No separate IL policy	55%	58%	100%	0%
<i>IL improves student achievement</i>				
1. Separate IL policy	50%	29%	0%	0%
2. No separate IL policy	50%	71%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. Separate IL policy	41%	50%	0%	0%
2. No separate IL policy	59%	50%	100%	100%

The analysis of principals' perceptions with the existence of a separate school policy for information literacy shows that schools were less likely to have a separate policy regardless of information literacy perceptions, suggesting that it is unlikely there is a direct relationship between the variables.

Table 10.5.3. Separate library budget by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Separate budget	96%	91%	100%	0%
2. No separate budget	4%	9%	0%	0%
<i>School library important in teaching IL</i>				
1. Separate budget	90%	100%	100%	0%
2. No separate budget	10%	0%	0%	0%
<i>IL improves student achievement</i>				
1. Separate budget	91%	100%	0%	0%
2. No separate budget	9%	0%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. Separate budget	94%	94%	100%	100%
2. No separate budget	6%	6%	0%	0%

The analysis of principals' perceptions with the existence of a separate school library budget shows that schools were likely to have a separate budget for the library regardless of how information literacy was perceived. This suggests that it is unlikely there is a direct relationship between the variables.

Table 10.5.4. Professional development (PD) opportunities by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. PD opportunities offered	96%	78%	100%	0%
2. No PD opportunities	4%	22%	0%	0%
<i>School library important in teaching IL</i>				
1. PD opportunities offered	94%	79%	100%	0%
2. No PD opportunities	6%	21%	0%	0%
<i>IL improves student achievement</i>				
1. PD opportunities offered	87%	90%	0%	0%
2. No PD opportunities	13%	10%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. PD opportunities offered	87%	89%	100%	100%
2. No PD opportunities	13%	11%	0%	0%

The cross-tabulation of principals' perceptions with professional development, e.g. external courses or internal training, shows that opportunities are offered to staff regardless of how information literacy is perceived and suggests the unlikelihood of a direct relationship between the variables.

Table 10.5.5. Use of National Library services by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. National Library services used	71%	47%	75%	0%
2. No services used	29%	53%	25%	0%
<i>School library important in teaching IL</i>				
1. National Library services used	67%	47%	75%	0%
2. No services used	33%	53%	25%	0%
<i>IL improves student achievement</i>				
1. National Library services used	65%	54%	0%	0%
2. No services used	35%	46%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. National Library services used	66%	51%	63%	50%
2. No services used	34%	49%	37%	50%

Analysis of principals' perceptions with the use of National Library's *Services to Schools* shows mixed results, e.g. a third who *strongly agree* with the perceptions are likely to use no services; while those who *agree* with the perceptions are split almost evenly between using and not using the services. These variations suggest that it is unlikely there is a direct relationship between the variables.

Table 10.5.6. Use of other external support by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Other external support used	100%	87%	100%	0%
2. No external support used	0%	13%	0%	0%
<i>School library important in teaching IL</i>				
1. Other external support used	97%	89%	100%	0%
2. No external support used	3%	11%	0%	0%
<i>IL improves student achievement</i>				
1. Other external support used	91%	100%	0%	0%
2. No external support used	9%	0%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. Other external support used	97%	89%	100%	100%
2. No external support used	3%	11%	0%	0%

The cross-tabulation of principals' perceptions with external support for information literacy other than from National Library, e.g. SLANZA, LIANZA, Ministry of Education, or other libraries, shows that schools use other external support, regardless of perceptions. This suggests there is little direct relationship between the two variables.

Table 10.5.7. Scheduling class library time by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Fixed schedule	93%	96%	100%	0%
2. Flexible schedule	7%	4%	0%	0%
<i>School library important in teaching IL</i>				
1. Fixed schedule	94%	95%	100%	0%
2. Flexible schedule	6%	5%	0%	0%
<i>IL improves student achievement</i>				
1. Fixed schedule	91%	100%	0%	0%
2. Flexible schedule	9%	0%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. Fixed schedule	91%	100%	100%	100%
2. Flexible schedule	9%	0%	0%	0%

This analysis shows that regardless of a principal's information literacy perceptions, a majority of schools used a form of fixed scheduling for class access to the library, suggesting a direct relationship between the variables is unlikely.

Table 10.5.8. Information literacy assessment type by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Assessment	86%	83%	50%	0%
2. No assessment	14%	17%	50%	0%
<i>School library important in teaching IL</i>				
1. Assessment	87%	79%	67%	0%
2. No assessment	13%	21%	33%	0%
<i>IL improves student achievement</i>				
1. Assessment	84%	81%	0%	0%
2. No assessment	16%	19%	0%	0%
<i>Collaboration integrates IL in teaching</i>				
1. Assessment	91%	67%	100%	100%
2. No assessment	9%	33%	0%	0%

This cross-tabulation shows a possible relationship between a principal's information literacy perceptions and the assessment of students' information skills, for the first three perceptions. It would be useful to investigate this further with a larger sample.

10.6. Actions that make a difference

Respondents were asked two open-ended questions about the use of the school library in curriculum teaching, giving them a chance to reflect on their own practices and opportunities that would be taken if they were available.

Table 10.6.1. What is the most important action taken by principals to involve the school library in curriculum teaching?

	Number
Resourcing the library	20
Curriculum integration	17
Library use	15
Encouraging collaboration	12
Supporting staff	5
Information literacy programs	2

Resourcing

The most important action principals took to involve the school library in curriculum teaching was ensuring that the library had adequate and appropriate material resources. Five respondents mentioned achieving this within budget constraints, with one moving funds between the curriculum and library budgets to purchase books on the year's integrated topics. Some principals discussed purchasing decisions – focusing on teaching topics and learning outcomes (6), sharing the process between stakeholders (4), and looking at the needs of students and teachers (4). A couple commented on the importance of up-to-date materials and culling items no longer relevant to students. Seven respondents said that resourcing included training and supporting library and teaching staff, with two of those considering the ability to fund a trained librarian or teacher-librarian as their most important contribution.

Curriculum integration

The second most important action by principals was ensuring the active involvement of the library in curriculum teaching, with one “insist[ing] that it is integrated into all curriculum areas”. Most comments referred to using the library’s resources to reinforce inquiry topics and reflect learning outcomes. Four respondents commented on their use of forward planning so that the library’s resources matched upcoming curriculum work.

Library use

The next most important action by principals was making good use of the library, with seven saying that library promotion was essential, e.g. holding events in the library, increasing awareness of resources for staff and students, or displaying material linked to units of work. Five respondents noted that the library was at the centre of the school’s learning processes. Four principals mentioned scheduling library opening hours to suit students’ needs, e.g. during lunch hours, with one rural school principal personally opening the library over lunch. Three principals stated the importance of linking the library to the school’s ICT infrastructure.

Collaboration

Eleven principals discussed the importance of library and teaching staff collaboration to plan for curriculum-related resources. Five schools used formal planning processes to aid collaboration; four mentioned communication and connection between library and teaching staff; three kept the librarian informed on upcoming topics. One principal taught an information literacy programme and shared it with the teaching and library staff. One commented that the staff meeting had a regular “library/literacy slot where books are introduced to staff”.

Supporting staff

Five principals noted the importance of supporting and training staff “around the use of the library”. Professional development was mentioned for teaching and library staff.

One principal encouraged staff to use the library for their own enjoyment and reading, while another mentioned release time for the teacher with library responsibility.

Information literacy programs

Two schools had developed information literacy programs with one delivered weekly by the principal to year 1 students and the other program delivered by teachers to all levels within the school.

Table 10.6.2. What one thing would make a difference to how the school library is used in curriculum teaching?

	Number
Increased resources	19
Improved library use	10
Professional development	6
Information literacy programs	2
Improved collaboration	2

Resourcing

19 principals said better resources would make a difference to the use of the school library. With more funding, twelve principals would improve the library’s staffing – employing a fulltime librarian or teacher-librarian (8), increasing hours for support staff (2), or putting on extra staff (2). Seven principals would improve the quality, range and number of the library’s information resources, while three would also improve the physical environment with new furniture and better access to classrooms.

Library use

Ten principals would improve the use of the school library, e.g. through finding more time in the school day for students and classes to access the library's information resources (5), or by improving the ICT infrastructure to allow better access to the library's materials (3). One principal saw the adoption of e-books in the future while another would promote the use of the library more.

Professional development

Six principals discussed increasing the professional development opportunities for teaching and library staff on use of the library's resources and how the library could support curriculum teaching. One noted that teacher trainee institutions could include a practical "how a library works" section during pre-service training.

Other opportunities

Two principals would implement specific programs to teach information literacy skills and another two would improve collaboration between the library, teachers and students to develop collection strategies and plan for better integration with the curriculum.

10.7. *Other comments*

Several school principals (3) commented on the love of reading by their pupils and how the library provided an encouraging environment for recreational reading. Two others noted that the library was a centre of rich resources which needed well-managed collections to meet the needs of children from a variety of different cultures.

11. Conclusions

11.1. *Research question 1: Common actions*

What are the most common actions taken by school principals to support the school library in information literacy initiatives?

Information literacy

The literature identifies a number of practices that support effective information literacy initiatives – advocacy; strategic planning through policy and support; staff professional development; and assessment (American Association of School Librarians, 1998, p.100). The research found that the most common actions taken by principals that could support information literacy in their schools were to:

- promote information literacy within the school community (100% of schools)
- seek external support from National Library's *Services to Schools* program (80%) or other sources (94%), e.g. public or other school libraries, SLANZA
- offer a range of professional development opportunities to improve the information literacy skills of staff (92%), including external and internal courses, seminars, workshops or conferences
- assess the information literacy skills of their students (83%), predominantly through specific tests or teacher assessment

However, fewer than half the schools (41%) had a separate information literacy policy, with a further 23% not including it in any school policy. This has implications for a school's ability to focus on teaching information skills as part of the curriculum, as clear policy can align the delivery of information literacy teaching with the wider objectives of the school through integration with other planning, policies and procedures (American Association of School Librarians, 1998, p.102). It also raises the

question of how comprehensive the approach to teaching information skills is if information literacy-friendly actions are unsupported by clear policy and infrastructure that integrates information literacy into the wider missions and goals of the school.

The school library

In the literature, practices that support effective use of the school library in information literacy initiatives include employing qualified library staff and adequate administrative support; providing sufficient funding; and encouraging collaborative planning between library and teaching staff (American Association of School Librarians, 1998, p.100).

The research found that the principals most commonly:

- maintained a separate school library budget (94%), indicating a level of financial independence. Though funding levels were not measured, principals commented that adequately resourcing the library for staff, materials, and physical environment was both their biggest achievement and their biggest challenge. Given more library funding, principals' first priority would be to employ a full-time librarian or teacher-librarian
- opened the library for between 21-35 hours per week (80%), which covers the greater part of the school week and allows a reasonable level of access for the school community

However, even though three-quarters of the responding schools had 150 or more students, staff levels were low with 55% of school libraries having only one staff member and a further 24% with two. Furthermore, trained librarians and teacher-librarians were in charge of the library in only 24% of schools, with the majority (48%) run by teachers/principals/deputy principals with library responsibility. Together these

factors imply a heavy workload for a small library staff whose focus may be divided further by teaching or administrative commitments, leading to a limited ability to develop information literacy through the library (Slyfield, 2001a, p.vi; Slyfield, 2001b, p.18). A minimum of one full-time, qualified library staff member with appropriate administrative support is seen as fundamental to an effective school library program (American Association of School Librarians, 1998, p.103).

Collaborative planning between teaching and library staff to match students' information needs with library resources for effective learning can be achieved through flexible scheduling of class library time (McGregor, 2002, p.73), yet few schools (6%) used flexible rather than fixed scheduling. The low level of flexible scheduling has implications for how effectively students are using the library's resources in relation to their learning, and whether teaching and library staff are collaborating adequately to develop a dynamic library to meet the information needs of the school community (American Association of School Librarians, 1998, p.107).

11.2. *Research question 2: Actions and school demographics*

Are information literacy actions by school principals related to school demographics, i.e. decile rating, urban/rural locale, roll size?

Actions unaffected by demographics

There appeared to be no relationship between school demographics and advocacy of information literacy; maintaining a separate information literacy policy; having a separate library budget, with the exception of small schools; or use of other external support. Decile rating was not shown to be a factor in the actions of principals.

Actions with a possible relationship to demographics

Analysis showed there were possible relationships between school demographics and the actions of principals, noticeably by size and locale. Small and rural schools were *less likely* to have a separate library budget; or offer professional development, including National Library courses. Yet, they were *more likely* to use support from SLANZA and LIANZA, or to have no external support at all; use flexible scheduling of library class time; and use teacher assessment of students' information literacy skills. Larger or urban schools were *more likely* to use professional development courses; seek support from public and other school libraries; have fixed scheduling with additional time; and use specific tests to assess students' information literacy skills.

These conclusions indicate that different school types may require a targeted approach to develop and maintain their information literacy capabilities so that students are not disadvantaged by school demography. Small and rural schools tend to have lower budgets, less staff, and a more isolated location, which can reduce access and opportunities to support the school library and information literacy initiatives (Slyfield, 2001b, p.48).

11.3. Research question 3: Actions and perceptions

Do the perceptions of school principals about the place of information literacy in the national curriculum affect their actions in supporting the school library?

Analysis showed that there were no discernible relationships between the positive information literacy perceptions of principals and actions taken to support the school library. There may be several reasons for this. One is that on their own information

literacy perceptions do not translate easily into the reality of actions that support a thriving information literacy environment (Henri, et al., 2002, pp.1-2). Other variables may affect principals' actions, e.g. budget restraints, awareness of effective actions, staff levels, or available time to implement an information literacy strategy. Other reasons may be connected to the survey method, e.g. the small sample size or the design of the survey.

11.4. Overall

The findings show that many primary school principals perceive the importance of information literacy and the school library and are taking actions to support the teaching of information skills to students. However, the approach is inconsistent across schools, despite research on the effectiveness of dynamic school libraries that encourage collaboration between teachers, library staff, and administrators (Bruce, 2002; Doyle, 1994, p.7; Kuhlthau, et al., 2007, pp.52-53), and the availability of guidelines and support from National Library and other organisations. Resourcing, awareness of effective practices and targeted support may be the key for New Zealand primary schools to approach consistently the information literacy implications of the national curriculum and realise the potential of the school library.

12. Further research

This research sought to fill a gap in understanding how New Zealand primary school principals are integrating the school library in information literacy initiatives. To enlarge upon its findings future research could:

- use a larger sample size with an expected low response rate, to improve statistical accuracy, allowing for findings that can be generalised to the primary school population
- investigate variables affecting the relationship between principals' perceptions and their actions to create effective information literacy infrastructure
- study the relationship between student achievement and use of the school library
- investigate targeted approaches to supporting information literacy capabilities of small and rural schools
- study the effectiveness of specific information literacy policies within schools

13. References

- American Association of School Librarians (1998). *Information power: Building partnerships for learning*. Chicago; London: American Library Association.
- American Library Association (1989). *Presidential Committee on Information Literacy: Final Report*. Retrieved May 6, 2011, from <http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm>
- Breivik, P. S. (1991). Literacy in an information society. *Educational Leadership*, 49(1), 87. Retrieved from ProQuest database.
- Bruce, C. S. (2002). *Information literacy as a catalyst for educational change: A background paper*. (White paper prepared for UNESCO, the U.S. National Commission on Libraries and Information Science, and the National Forum on Information Literacy, for use at the Information Literacy Meeting of Experts, Prague, The Czech Republic, July 2002). Available from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.113.3967>
- Bruce, C. S. (n.d.). *Information literacy*. Retrieved September 25, 2011, from <http://sky.scitech.qut.edu.au/~bruce/il/faces.jsp>
- Bryman, A. (2008). *Social research methods* (3rd ed.). Oxford: Oxford University Press.
- Chalmers, A., & Slyfield, H. (1993). *Contributions to learning: Libraries and New Zealand schools*. Wellington: Research Unit, National Library of New Zealand.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- CustomInsight (n.d.). *Survey random sample calculator*. Retrieved June 30, 2011, from <http://www.custominsight.com/articles/random-sample-calculator.asp>
- Doyle, C. S. (1994). *Information literacy in an information society: A concept for the information age*. Syracuse, NY: ERIC Clearinghouse on Information and Technology.
- Eisenberg, M. B., & Berkowitz, R. E. (c1990). *Information problem-solving: The big six skills approach to library and information skills instruction*. Norwood, NJ: Ablex.

- Henri, J., Hay, L., & Oberg, D. (2002). *The role of the principal in an information literate school community: Findings from an international research project*. Paper presented at the 68th IFLA Council and General Conference, August 18-24, 2002. from <http://archive.ifla.org/IV/ifla68/papers/031-097e.pdf>
- Kuhlthau, C. C. (1987). *Information skills for an information society: A review of research*. Syracuse, NY: ERIC Clearinghouse on Information Resources.
- Kuhlthau, C. C. (1989). Information search process: A summary of research and implications for school library media programs. *School Library Media Quarterly*, 18(1). Retrieved from <http://www.ala.org/ala/mgrps/divs/aasl/aaslpubsandjournals/slmrb/editorschoice/b/infopower/slctkuhlthau2.cfm>
- Kuhlthau, C. C. (1993). *Seeking meaning: A process approach to library and information services*. Norwood, NJ: Ablex.
- Kuhlthau, C. C., Maniotes, L. K., & Caspari, A. K. (2007). *Guided inquiry: Learning in the 21st century*. Westport, CT: Libraries Unlimited.
- Lance, K. C., Rodney, M. J., & Hamilton-Pennell, C. (2000). *Measuring up to standards: The impact of school library programs & information literacy in Pennsylvania schools*. Available from <http://eric.ed.gov/PDFS/ED446771.pdf>
- Lance, K. C., Rodney, M. J., & Russell, B. (2007). *How students, teachers and principals benefit from strong school libraries*. Retrieved from Association for Indiana Media Educators: <http://www.ilfonline.org/clientuploads/AIME/2007MSArticle.pdf>
- Lealand, G. (1990). *The educational impact of the appointment of full-time trained teacher-librarians*. Retrieved from <http://www.eric.ed.gov/PDFS/ED335050.pdf>
- Loertscher, D. V., & Woolls, B. (1999). *Information literacy: A review of the research: A guide for practitioners and researchers*. San Jose, CA: Hi Willow Research.
- McGregor, J. H. (2002). Flexible scheduling: How does a principal facilitate implementation? *School Libraries Worldwide*, 8(1), 71-84. Retrieved from www.iasl-online.org/files/jan02-mcgregor.pdf
- Moore, P. (1998). *Teaching information problem solving in primary schools*. Wellington: Ministry of Education.
- Moore, P. (2000). *Towards information literacy: One school's journey*. Wellington: New Zealand Council for Educational Research.

- Moore, P. (2002). *Information literacy: What's it all about?* Wellington: New Zealand Council for Educational Research.
- Moore, P. (2005). An analysis of information literacy education worldwide. *School Libraries Worldwide*, 11(2), 1-23. Retrieved from Library Literature and Information Full Text database
- Moore, P., & Trebilcock, M. (2003). *The school library team: What does it do to influence teaching and learning?* Available from Victoria University of Wellington library
- National Library of New Zealand (n.d.-a). *About*. Retrieved October 8, 2011, from <http://schools.natlib.govt.nz/about>
- National Library of New Zealand (n.d.-b). *The school library and learning in the information landscape*. Retrieved October 8, 2011, from <http://schools.natlib.govt.nz/developing-your-library/tools-and-guides/school-library-and-learning-information-landscape>
- New Zealand Ministry of Education (2007). *Key competencies*. Retrieved April 19, 2011, from <http://nzcurriculum.tki.org.nz/Curriculum-documents/The-New-Zealand-Curriculum/Key-competencies>
- New Zealand Ministry of Education (2009a). *How the decile is calculated*. Retrieved May 7, 2011, from <http://www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/SchoolOperations/Resourcing/OperationalFunding/Deciles/HowTheDecileIsCalculated.aspx>
- New Zealand Ministry of Education (2009b). *Types of schools*. Retrieved October 5, 2011, from <http://www.minedu.govt.nz/Parents/AllAges/EducationInNZ/SchoolsInNewZealand/SchoolTypes.aspx>
- New Zealand Ministry of Education (2010). *The New Zealand curriculum online: Key competencies*. Retrieved August 9, 2011, from <http://nzcurriculum.tki.org.nz/Curriculum-documents/The-New-Zealand-Curriculum/Key-competencies>
- New Zealand Ministry of Education (2011a). *Boards of trustees*. Retrieved April 14, 2011, from <http://www.minedu.govt.nz/Parents/AllAges/EducationInNZ/SchoolsInNewZealand/BoardsOfTrustees.aspx>

- New Zealand Ministry of Education (2011b). *Schools directory*. Available from http://www.educationcounts.govt.nz/statistics/tertiary_education/27436
- New Zealand Ministry of Education, & National Library of New Zealand (2002). *The school library and learning in the information landscape*. Wellington: Learning Media. Available from <http://schools.natlib.govt.nz/developing-your-library/tools-and-guides/school-library-and-learning-information-landscape>
- Pickard, A. J. (2007). *Research methods in information*. London: Facet.
- Probert, E. (2009a). Information literacy skills: Teacher understandings and practice. *Computers & Education*, 53(1), 24-33. doi:10.1016/j.compedu.2008.12.018
- Probert, E. (2009b). *The school library leading the way: Providing information literacy professional development for teachers*. Retrieved from <http://www.kzneducation.gov.za/Portals/0/ELITS%20website%20Homepage/IASL%202009/probert%5B1%5D.pdf>
- Queen's University, & People for Education (2006). *School libraries and student achievement in Ontario*. Retrieved from Ontario Library Association: http://www.accessola.com/data/6/rec_docs/137_eqao_pfe_study_2006.pdf
- Slyfield, H. (2000). *Information literacy: Survey of National Library advisers and centre managers*. Wellington: Research Unit, National Library of New Zealand.
- Slyfield, H. (2001a). *Information literacy in New Zealand secondary and primary schools*. Wellington: Research Unit, National Library of New Zealand.
- Slyfield, H. (2001b). *School libraries in New Zealand*. Wellington: National Library of New Zealand.
- Smith, J., Crooks, T., & Allan, R. (2010). *Information skills for inquiry learning: Assessment results 2009*. (NEMP report 50). Retrieved from http://nemp.otago.ac.nz/PDFs/info_skills_09/NEMP_Info_Skills_2009.pdf
- Student learning in the information landscape* (2005). Wellington: Education Review Office.
- Sykes, J. (2010). *Transforming Canadian school libraries to meet the needs of 21st century learners: Alberta Education School Library Services initiative - research review and principal survey themes*. Retrieved from <http://tmcanada.pbworks.com/f/Paper%285%29.pdf>
- Todd, R. J., & Gordon, C. A. (2010). *School libraries, now more than ever: A position paper of The Center for International Scholarship in School Libraries*. Available from <http://cissl.rutgers.edu/index.html>

- Todd, R. J., & Kuhlthau, C. C. (2004). *Student learning through Ohio school libraries*. Retrieved from Ohio Educational Library Media Association:
<http://www.oelma.org/StudentLearning/documents/OELMAReportofFindings.pdf>
- U.S. National Commission on Libraries and Information Science (2008). *School libraries work!* (3rd ed). Retrieved from
http://www2.scholastic.com/content/collateral_resources/pdf/s/slw3_2008.pdf
- UNESCO (2006). *Development of information literacy through school libraries in South-East Asian countries*. Retrieved from
<http://www2.unescobkk.org/elib/publications/06INF/information.pdf>
- Wilson, P. P., & Lyders, J. A. (2001). *Leadership for today's school library: A handbook for the library media specialist and the school principal*. Westport, CT: Greenwood Press.
- Zurkowski, P. G. (1974). *The information service environment relationships and priorities. Related paper no. 5*. Retrieved from
<http://www.eric.ed.gov/PDFS/ED100391.pdf>

14. Bibliography

- Kelley, D. L. (1999). *Measurement made accessible*. Thousand Oaks, CA: Sage.
- Lowry, R. (2011). *Chi-square, Cramer's V, and Lambda*. Retrieved October 11, 2011, from <http://faculty.vassar.edu/lowry/newcs.html>
- O'Leary, Z. (2010). *The essential guide to doing your research project*. London; Thousand Oaks, CA; New Delhi; Singapore: Sage Publications.
- Qualtrics Inc (n.d.). *Qualtrics*. Retrieved October 5, 2011, from <http://www.qualtrics.com/>
- Sprinthall, R. C. (2012). *Basic statistical analysis* (9th ed.). Boston: Pearson Education.

Appendix A: Survey questionnaire

A1. *Cover letter*

Unlocking the potential of school libraries

To the Principal

You are invited to take part in a short, online survey as part of my Masters Degree research on practical ways that school libraries can play a wider information literacy role in curriculum teaching. It takes 10-15 minutes to complete and is anonymous. The Information Sheet at the start of the survey explains the nature and purpose of the research. Your participation is voluntary but any time you can give to this project would be much appreciated.

Please click on this link to view the Information Sheet at the start of the survey:

<http://Qualtrics>

Thank you.

Liz Ngan
Researcher
School of Information Management
Victoria University of Wellington

Email: nganelis@myvuw.ac.nz

A2. *Survey information sheet*

Unlocking the potential of school libraries

Researcher: Liz Ngan, School of Information Management, Victoria University of Wellington

Introduction

As part of my Master of Information Studies (MIS) degree, I am undertaking a research project on how New Zealand primary school principals are using the school library for information literacy initiatives that support curriculum teaching. The University requires that ethics approval be obtained for research involving human participants.

The research benefits are in understanding practical ways that school libraries can play a wider role in curriculum teaching, supporting not only reading literacy but also the ability for students to evaluate and use different information resources, with the goal of life-long learning.

The survey

Principals have been chosen to take part from a random sample of primary schools, using a publicly-available register of school email addresses. Your participation is entirely voluntary, though research outcomes improve when more data is collected. Participation is taken as your consent for the researcher to use the data you provide.

The research takes the form of a short online survey of the perceptions and actions of school principals, as well as limited factual information about your school, such as roll size. The survey is in four parts, with a total of 18 questions and takes about 10 minutes to complete. It can be saved at any stage for later completion, with a final closing date of Weds 13 Jul 2011, unless extended by the researcher. You may complete the survey only once.

Although you have been invited directly to participate, responses are anonymous and the data will be aggregated so that no school or principal can be individually identified. Information collected will be confidential, with only myself and my supervisor, Philip Calvert, having access to the data. All data remains the property of the researcher and will be stored securely then destroyed two years after the project's completion.

The final report will be deposited in the Victoria of University Library in hardcopy and electronic form, and may be published in academic journals or presented at professional conferences. Should you require feedback from this study, please contact the researcher for a summary of research findings that will be available at the end of the project in Oct 2011. A feedback request is not conditional on completing the survey, nor does it affect the anonymity of responses.

Contact details

If you have any questions or would like further information about the project, please contact Liz Ngan on 021 145 7798 or email nganelis@myvuw.ac.nz, or my supervisor Philip Calvert on 04 463 6629 or email philip.calvert@vuw.ac.nz.

Please consider completing this survey about the school library and information literacy. Your assistance will be much appreciated. Thank you.

Liz Ngan

- ☐ I have read the above and consent to participate in the survey
- ☐ I do not wish to participate in the survey

A3. Survey questionnaire

Unlocking the potential of school libraries

Section I. Your school

1. What is the decile rating of your school?

<input type="checkbox"/> 1	<input type="checkbox"/> 6
<input type="checkbox"/> 2	<input type="checkbox"/> 7
<input type="checkbox"/> 3	<input type="checkbox"/> 8
<input type="checkbox"/> 4	<input type="checkbox"/> 9
<input type="checkbox"/> 5	<input type="checkbox"/> 10
2. What is the roll size of your school?
☐ Less than 150 students
☐ 150 – 300 students
☐ Over 300 students
3. What is the locale of your school?
☐ Urban
☐ Rural

Section II. Your school library

4. How many people are on the staff of the library?

<input type="checkbox"/> 0	<input type="checkbox"/> 3
<input type="checkbox"/> 1	<input type="checkbox"/> 4
<input type="checkbox"/> 2	<input type="checkbox"/> 5 or more
5. Who is the key person in charge of the library?
☐ Principal
☐ Trained teacher-librarian
☐ Teacher with library responsibility
☐ Trained librarian
☐ Teacher aide
☐ Library assistant
☐ Volunteer
☐ Other, please specify _____
6. How many hours per week is the library open?

<input type="checkbox"/> 0 – 5	<input type="checkbox"/> 26 - 30
<input type="checkbox"/> 6 – 10	<input type="checkbox"/> 31-35
<input type="checkbox"/> 11 – 15	<input type="checkbox"/> 36 - 40
<input type="checkbox"/> 16 – 20	<input type="checkbox"/> 40 or more
<input type="checkbox"/> 21 – 25	

Section III. Perceptions of the school library and information literacy

This survey uses the broad concept of information literacy defined in National Library's *The school library and learning in the information landscape: Guidelines for New Zealand schools* (2002):

- Recognising when information is needed and being able to locate, evaluate, and use it effectively
- Process of constructing personal knowledge and generating ideas to facilitate lifelong learning

The New Zealand curriculum (2007) has the following key competencies:

- *Thinking* – creatively and critically seeking, using and making sense of information
- *Using language, symbols and texts* – understanding and working with information in different formats

Please indicate your opinion of the following statements.

7. Information literacy underpins the national curriculum

- ☐ strongly agree
- ☐ agree
- ☐ neither agree nor disagree
- ☐ disagree
- ☐ strongly disagree

7b. The school library plays an important part in teaching students to become information literate

- ☐ strongly agree
- ☐ agree
- ☐ neither agree nor disagree
- ☐ disagree
- ☐ strongly disagree

7c. Effective information literacy initiatives can improve student levels of achievement

- ☐ strongly agree
- ☐ agree
- ☐ neither agree nor disagree
- ☐ disagree
- ☐ strongly disagree

7d. To integrate information literacy in curriculum teaching it is important for school library staff and teachers to work together

- ☐ strongly agree
- ☐ agree
- ☐ neither agree nor disagree
- ☐ disagree
- ☐ strongly disagree

Section IV. Actions related to information literacy

8. As Principal, who do you promote information literacy to in the wider school community? Please check all that apply.
- ☐ the Board of Trustees
 - ☐ teaching staff
 - ☐ library staff
 - ☐ students
 - ☐ parents or caregivers
 - ☐ others, please specify _____
9. Does the school have a separate information literacy policy as part of the board's review cycle?
- ☐ Separate policy exists and is part of the board's review cycle
 - ☐ Separate policy exists but is not part of the board's review cycle
 - ☐ Information literacy is included in another policy.
Please specify _____
 - ☐ Information literacy is not included in the school's policies
10. Does the school library have a separate budget?
- ☐ Separate library budget exists
 - ☐ No separate library budget exists
 - ☐ The library has a separate budget for some items
Please specify _____
11. What professional development opportunities are available to your staff to improve their information literacy skills?
- ☐ Attending external courses, seminars, workshops or conferences
 - ☐ Attending internal courses, seminars or workshops
 - ☐ Other opportunities. Please specify _____
 - ☐ No specific professional development opportunities for information literacy are available
12. Which of the National Library's *Services to Schools* does your school use to support information literacy? Please check all that apply.
- ☐ Look for tools, guides and links to research on the website (<http://schools.natlib.govt.nz/>)
 - ☐ Find relevant courses for staff members from the *Professional Learning and Development* program
 - ☐ Participate in the *Online Community*, to discuss issues of interest
 - ☐ Talk with the *Services to Schools* advisors
13. What other external support for information literacy initiatives does your school use? Please check all that apply
- ☐ Support from the School Library Association of NZ Aotearoa (SLANZA)
 - ☐ Support from other school libraries
 - ☐ Support from the public library
 - ☐ Support from the Library and Information Association of NZ Aotearoa (LIANZA)
 - ☐ Support from the Ministry of Education
 - ☐ Other support. Please specify _____

14. How does your school schedule library time for classes?
- ☐ Classes visit the library on a fixed schedule
 - ☐ Classes visit the library on a fixed schedule with additional library time available when students need resources to support curriculum teaching
 - ☐ Class library time is scheduled according to curriculum teaching needs
 - ☐ Class library time is not scheduled
15. Are the information literacy skills of your students assessed?
- ☐ Specific tests are used to monitor information literacy levels
Please state test/s used _____
 - ☐ Teachers assess information literacy levels of students
 - ☐ Information literacy skills are assessed in another way.
Please specify _____
 - ☐ Information literacy skills are not assessed
16. What is the most important action you take as a principal to involve the school library in curriculum teaching?

17. What one thing would make a difference to how your school library is used in curriculum teaching? _____
18. Any other comments?

Thank you for your time.

Appendix B: Contingency table scores

B1. Actions cross-tabulated with school demographics

Table B1.10.4.1. Information literacy advocacy by decile, size and locale

Group	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Board of Trustees	9	19	17	6	12	27	31	14
Teaching staff	10	22	20	6	14	32	36	16
Library staff	5	15	13	3	7	23	24	9
Students	11	20	18	7	13	29	34	15
Parents / caregivers	10	16	20	6	13	27	32	14
Others	1	1	0	0	1	1	1	1

Table B1.10.4.2. Information literacy policy by decile, size and locale

Policy type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Separate policy	5	9	8	4	6	12	14	8
No separate policy	6	13	12	3	8	20	22	9

Table B1.10.4.3. Library budget type by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Separate budget	11	20	19	5	14	31	35	15
No separate budget	0	1	0	1	0	0	0	1
Separate for some items	0	1	1	1	0	1	1	1

Table B1.10.4.4. Professional development (PD) by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
External courses	9	19	17	3	12	30	34	11
Internal courses	4	6	12	2	2	18	19	3
Other opportunities	2	2	1	0	1	4	5	0
No PD	1	3	2	4	1	1	0	6

Table B1.10.4.5. Use of National Library services by decile, size, locale

Service	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Website	7	16	19	6	10	26	29	13
Courses	7	13	13	3	9	21	23	10
Online forum	3	5	7	2	1	12	12	3
Advisors	8	16	14	5	11	22	27	11
Schools in sample	11	22	20	7	14	32	36	17

Table B1.10.4.6. Other external support by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
SLANZA	8	12	14	4	8	22	23	11
Other school libraries	4	8	10	1	4	17	17	5
Public library	4	14	10	2	7	19	23	5
LIANZA	3	6	4	2	2	9	9	4
Ministry of Education	3	7	6	0	6	10	11	5
Other	0	3	0	1	0	2	2	1
No support used	1	2	0	1	2	0	0	3

Table B1.10.4.7. Library scheduling by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Fixed schedule	3	1	1	1	2	2	3	2
Fixed + added time	8	19	18	4	12	29	32	13
Flexible schedule	0	2	1	2	0	1	1	2

Table B1.10.4.8. Assessment by decile, size and locale

Type	Decile rating			Roll size			Locale	
	low	med	high	small	med	large	urban	rural
Specific tests	2	5	5	1	2	9	11	1
Teachers' assessment	5	11	6	4	6	12	13	9
Other assessment	0	3	7	1	4	5	6	4
No assessment	4	3	2	1	2	6	6	3

B2. Actions cross-tabulated with perceptions

Table B2.10.5.1. Information literacy advocacy by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>Information literacy underpins the national curriculum</i>	126	90	11	0
<i>The school library plays an important part in teaching information literacy</i>	132	82	13	0
<i>Information literacy improves student achievement</i>	132	95	0	0
<i>Collaboration of library and teaching staff helps integrate information literacy in curriculum teaching</i>	136	80	8	3

Table B2.10.5.2. Separate information literacy policy by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Separate IL policy	10	11	1	0
2. No separate IL policy	18	12	1	0
<i>School library important in teaching IL</i>				
1. Separate IL policy	14	8	0	0
2. No separate IL policy	17	11	3	0
<i>IL improves student achievement</i>				
1. Separate IL policy	16	6	0	0
2. No separate IL policy	16	15	0	0
<i>Collaboration integrates IL in teaching</i>				
1. Separate IL policy	13	9	0	0
2. No separate IL policy	19	9	2	1

Table B2.10.5.3. Separate library budget by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Separate budget	27	21	2	0
2. No separate budget	1	2	0	0
<i>School library important in teaching IL</i>				
1. Separate budget	28	19	3	0
2. No separate budget	3	0	0	0
<i>IL improves student achievement</i>				
1. Separate budget	29	21	0	0
2. No separate budget	3	0	0	0

<i>Collaboration integrates IL in teaching</i>				
1. Separate budget	30	17	2	1
2. No separate budget	2	1	0	0

Table B2.10.5.4. Professional development opportunities by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. PD opportunities offered	27	18	2	0
2. No PD opportunities	1	5	0	0
<i>School library important in teaching IL</i>				
1. PD opportunities offered	29	15	3	0
2. No PD opportunities	2	4	0	0
<i>IL improves student achievement</i>				
1. PD opportunities offered	28	19	0	0
2. No PD opportunities	4	2	0	0
<i>Collaboration integrates IL in teaching</i>				
1. PD opportunities offered	28	16	2	1
2. No PD opportunities	4	2	0	0

Table B2.10.5.5. Use of National Library services by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. National Library services used	79	43	6	0
2. No services used	33	49	2	0
<i>School library important in teaching IL</i>				
1. National Library services used	83	36	9	0
2. No services used	41	40	3	0
<i>IL improves student achievement</i>				
1. National Library services used	83	45	0	0
2. No services used	45	39	0	0
<i>Collaboration integrates IL in teaching</i>				
1. National Library services used	84	37	5	2
2. No services used	44	35	3	2

Table B2.10.5.6. Use of other external support by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Other external support used	28	20	2	0
2. No external support used	0	3	0	0

<i>School library important in teaching IL</i>				
1. Other external support used	30	17	3	0
2. No external support used	1	2	0	0
<i>IL improves student achievement</i>				
1. Other external support used	29	21	0	0
2. No external support used	3	0	0	0
<i>Collaboration integrates IL in teaching</i>				
1. Other external support used	31	16	2	1
2. No external support used	1	2	0	0

Table B2.10.5.7. Scheduling class library time by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Fixed schedule	26	22	2	0
2. Flexible schedule	2	1	0	0
<i>School library important in teaching IL</i>				
1. Fixed schedule	29	18	3	0
2. Flexible schedule	2	1	0	0
<i>IL improves student achievement</i>				
1. Fixed schedule	29	21	0	0
2. Flexible schedule	3	0	0	0
<i>Collaboration integrates IL in teaching</i>				
1. Fixed schedule	29	18	2	1
2. Flexible schedule	3	0	0	0

Table B2.10.5.8. Information literacy assessment type by perceptions

Perception	Strongly agree	Agree	Neutral	Disagree
<i>IL underpins the national curriculum</i>				
1. Assessment	24	19	1	0
2. No assessment	4	4	1	0
<i>School library important in teaching IL</i>				
1. Assessment	27	15	2	0
2. No assessment	4	4	1	0
<i>IL improves student achievement</i>				
1. Assessment	27	17	0	0
2. No assessment	5	4	0	0
<i>Collaboration integrates IL in teaching</i>				
1. Assessment	29	12	2	1
2. No assessment	3	6	0	0

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