

School libraries, teacher-librarians and literacy at Gold Coast schools: Research findings

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Introduction

The future viability of school libraries and teacher-librarians depends in large part upon reliable evidence of their positive impact on student outcomes. Evidence of this kind is essential when school budgets are severely stretched and administrators face multiple, competing needs.

This research provides evidence of the contribution that school libraries and teacher-librarians make to literacy development at 27 schools in the Gold Coast area of Australia. It draws upon the insights of school principals from a representative mix of government and non-government schools, primary, secondary and combined P-12.

As the first study to focus specifically on Gold Coast school libraries, its outcomes include:

- An extensive review of international and Australian research showing impacts of school libraries and teacher-librarians on students' literacy and learning outcomes
- Current detailed snapshot of school libraries in a well-defined area
- Findings broadly consistent with international research showing indications that school NAPLAN scores for reading and writing were generally higher when (a) student to library staff ratios were lower (i.e. better) and (b) the school had a teacher-librarian.

Although the findings are not generalisable due to small sample size, their significance lies in their exploratory depth and currency. They are of potential interest to education authorities, school leadership teams, teacher-librarians, teachers and researchers. The findings offer evidence to inform policy development, strategic planning and advocacy for school libraries that respond to the literacy development needs of 21st century learners. They also support further collaborative research on a State or national level, with potential partners including universities, education authorities, professional associations and commercial organisations.

The full research report is available on the SLAQ web site at: <http://www.slaq.org/research>.

This paper is in six main parts. After outlining the background and research approach, it summarises relevant international and Australian research. The paper then outlines the study's findings about the 27 Gold Coast school libraries. Finally it discusses implications of the findings and presents recommendations.

Background

The Australian Government is committed to significantly raising student literacy. The National Education Reform Agreement (NERA) declares "ambitious national targets for a high quality and high equity schooling system" to place Australia in the top 5 countries internationally in reading, mathematics and science by 2025 (Australian Government, 2013). The recent parliamentary *Inquiry into school libraries and teacher librarians in Australia* (House of Representatives, 2011) highlights the role that school libraries and teacher-librarians play in supporting student literacy, reading and learning. It acknowledges their contribution to national government initiatives such as Building the Education Revolution (BER), Digital Education Revolution (DER) and the new Australian Curriculum.

The *Standards of professional excellence for teacher-librarians* (ASLA & ALIA, 2004) emphasise that reading promotion and literacy development are core goals for teacher-librarians. Achievability of these goals is dependent on employment of specialist teacher-librarians and adequate funding for school libraries. However, submissions to the Inquiry indicate significant lacks and disparities around Australia (ALIA, 2010; ASLA, 2010; Kirkland, 2010; SLAQ, 2010). School library resourcing varies greatly between schools, States and education systems. Many school libraries are under-funded and specialist teacher-librarian positions are declining. The problem is compounded by inadequate funding of schools Australia-wide (Gonski, et al., 2011).

The Inquiry (House of Representatives, 2011) associated the under-resourcing of school libraries with a lack of solid evidence demonstrating their value to students, schools and the wider community. Although the Inquiry submissions provide many examples of good practice, they often fail to demonstrate outcomes and the difference school libraries and teacher-librarians actually make. Similarly, there are abundant anecdotal accounts and practical guides in the professional teacher-librarianship literature, but formal research-based evidence with an Australian focus is quite limited.

Recognising this need for evidence, a research partnership was established between School Library Association of Queensland (SLAQ) and the Children and Youth Research Centre at Queensland University of Technology (QUT). The first outcome of this partnership is this exploratory study focusing on school libraries in the Gold Coast area.

Research Approach

This exploratory study involved a review of relevant previous international research, and the collection and analysis of new data from schools in the Gold Coast region of Australia.

Research aim and questions

The study addressed the following research questions:

- *What is the current nature of school library provision and staffing in Gold Coast schools?*
- *How do school libraries and teacher-librarians contribute to school students' literacy development in Gold Coast schools?*

Since it was conceived as a pilot study, the Gold Coast constituted a relatively small, well defined area with a representative range of schools of varying types and sizes. School principals were appropriate participants, with the expectation that they would have overall responsibility for library provision and literacy development at their school.

Participants

97 schools in the Gold Coast area were identified in 2012 via Education Queensland's online *Schools directory* and their principals were invited by email and mail to participate in the research. 27 principals responded (28% of the 97 Gold Coast principals contacted). As summarised in Table 1 below, the survey respondents were from a variety of school types.

School types	Government	Non-government	Total
Primary	10	3	13
Secondary	4	1	5
Combined (P-12)	0	7	7
Special school (P-12)	1	0	1
Senior secondary college (Years 10-12)	1	0	1
Total	16	11	27
Percentages	59% of responses	41% of responses	-
	16.5% of all Gold Coast schools	11% of all Gold Coast schools	28% of all Gold Coast schools
	25% of all Gold Coast government schools	33% of all Gold Coast non-government schools	-

Table 1: Summary of survey respondents by school type

Data collection and analysis

Data collection involved anonymous surveys and telephone interviews. Principals' responses were treated confidentially and the individual schools were not identified. The survey was first distributed via email in August 2012. Due to initial low response rate, it was later re-sent in print format via mail in October 2012.

The survey included a mix of 17 closed and open questions based around themes identified in the research literature and the report of the *Inquiry into school libraries and teacher librarians in Australian schools* (House of Representatives, 2011). It covered: school demographics; school NAPLAN scores for reading and writing; EFT library staffing; employment and qualifications of person in charge of the school library; the principal's perceptions about the school library and its contribution to student literacy; and the principal's vision for the school library. The respondents were also invited to participate in a follow-up telephone interview with the project's lead researcher to discuss the interview questions at greater length.

The survey and interviews produced a rich mix of quantitative and qualitative data. Data analysis involved exploratory analysis of quantitative data and thematic analysis of qualitative data (Creswell, 2012; Patton, 1990).

Limitations

As this study was designed as a small scale pilot study, its investigative scope and sample size are limited. The findings cannot be considered generalisable to schools outside the featured 27 Gold Coast schools. In addition, they do not rule out other explanations for associations between school libraries, teacher-librarians and school NAPLAN scores.

The researchers also acknowledge the contestability and limitations of standardised testing such as NAPLAN in assessing students' literacy and learning outcomes (eg. Dulfer, Polesel, & Rice, 2012). However, we followed a common approach in international research which uses standardised test results as basis for identifying relationships between school libraries and student achievement. Further research is needed to holistically examine relationships between school libraries, teacher-librarians and students' literacy and learning outcomes.

Literature review

Numerous studies conducted in the US, Canada and Britain provide compelling evidence that school libraries have positive impacts on student literacy, reading and learning outcomes. In contrast, only a handful of studies exploring the impact of schools and teacher-librarians have been conducted in Australia.

Need for evidence

The need for research about the Australian school library scene was first highlighted in a report commissioned by the Australian School Library Association in 2003, which stated:

If practitioners in Australia are to mount a strong case for recognising the positive impact of school libraries and school librarians on student learning . . . it is important to know how applicable the existing research is to an Australian context and what kind of additional research might be needed to demonstrate the positive relationship between school libraries and student achievement (Lonsdale, 2003, p.1).

The report of the Inquiry into school libraries and teacher librarians in Australian schools (House of Representatives, 2011) reiterated:

There is a fundamental need to collate some hard data to ascertain how many teacher librarians there are in Australia's primary and secondary schools; to identify where the gaps are; and to start to extrapolate the links between library programs, literacy (especially digital literacy, which is as important as regular literacy and numeracy skills), and student achievement (House of Representatives, 2011, p. 118).

School leaders need solid evidence to support decision-making. Given the prevailing school-based management system in Australia, it is concerning that school principals are often unaware of the full potential of school libraries and teacher-librarians (Hartzell, 2002; Henri & Boyd, 2002; Ragle, 2011). This is one likely reason for diminishing library budgets and teacher-librarian positions.

Australian professional journals provide a rich picture of contemporary school libraries and examples of good professional practice. However, they tend to describe inputs (planning and actions) rather than outputs (evaluated outcomes). The persuasive power of these anecdotal accounts is often limited by lack of solid evidence demonstrating real differences attributable to school libraries and teacher-librarians. There is a critical need for what Ross Todd (2009, p. 89) calls "evidence for practice" that focuses on "the real results of what school librarians do, rather than on what school librarians do".

International research

The majority of international studies focus on test results for student attainment in areas such as reading and language arts, for example: Lance & Hofschire (2012) and Smith (2006). However, some studies adopt a qualitative approach to evaluate the nature of the relationships between school libraries/teacher-librarians and students' learning outcomes, for example: Klinger et. al. (2009), Todd, Gordon and Lu (2010, 2011) and Small, Shanahan and Stasak (2010).

Impacts of school libraries

Many studies investigating the impacts of school libraries have been conducted in North America, from the early 1960s until the present. School libraries work! (2008) records more than twenty studies between 2000 and 2008 across the US and Canada, which included about 10,000 elementary, middle and high schools and more than 3 million students.

In many cases, analyses were controlled for social and/or school-based variables, for example: Lance & Schwarz (2012). The findings suggest that positive impacts of school libraries and teacher-librarians occur independently of particular social and school-based variables, such as students' socio-economic or educational backgrounds, or other aspects of their school environment.

General impacts

Multiple studies in the US have demonstrated relationships between student test scores, school libraries and teacher-librarians. These include a recent national report documenting the deleterious effects of cutting librarian positions in terms of fourth-grade students' reading scores between 2004 and 2009 (Lance & Hofschire, 2011); and four influential Colorado studies (Lance, Welborn & Hamilton-Pennell, 1993; Lance, Rodney & Hamilton-Pennell, 2000; Francis, Lance & Lietzau, 2010; Lance & Hofschire, 2012).

The Colorado studies highlight that all of the following factors positively influence student achievement:

- More full-time equivalent library staffing
- Presence of qualified teacher-librarians
- Higher library budgets
- Larger library collections, newer resources, varied formats
- Networked online resources made accessible via computers in the library as well as in classrooms, labs, and offices
- Heavier student use of library, indicated by library visits and circulation

These findings are consistent with other studies which show the impact on student achievement of:

- Higher full-time equivalent staffing in Wisconsin (Smith, 2006).
- Larger, newer resource collections in California (Achterman, 2008)
- Access to online resources and ICT in Ohio (Todd & Kuhlthau, 2005a) and Ontario (People for Education, 2011)
- Higher total library expenditures in Illinois (Lance, Rodney & Hamilton-Pennell, 2005),

Taking a broader learning focus, a UK study (Williams & Wavell, 2001) found that school libraries contribute to students' motivation, progression, independence and interaction. Similarly, the Ohio study (Todd & Kuhlthau, 2005a, 2005b) revealed that effective school libraries help students with their learning, both in and out of school, in two important ways:

- *helps-as-inputs*: where school libraries support students in the learning process
- *helps-as-outcomes*: where school libraries enable students' academic achievements.

They propose that the school library is "an agent for active learning" and that it is:

not just informational, but transformational and formational, leading to knowledge creation, knowledge production, knowledge dissemination and knowledge use, as well as the development of information values (Todd & Kuhlthau, 2005a, p. 85).

A Pennsylvania study identified longer-term impacts beyond school:

What students learn is how to learn more effectively, both now and in the future. . . . libraries and librarians make a difference by teaching students learning skills that will serve them well throughout their lives (Lance & Schwarz, 2012, p. vii).

Impacts of school libraries on reading

Reading expert Stephen Krashen (2004) indicates that wide reading and access to reading materials through libraries are critical for literacy development, especially among students from lower socio-economic backgrounds. Therefore, it is significant that many studies highlight the impact of school libraries on reading ability and enjoyment, for example:

Todd, Gordon & Lu, 2010), Ontario Library Association, et. al. (2006) and Wisconsin (Smith, 2006). A British study (Clark, 2010) and an Australia-wide school literacy survey (Masters & Forster, 1997) showed strong relationships between reading attainment and school library use.

. . . wide reading and access to reading materials through libraries are critical for literacy development . . .

Impacts of school libraries on information literacy

School libraries contribute to students' information literacy development, through school library programs and individual assistance to students. Again positive outcomes are related to higher school library staffing; involvement of a qualified teacher-librarian; expenditure on information resources; and integration of information resources and technology. For example this was shown by studies in: New York State (Small, Shanahan & Stasak, 2010), New Jersey (Todd, Gordon & Lu, 2010) and Wisconsin (Smith, 2006).

Impacts of teacher-librarians

The mere provision of a school library does not guarantee positive impact. While larger total library staff is often related to student achievement, there is generally greater impact when staff includes qualified teacher-librarians who take a shared leadership role with teaching colleagues (Todd & Kuhlthau, 2005b). According to an Ontario study "exemplary teacher-librarians" are "leaders in their school and outstanding teachers", who project a vision of the library as "a central hub of the school, prominently placed and a central place of activity and learning" (Klinger et al., 2009, p.36).

In particular, qualified teacher-librarians influence student achievement through:

- Developing library collections to suit the curriculum and enabling their use to support learning, for example: Lance & Loertscher (2005).
- Providing information literacy programs and research assistance, for example: Small, Shanahan & Stasak (2010), Wisconsin (Smith, 2006)
- Collaborating with teachers in curriculum development and teaching, and providing professional development, for example: Ohio Todd & Kuhlthau (2005a, 2005b).
- Promoting reading, for example: Francis, Lance & Lietzau (2010) and Lance and Hofschire (2011)

With regard to reading, Lance and Hofschire's most recent research (2012) demonstrated the beneficial effects of having an endorsed librarian (with teaching qualifications):

Regardless of how rich or poor a community is, students tend to perform better on reading tests where, and when, their library programs are in the hands of endorsed librarians. Furthermore, at schools where library programs gain or maintain an endorsed librarian when school budgets get tight, students tend to excel. At schools where library programs lose or never had an endorsed librarian, students suffer as a result (Lance & Hofschire, 2012, p.9).

Impacts of school principals

School principals also contribute to a school library's impact on student achievement, especially when there is a strong collaborative relationship between principal and teacher-librarian (Henri, Hay & Oberg, 2002; Lance, Rodney & Russell, 2007). In addition, Todd, Gordon and Lu (2011) highlight the benefit of principals who nurture a school culture that supports the most effective operation of the school library and enables trust and collaboration between teachers and teacher-librarians.

Australian research

Only three Australian studies consider the actual outcomes or impacts of school libraries and teacher-librarians on student literacy or learning outcomes.

Student learning through Australian school libraries (Hay, 2005, 2006) replicated the Ohio study (Todd & Kuhlthau, 2005 a,b). The results similarly indicate that the school library and teacher-librarian help students learn by providing access to a range of current resources and technology and developing information literacy. Students' responses confirm the usefulness of access to a well-resourced library and acknowledge the teacher-librarian's knowledge and expertise as a resource specialist.

The *School libraries futures project* (Hay and Todd, 2010) provides extensive examples of teacher-librarian activities that support information literacy and learning in New South Wales government schools. Despite respondents' frequent claim that school libraries have a "definite impact" they provide limited evidence of actual outcomes on student learning. The researchers suggest this invisibility of outcomes can lead to perceptions among education authorities and principals that school libraries do not make a significant contribution.

Australian school library surveys conducted annually since 2010 by the Softlink company (2012) show links between: higher school library funding and higher than national average reading scores; and lower school library funding and lower than national average reading scores. In addition, they find a significant positive correlation between the number of school librarians employed and the NAPLAN Reading Literacy results for the school. In these respects, the Softlink findings are similar to findings of the US impact studies.

Findings: Gold Coast school libraries, library staff and teacher-librarians

The schools

The 27 Gold Coast schools featured in this study varied in size and nature. They included primary, secondary and combined P-12 schools:

- 59% were government schools
- 41% were non-government schools.

This break-down quite closely reflects the proportion of government to non-government schools (66% to 34%) among the 97 Gold Coast schools originally identified.

Note: In this report, schools are designated by an ID letter to preserve their confidentiality. School types are indicated by the terms used for the *My school* (ACARA, n.d.b) website.

The school libraries

The school libraries were also quite varied:

- All 27 schools had a library
- 2 non-government combined (P-12) schools had separate junior and senior libraries.
- The great majority used traditional names such as Library (18 schools) or Resource Centre (8 schools) or the hybrid Library Resource Centre (1 school)
- 1 non-government P-12 school used the recently coined descriptor iCentre
- While primary schools equally used Resource Centre and Library, the majority of secondary and combined schools preferred Library.

The school library staff

Levels of library staffing varied markedly across the schools, in terms of equivalent full-time (EFT) staff and qualifications, but all 27 school libraries had at least 1 part-time staff.

For this group of 27 schools, the median EFT library staff was 1.8 and the median EFT teacher-librarian was 1.

There were notable differences in school library staffing between government and non-government school libraries. The government schools tended to have fewer and less well qualified library staff than non-government schools.

- Non-government schools tended to have larger EFT library staffs that included a paraprofessional library technician or administrative assistant
- All non-government schools had at least one part-time teacher-librarian.
- 6 government schools had no teacher-librarian

The following Table 2 shows a break-down of EFT staff by type of school. The figures in brackets show the number of schools per particular EFT.

School types	Total library staff EFT														
	7	5.5	5	4.5	2.8	2.2	2	1.9	1.8	1.6	1.4	1.3	1.2	1	0.9
Government primary						(1)		(1)	(1)	(1)		(1)	(1)	(3)	(1)
Government secondary					(1)		(1)							(2)	
Government special (P-12)											(1)				
Government senior secondary college (Yr 10-12)									(1)						
Non-government primary							(2)							(1)	
Non-government secondary							(1)								
Non-government combined (P-12)	(1)	(1)	(3)	(1)										(1)	
Total (n=27)	(1)	(1)	(3)	(1)	(1)	(1)	(4)	(1)	(2)	(1)	(1)	(1)	(1)	(7)	(1)

Table 2: Summary of school library staff

Make-up of library staff

The make-up of library staff varied greatly from one school to the next with a mix of a qualified teacher-librarians, qualified librarians, teachers, library technicians, AV technicians and library aides. Some school libraries employed 2 or more staff, and 7 libraries had 3 or more different position types. In contrast, at 7 libraries the person in charge had no support.

In most cases, the title of the person in charge was *teacher-librarian*. However, at 3 schools the person in charge was designated differently, as: Head of Library and information Services, Library Manager, and iCentre Coordinator.

Only three quarters (78%) of the school libraries were managed by a qualified teacher-librarian with dual qualifications in teaching and librarianship/information science.

Teacher-librarians

In line with peak professional bodies ALIA, SLAQ and ASLA, a teacher-librarian is understood to hold dual qualifications in teaching plus teacher-librarianship or library/information science. Of the 21 schools in this study with a qualified teacher-librarian:

- almost two thirds had at least 1 full-time qualified teacher-librarian
- 7 schools had only a part-time teacher-librarian
- 2 non-government schools with separate junior and secondary libraries had 2 full-time teacher-librarians.
- all non-government schools had a teacher-librarian
- only 63% of government schools had a teacher-librarian
- of the 7 libraries with a part-time teacher-librarian, 5 were government schools.

Schools without a teacher-librarian

Six government schools did not have a qualified teacher-librarian:

- 1 state primary school
- 3 state secondary schools
- 1 state P-12 special school
- this equates to almost one quarter (22%) of all 27 schools and over one third (37.5%) of the 16 government schools.

Of the six schools without a teacher-librarian:

- 2 were run by library aides with no professional qualifications in teaching or librarianship (although one is completing a Masters degree in another discipline)
- 3 were run by a teacher (without librarianship qualification)
- 1 was run by a library technician (with Certificate IV but without professional library or teaching qualification)

Student to library staff ratios

- The government schools had higher ratios of students to EFT library staff (i.e. relatively fewer staff per enrolled students)
- Library staff at non-government schools tended to rise in line with student enrolment
- In contrast, EFT library staff at the government schools tended to cluster between 1 and 2 irrespective of size of student enrolment.

Findings: Literacy and reading activities at the Gold Coast school libraries

The Gold Coast school libraries in this study provided numerous and varied activities related to literacy development and reading promotion.

- Those with a teacher-librarian tend to provide a greater number of activities.
- It seems that a critical mass of at least one EFT teacher-librarian and support staff was required to provide a varied program of activities.

All except one of the 27 school libraries provided some reading and literacy development activities.

- The average was 7 activities
- 17 school libraries (63%) provided 5 or more activities
- 8 school libraries (30%) provided 9 or more activities.
- Reading promotion activities were the most common, with and one or more provided by 26 school libraries.

Figure 1 below highlights the range of activities provided by the school libraries in this study.

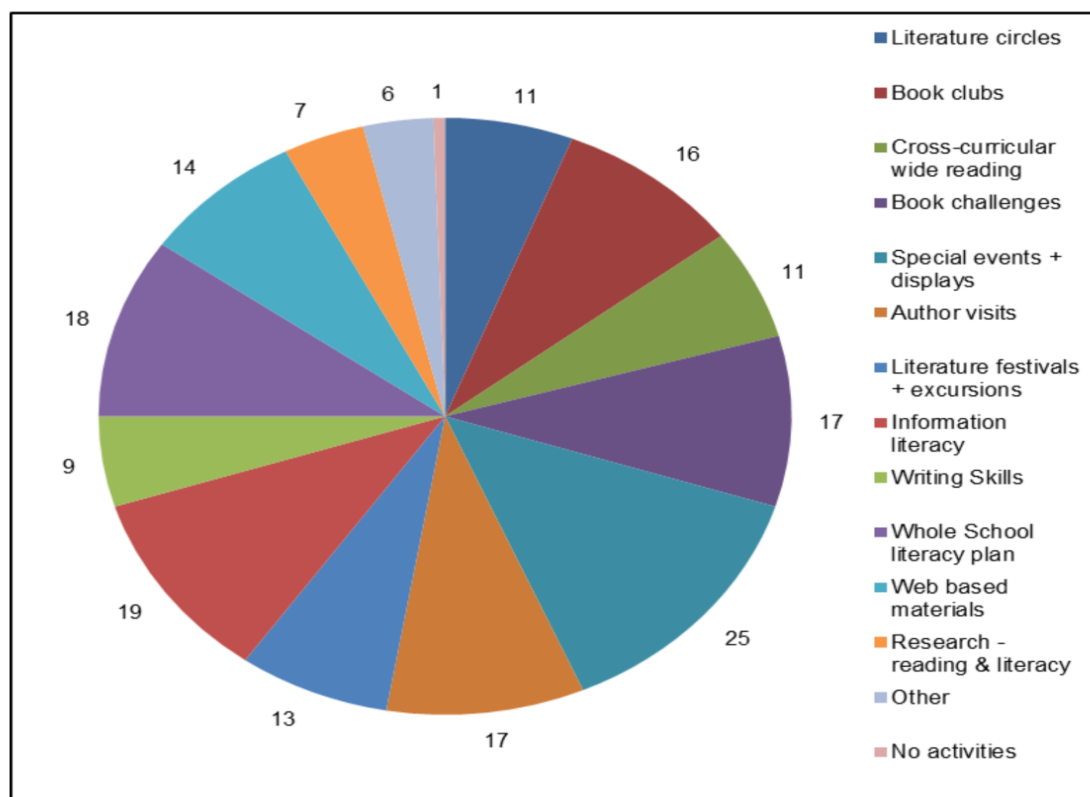


Figure 1: Literacy and reading activities provided by the Gold Coast school libraries

The school libraries with teacher-librarians tended to provide more literacy development activities than those without a teacher-librarian.

- There appears to be a strong association between higher EFT teacher-librarian and higher number of activities provided
- This association is particularly distinct for government schools

- Significantly the 6 schools with no teacher-librarian provided few or no activities.

In contrast, there is no apparent association between total equivalent full time library staff and the number of literacy development activities offered by the library. This would seem to further highlight the impact of having a qualified teacher-librarian.

Findings: NAPLAN scores, school libraries and teacher-librarians

This study considered the schools' 2011 NAPLAN scores (ACARA, 2011). It found that their NAPLAN scores for reading and writing were generally higher when (a) student to library staff ratios were lower (ie. better) and (b) the school had a teacher-librarian. The data are displayed and explained in Appendix A and summarised here.

The data suggest an inverse relationship between lower *student to EFT library staff* ratios and higher NAPLAN reading and writing scores.

- At schools with a qualified teacher-librarian, school NAPLAN scores tend to be higher than national mean NAPLAN scores for reading and writing
- At schools without a qualified teacher-librarian, school NAPLAN scores are generally lower than the median NAPLAN score for schools with a teacher-librarian
- Non-government schools in this sample generally performed better than government schools

Findings: The principals' views about school libraries and teacher-librarians

In addition to factual data, the study presents principals' perceptions about school libraries and teacher-librarians. The great majority of the 27 Gold school principals indicated that their school library is necessary and contributes to students' literacy development.

School library influence on students' literacy

The great majority (93%) of the school principals considered that their school library had some influence on students' literacy development

- over two thirds (67%) considered that it had a great/very great influence
- 26% of the principals considered that the school library had a little influence on literacy development
- only one principal considered the library had no influence
- primary and P-12 school principals, from non-government schools, reported the highest levels of influence

Need for a school library to support students' literacy

A similarly large majority (93%) of the principals indicated the need for a library to support students' literacy development in their school. Over two thirds considered it to be essential. For example, one principal commented: "A well resourced library and a good TL are essential to a whole of school approach to literacy development".

Only two principals, both in government schools considered the library to be unnecessary, while the principal of school E considered that libraries "have limited need past class 5".

How school library staff contribute to students' literacy development

The principals described many ways in which their school library staff contribute to students' literacy development. These included:

- As pedagogical and curriculum leaders: "*Our librarians are on our curriculum committees. They are seen as pedagogical leaders. They work with staff in planning time and work with students in class work and individually*" (Principal School V)
- As literacy leaders: "*[Library staff] work with school leadership and curriculum team to strategically plan school improvements in literacy*" (Principal School B)
- As collaborative literacy teachers
- As promoters of information and digital/ICT literacy: "*TL models and promotes the use of technology to find information, to create and communicate and for recreation*". (Principal School T)
- As promoters of reading
- As peer educators: "*Model and support teachers and students in delivery of high quality practices and improved standards*". (Principal School BB)
- As resource experts: "*Ensure there are resources to support Australian Curriculum*". (Principal School AA); "*Resource advice and management*". (Principal School Q)
- As student-focused library managers
- As learning space creators: "*Provide inviting, engaging environment to promote a love of learning and inquiry through print and ICT*". (Principal School BB)

Principals indicated further ways in which their library staff could contribute to students' literacy development. Notably, their responses show that "current ways of contributing" at some schools are still "further ways of contributing" at other schools. For example, one principal indicated the need for the teacher-librarian to more actively engage in: "Continual promotion of the values of literacy throughout the school". (School Z).

The teacher-librarian role

The principals' responses suggest generally well-informed views about the varied and changing nature of the teacher-librarian's role. Several commented that teacher-librarians play an important role in their school, especially with regard to student literacy. For example, one principal stated that: "The role of teacher librarian is critical to literacy development and curriculum support".

Some principals noted that the teacher-librarian role is changing, with an increasing focus on managing learning and literacy. Several recognised that literacy now encompasses use of digital information and that teacher-librarians play an important role in promoting other teachers' use of technologies. They see that the increasing mobility of technology is extending the context in which teacher-librarians operate, beyond the library itself.

Library-related needs for achieving school literacy goals

While the principals generally recognised that the school library can contribute to students' literacy development, they also indicated further needs must be met for it to fully achieve the school's literacy goals. Many needs relate to resourcing, as the principal of School E commented: "[it] all comes back to strategic plan and money".

Principals needed increased funding for staffing, resources, digital technologies and improved library spaces. Several focused on the need to either appoint or increase the hours of a qualified teacher-librarian. One mentioned professional development for teacher-librarians, which probably would have funding implications.

In addition to increased funding, some principals identified practice-related needs: for teacher-librarians to adapt their practice with changing conditions, or take a more active teaching role. Meanwhile, some principals saw a need for teachers to develop greater awareness about the role libraries and library staff can play in literacy and curriculum development. However, one principal noted that teacher-librarians also need to do more to promote their skills.

Telling tales of two school libraries

Finally, two principals' contrasting accounts illustrate the difference school libraries and teacher-librarians can make. They also highlight the need to adequately fund school libraries and library literacy programs and employ sufficient and appropriately qualified teacher-librarians to lead them.

School B: A quality resource

School B exemplifies the active contribution of the school library and teacher-librarian to literacy development. It is a small government primary school, with 270 students and a new BER library. The principal comments: "The new BER library facilities at our school have lifted the profile and value of a quality resource managed by a highly effective TL".

A part-time teacher-librarian (0.8) and library aide (0.5) provide an extensive range of literacy development activities that span reading promotion events and book challenges, information literacy and research skills. The principal recognises that the teacher-librarian plays an active role as curriculum and literacy leader: "The TL leads and manages many aspects of the 21C learning program and the new literacies at the school".

However, this high level contribution places significant demands on the small library staff. The principal is aware that the staffing level is inadequate to sustain this level of activity and is concerned about the impact on the teacher-librarian: "The under-supply/over-demand for using the library and the expertise of the TL is an ongoing issue . . . and the (TL) needs to be protected from an impossible workload and burnout".

School CC: If only . . .

School CC is a government secondary school. Year 9 NAPLAN scores were 573 for reading (below the national mean of 580) and 582 for writing (above the national mean of 566). The library is managed by one full-time library aide, without either a teacher or teacher-librarian. No literacy-related activities are offered by the library.

The principal acknowledges that the library currently has no influence on literacy development, but still considers it to be essential. He notes a significant decline in growth of average NAPLAN reading scores in the four years since the teacher-librarian's position was discontinued: "We lost our librarian 4 years ago and now we recognise the need for one, particularly since the negative growth in reading on NAPLAN Year 7-9 declined by 30% from 2010-2012. Double the percentage of negative growth for the previous cohort".

In response to the question 'What do you need to achieve literacy goals?' this principal tellingly comments: "Re-appointment of a teacher librarian".

Implications of the findings

This study adds to a growing body of research about the contribution that school libraries - and especially teacher-librarians - make to student literacy and learning outcomes. The findings have significant implications for educational equity and achievability of national literacy goals.

Variations in school library resourcing and staffing

While all except one of the school libraries provide literacy development activities, it is notable that libraries with a qualified teacher-librarian tend to provide more activities. Moreover, consistent with more detailed studies, the data suggest that the schools with a qualified teacher-librarian tend to achieve higher NAPLAN scores. This is evidence of the difference that a qualified teacher-librarian can make.

... libraries with a qualified teacher-librarian tend to provide more activities.

These findings are further supported by the school principals' views about school libraries and teacher-librarians. A great majority (93%) consider that their school library is necessary and has an influence on student literacy development. In addition, principals indicate that teacher-librarians make particular contributions as literacy curriculum leaders and teachers, and as reading promoters.

Despite these apparent links between student learning outcomes and school libraries, there are significant variations in library staffing between the 27 Gold Coast schools, especially between government and non-government schools. The variations reflect Australia-wide conditions, which are compounded by uneven and often decreasing school library funding (House of Representatives, 2011; Softlink, 2012). This raises concern about equitable learning opportunities for students, given the evidence that teacher-librarians can make a difference to literacy outcomes.

Supporting literacy goals

Based on the findings of this study and international research, it is evident that school libraries and teacher-librarians are well placed to support the Australian government's priority to raise national literacy standards (Australian Government, 2013) and the implementation the new Australian Curriculum (ACARA, n.d.a).

Teacher-librarians bring specialist knowledge and a cross-curricular view to this process.

The Australian Curriculum places responsibility on all teachers for developing literacy and ICT capability across the curriculum. Teacher-librarians bring specialist knowledge and a cross-curricular view to this process. With dual qualifications as teachers and information

professionals, they offer particular expertise in information literacy and inquiry learning (Lupton, 2012).

ICT literacy is of particular importance to contemporary students' learning and personal well-being. Despite generalised assumptions about the digital prowess of "21st century learners", research shows that school students have widely varying ICT capabilities. While many are very skilful in accessing and navigating social media, their approaches to identifying and using information are often quite superficial (British Library / JISC, 2008; Purcell, et al., 2012). Here, teacher-librarians can play an important part in enabling students to engage critically, responsibly and safely with online information and learning technologies.

The current emphasis on ICT capability tends to detract from the benefits of students having free access to multiple types of resources, including print formats. This is sometimes associated with an assumption that school libraries are becoming less relevant with advancing technologies and seemingly boundless online information. However, although technology supports literacy development it cannot offer a complete solution. For example, the principal of School Q stated the need for: "A balanced delivery of books, ebooks, IT tools and writing. Removing all books won't fix literacy concerns".

Ensuring equitable literacy support

As a hub for learning, information, reading and social interaction, the library can play a strong part in advancing literacy on a school-wide basis (Klinger et al., 2009; Todd, Gordon & Lu, 2010). As one of few places within a school open to all students and teachers, the library offers equitable access to a wide range of resources. However, its potential to enhance literacy extends beyond providing resources and conducive spaces. The library staff, especially qualified teacher-librarians, play a vital role in enabling students and teachers use the resources and spaces to their fullest potential.

Challenges and opportunities for teacher-librarians

The study's findings indicate considerable expertise and commitment among Gold Coast teacher-librarians, who provide a wide range of literacy and reading activities, despite limited library support staff. The principals expressed generally favourable views about the contributions that the library and library staff make, although it is evident that some principals' expectations are met

more fully than others. This suggests that established practices at some Gold Coast school libraries are still opportunities for growth at others. It is a reminder that there is always room for teacher-librarians to extend their practice, and actively promote their role in student learning.

In carrying out their professional responsibilities, teacher-librarians face challenges to balance productive yet sustainable literacy initiatives with other important aspects of their multi-faceted role (ASLA & ALIA, 2004). Paradoxically, successful leadership and literacy initiatives are likely to increase demand and pressure on the teacher-librarian. For example, the principal of School B expressed concern that the teacher-librarian's contribution could be compromised by burnout. This highlights the need to adequately fund a critical mass of library staff, comprising teacher-librarian and administrative support.

The principals' comments also indicate the importance for teacher-librarians to work collaboratively and strategically, to ensure their ongoing viability. This involves teacher-librarians operating as evidence based practitioners (Todd, 2009) who keep attuned to their principal's expectations and actively monitor and respond to the current literacy requirements of their school.

Strategic teacher-librarians recognise that under a school-based management system, principals need evidence to weigh up many competing resource needs, including the school library. As shown by this study, principals may be aware of the benefits of the school library and teacher-librarians, but their ability to provide funding may be limited by budgetary constraints. While budgetary allocation is generally outside teacher-librarians' control, they can provide evidence to inform decision-making about school library resourcing. This involves demonstrating the value of the school library and its programs in terms of tangible outcomes; and proactively responding to particular priorities and changing conditions within the school. In these ways, teacher-librarians can also address the identified need to raise awareness of their role among colleagues and the leadership team. They can also build a case to support funding requests or other support by undertaking their own purposeful evidence gathering, or drawing upon the findings of other research.

Strategic teacher-librarians recognise that under a school-based management system, principals need evidence . . .

Resourcing imperatives

Greater and more consistent resourcing of Australian school libraries and teacher-librarians would enable their ongoing capacity to advance school and national literacy goals. This point is emphasised by the Inquiry into school libraries and teacher librarians (House of Representatives, 2011). It is echoed by Gold Coast principals who identified needs for increased library staffing, resources, digital technologies, improved library spaces and professional development for teacher-librarians. As the School BB principal states: "If the government truly values school libraries they need to fund specialised staff to complete training and also designate earmarked funds for library purchasing".

These concerns warrant serious attention by education authorities and school leaders when addressing the proposed new resourcing model for Australian schools (Australian Government, 2013).

Recommendations

The study and its findings prompt three recommendations, that:

1. Teacher-librarians and professional associations present the findings of this study, in conjunction with previous research findings, to education policymakers, education employing authorities and school leaders – as evidence to raise awareness and demonstrate the extensive contribution that school libraries and teacher-librarians can make to student literacy development and learning.
2. Education authorities and schools leaders provide adequate and equitable funding to ensure that school libraries and teacher-librarians can achieve their full potential in supporting student literacy development in the varied ways outlined in the research literature and this report.
3. Researchers and professional partners extend this research into other education regions of Queensland or across Australia, to gain quantitative data and qualitative insights concerning the role and contribution of school libraries and teacher-librarians to literacy and learning in schools; and to develop case studies of exemplary school library and teacher-librarian practice in supporting student literacy development.

Conclusion

The findings reported here respond in part to a research need identified by the Inquiry into school libraries and teacher-librarians in Australia (House of Representatives, 2011). They highlight the extensive contribution Gold Coast school libraries and teacher-librarians make to their students' literacy development. In particular, the data are consistent with more detailed studies in suggesting apparent relationships between school libraries, teacher-librarians and higher NAPLAN literacy scores. Despite this evident contribution, school library resourcing is uneven and often inadequate around Australia. Many schools, including six of the Gold Coast schools in this study, do not have a qualified teacher-librarian. This raises serious questions around sustainability and equity:

- *Who takes specialist responsibility for ICT literacy development and reading promotion in schools without a teacher-librarian?*

- *What are the implications for student literacy development at these schools?*

The answer is starkly evident in the case of School CC, where the principal has noted a decline in growth of school NAPLAN literacy scores over 4 years since termination of the teacher-librarian's position.

However, current educational reforms offer opportunities to revitalise school libraries in Australia. The proposed equitable funding model (Australian Government, 2013) and the new Australian Curriculum (ACARA, n.d.a) address the literacy development needs of school students. Enhanced policy and funding for school libraries and teacher-librarians is needed to ensure their continuing contribution to students' literacy and learning outcomes.

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This is a refereed article

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Appendix A: Comparing NAPLAN scores, EFT library staff and teacher-librarians

As this study was designed as a small scale pilot study, its investigative scope and sample size are limited. The findings cannot be considered generalisable to schools outside the featured 27 Gold Coast schools. In addition, they do not rule out other explanations for associations between school libraries, teacher-librarians and school NAPLAN scores.

NAPLAN reading and writing scores and ratios of students to EFT library staff

Figures 2 and 3 below compare school NAPLAN scores for reading and writing and ratios of students to EFT library staff. The scatter plots suggest a general pattern where schools with lower student to EFT library staff ratios achieve higher NAPLAN scores at all levels. Non-government schools in this sample generally perform better than government schools. Moreover, an apparent tendency for EFT library staff in non-government schools to rise with increasing enrolments strengthens the suggestion of relationships.

The maroon dots represent government schools and the green dots represent non-government schools. The higher a dot appears, the better the school's NAPLAN reading score. The further to the left, the lower (ie. better) the school's student to EFT Library staff ratio.

These scatter plots include 22 of the 27 schools in the study, since two schools did not participate in NAPLAN testing (a special school and a secondary senior college) and three did not provide enrolment data).

NAPLAN reading and writing scores at schools with and without a teacher-librarian

Figures 4 and 5 below compare 2011 NAPLAN reading and writing scores at schools with and without a teacher-librarian. They show that at every year level the median NAPLAN score for schools with a teacher-librarian is consistently above the Australian mean NAPLAN score for the corresponding year level. NAPLAN scores for schools without a teacher-librarian are generally lower than the median score of the schools with a teacher-librarian. However, it is important to note that in most cases NAPLAN scores for schools without a teacher-librarian are inside the range of NAPLAN scores for schools with a teacher-librarian. Therefore, the contrast suggested by the data may be a consequence of the very small sample sizes of the schools without a teacher-librarian and a potential influence of school principal self-selection for this study.

For each box plot, the dotted line represents the range of NAPLAN scores attained by schools in the relevant sample group. The figure above the dotted line is the count (or total number) of schools in the sample. The whiskers (or horizontal lines) at the top and bottom of the dotted line respectively indicate the highest and lowest NAPLAN score in the range. The top and bottom lines of the boxes represent the first and third quartiles, while the thick black horizontal line represents the median NAPLAN score for the schools at each year level. The magenta horizontal bars are the Australian national mean reading and writing scores for 2011 for the corresponding year groups (ACARA, 2011).

Notes:

- (i) 25 of the study's 27 schools are represented in the box plots, since 2 schools did not participate in NAPLAN (a special school and a secondary senior college)
- (ii) Data for NoTL schools for Year 3, Year 5, and Year 7 are from just two schools and are represented by the sample mean and the higher and lower scores (thick horizontal bar, upper whisker, and lower whisker respectively).
- (iii) Data for Year 9 NoTL are from just one school and the thick horizontal bar represents that single student averaged NAPLAN score.
- (iv) The Australian mean NAPLAN scale score is used here as a proxy for the average of NAPLAN school scores for Australia overall. An Australian mean NAPLAN scale score relates to a sample of students, rather than a sample of schools. It would be

surprising for a national average of school scores to be equal to a national average of student scores because of variation in year group sizes across schools and variation in the distribution of individual student scores from one school to the next.

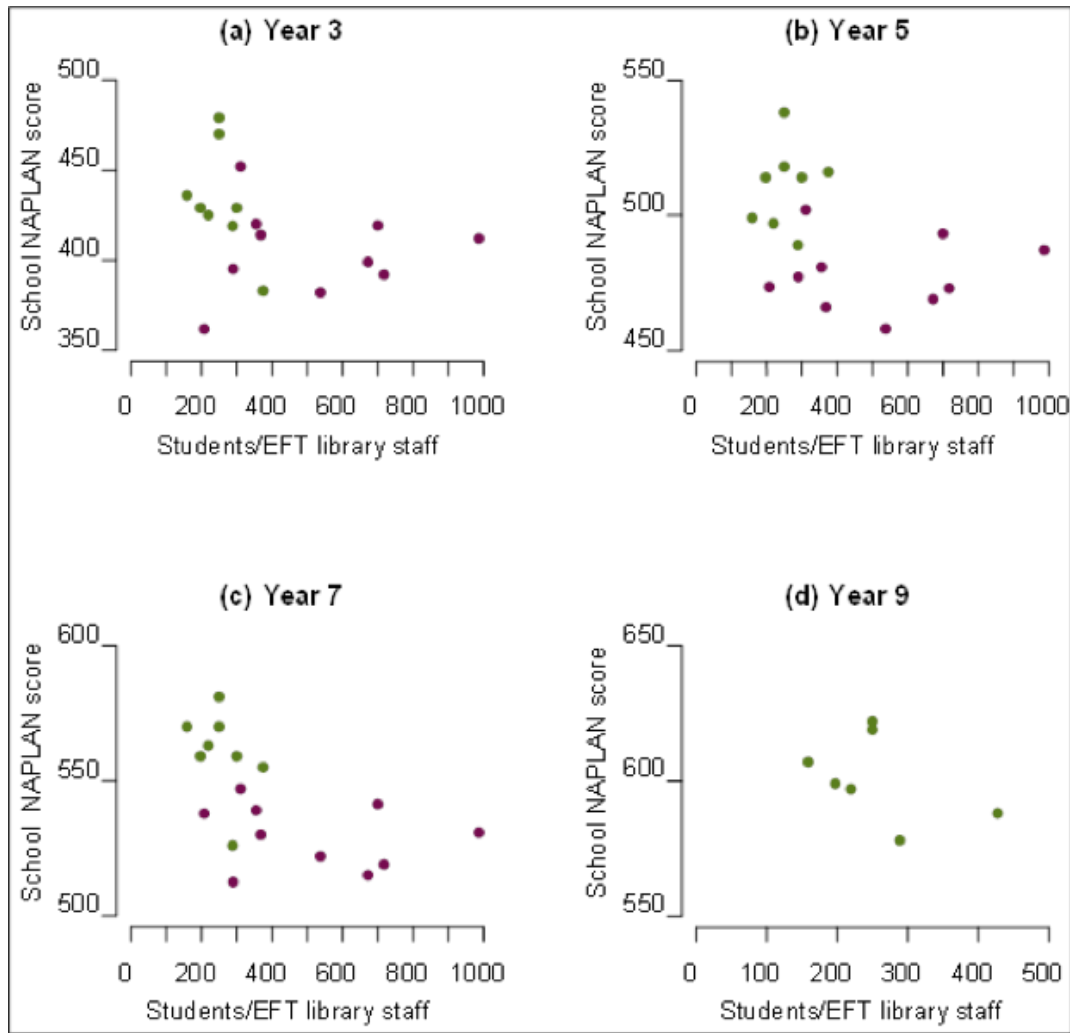


Figure 2: Comparison of students to EFT library staff ratio and school NAPLAN READING scores

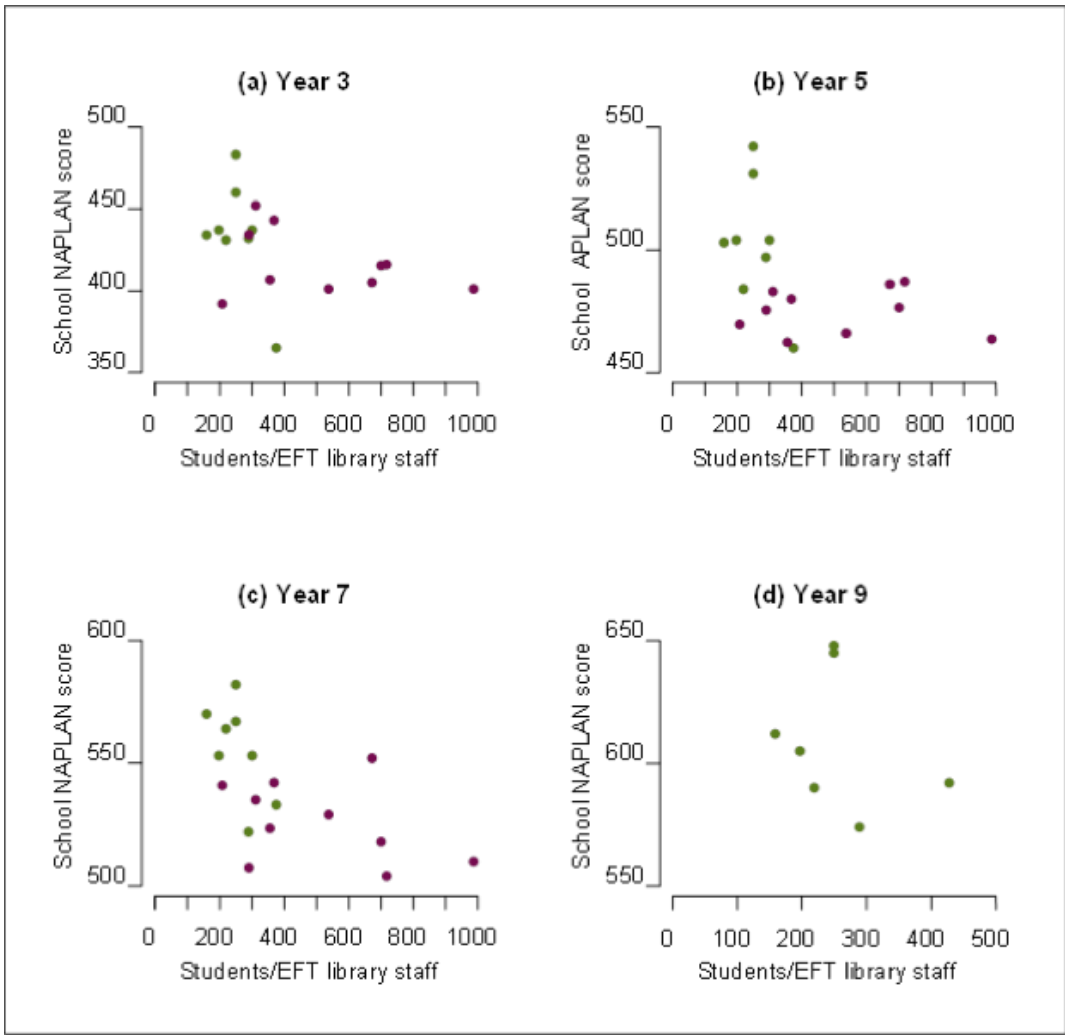


Figure 3: Comparison of students to EFT library staff ratio and school NAPLAN WRITING scores

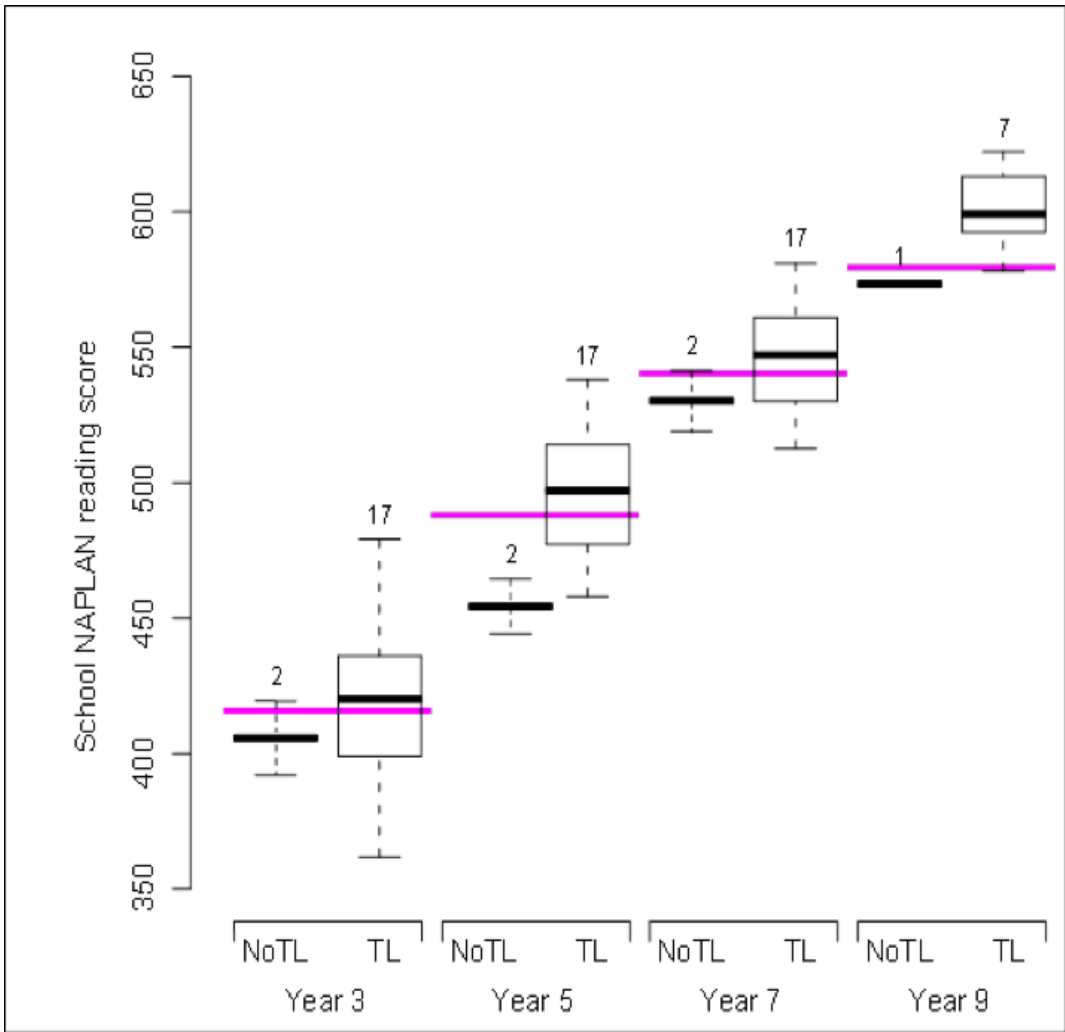


Figure 4: Comparison of NAPLAN READING scores for schools with and without a teacher-librarian

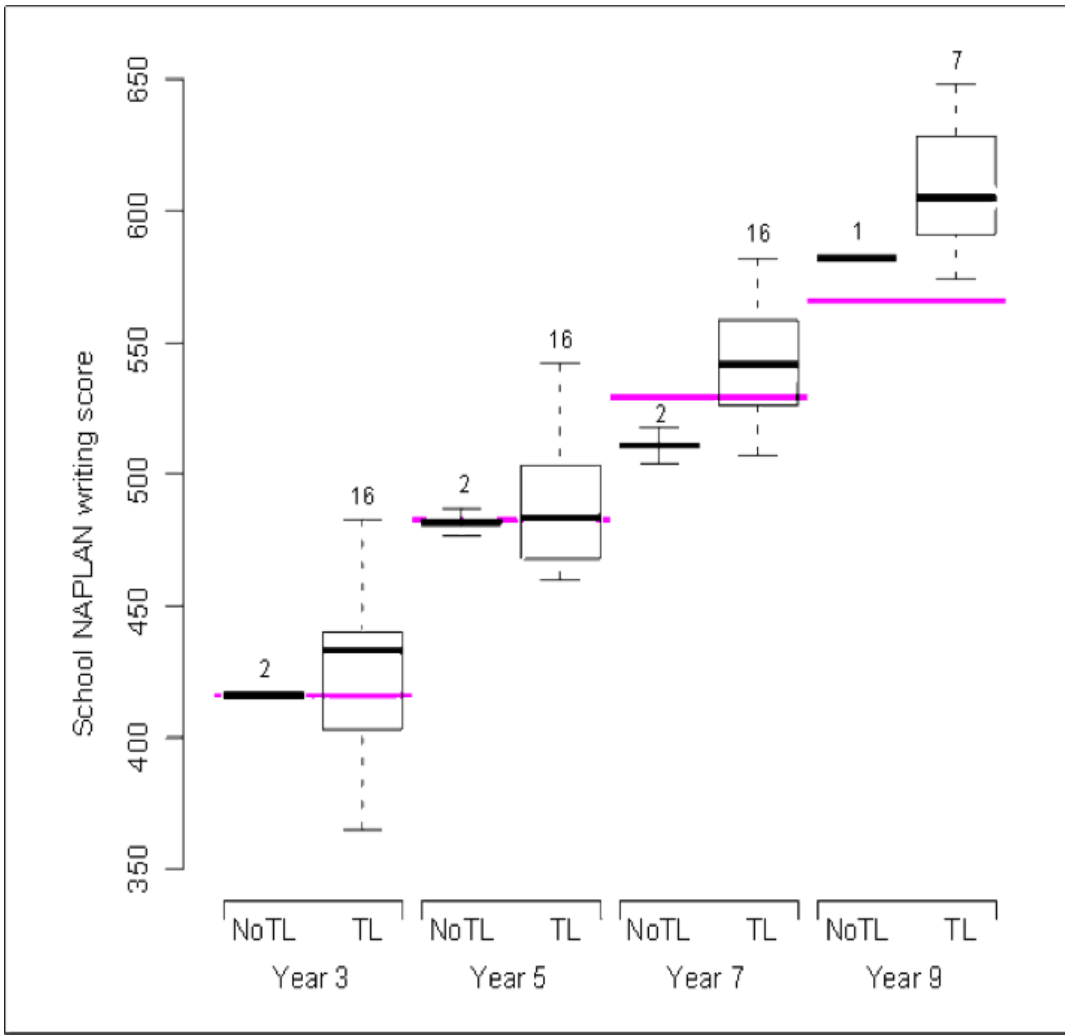


Figure 5: Comparison of NAPLAN WRITING scores for schools with and without a teacher-librarian