
New Zealand school librarians: Technology leaders?

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This research examines what role and views New Zealand school librarians currently have within their schools as technology leaders. The results indicate there is a distinct hierarchy that affected the way librarians conducted their jobs and the place they see they hold within the school as a technology leaders. The implication for schools and their librarians may affect how librarians will fill or fail to fill possible roles for school libraries in the future.

Introduction

What helps and hinders school librarian's position as technology leaders within their schools?

New Zealand schools are currently in a transitional period where technology is becoming a core aspect of the way they facilitate their duty - to provide their students with the skills they will need for the future. As many New Zealand schools have been embracing this, little research has been done toward investigating how the school's librarians are making themselves relevant as education transitions into an era where books are not the sole information resource for students.

The New Zealand government began a \$300 million broadband initiative roll out in 2011 with an aim to provide 97.7% of New Zealand schools with the ability to access high speed Internet and improve educational outcomes for students, teachers and administrators (Fiber to schools, fact sheet).

The question is: 'What happens after broadband has arrived at the schools?' Who will help students make the most out of the countries investment? Librarians are uniquely positioned within their school community as knowledge managers. As both quality and access to ICT improve in New Zealand schools, there is a need to monitor the conditions school librarians are in to ensure best practice is promoted. This qualitative research aims to capture a snapshot of the current attitudes and situations of school librarians.

Review of Literature

To date, little academic study has been conducted in New Zealand and abroad to evaluate school librarians as technology leaders (Johnston, 2012). However, in recent years some overseas research has delved into various aspects of this area and provided insight into the importance and potential for school librarians within this role as technology leaders.

Information Literacy

Information literacy is a main component in lifelong learning. It aids people in becoming more effective problem solvers, especially in this heavily digitally geared society, (Fernandez-Villavicencio, 2010) and as Servon and Nelson describe; 'access to information technology (IT) and the ability to use it, increasingly become part of the toolkit necessary to participate and prosper in an information-based society' (Sevron and Nelson, 2001, p. 279).

Overseas information literacy studies show that to impact people's abilities to communicate and progress, education must transition into a sphere where people do not simply consume information but also produce it (McShane, 2011). The Internet has become a global forum for business, socializing and education. If students do not have the know-how, to both use and produce on the web, they will not be able to participate in the global market to its full extent.

New Zealand's fiber infrastructure, which is currently being implemented, intends to provide schools with the option to offer high quality Internet access for their students. Offering equal access to all of New Zealand's students will put them on par with each other and students overseas, and will in turn aid them being able to compete in the global market.

Knowledge paired with infrastructure

Even though the hardware is being implemented around New Zealand, it is only half of the battle. A study of four U.S. towns with new technology infrastructure found that the only place (Connecticut) where the fiber optic cable implementation was paired with education programs showed any major improvements to the public's ability to use computers (LaRose, Strover, Gregg, and Straubhaar, 2011).

Other issues that have arisen are students' abilities to think critically. A focus group study on undergraduate students in the U.S. found that while the students were quite familiar with social networking sites, their knowledge of possible education Web 2.0 resources, like bookmarking tools, was lacking (Burhanna, Seeholzer, and Salem, 2009). Unless a student is not specifically taking a web-based class they are not being provided with tools for assessing the information they find on the web for its quality and accuracy.

In a New Zealand Crown Fiber Holdings publication about the Manaiakalani project (a local initiative to provide Internet access to a lower socio-economic area of Auckland) they found, "Often e-learning is seen as being about getting good download speeds from the Internet... At Point England (local primary school) however, good upload speeds are just as important, as the teaching philosophy involves students creating something from their learning and uploading it to their blog, where it can be shared. Collaboration online is key – between students, and with their teachers and parents – and this will only work with a robust Internet

connection and good speeds" (Crown Fiber Holdings, 2013, p.1). This was published in 2013, six years after the program initially began. It shows the importance of offering students not only the computer, but a teacher who is able to cohesively implement the curriculum into online platforms (Crown Fiber Holdings, 2013).

Schools cannot simply have fast broadband; they need to pair the resource with people that will teach, scan, organize and plan for its future. While teachers will be using the online tools they are under huge day-to-day pressures running their classes, it is not feasible or efficient for them to keep up with all the new technologies. There is a niche for someone to be that scanner, that communicator, and a support to teachers, someone to promote online resources and how they can be weaved into their lessons, and taught to the students.

School Librarians as ICT Leaders

School librarians have the potential to be technology leaders within their schools. The style of management found in this past generation's librarians has been found to focus on "establishing positive relationships, creating flexible work environments, using technology effectively, and resolving conflict" (Tolley-Stokes, and Wallace, 2011, p. 61). Our current generation of librarians has the skills set and temperament to pave a way in their school's community to adapt and create ICT standards with their co-workers.

In Johntson's 2012 research she points out the unique position teacher-librarians hold within schools "... knowledge of pedagogical principles and curriculum, paired with technology and information expertise..." (p. 15). This skill set, sets librarians apart from other staff and positions within schools, allowing them to lead collaborations between teachers and IT (Instructional Technology) staff. Where teachers don't have the time, and IT staff don't have knowledge of the curriculum or teaching, librarians can take charge and be the one to investigate and develop new effective online educational resources eliminating the ambiguity of integrating technology within a class curriculum.

In the past, school librarians have not been treated as equals to teachers (Sadowski and Meyer, 1993), despite many being university qualified as librarians. This inequality is shown through lower pay rates, funding cuts during recessions and small staff numbers. A Norwegian investigation into librarians' roles and political influences concluded, "School librarians must be professional in both librarianship and education if they are to gain status in their schools. Principals and teachers, on the other hand, must know about the potential of the library for contributing to motivation and learning" (Elisabeth, Tove and Sundt, 2006). This shows the need for the highest professionalism to be brought by librarians to their jobs, and the need for respect and support by their colleagues.

Two similar studies, by Johnson (2012), and Smith (2010), recently addressed this issue in the U.S. and discovered some of the main barriers found were lack of confidence at using the technology, being unaware of the possibilities web-based learning could provide, and lack of

support from within the school. Although these are issues might be dealt with through education and support from the principal.

The future role of librarians utilizing technological possibilities is described in Dees, Mayer, Morin and Willis' (2010) article, 'Librarians as Leaders in Professional Learning Communities through Technology, Literacy, and Collaboration.' The article refers to a school in Georgia where the media specialists provide training days for the staff. What began as helping them to understand the basic uses of email, word processing, and Internet searches; evolved into modeling use of interactive whiteboards, incorporating wikis, and podcasting. From there they are able to monitor and measure which online resources are used most and by whom, and which are not used at all. This leads to further collaboration with the teachers by providing lesson ideas, resource suggestions and further collaboration opportunities to various teachers. The technology allows for more interaction and input with each teacher, and then as the source with which other teachers can gain new ideas and insight.

The majority of research in this area of study has been carried out in the US. It is a very progressive country in terms of school library advocacy as evident by the research. Here in New Zealand outreach is limited, many schools only have one or two full-time librarians. Tools like the Internet can be used to gain momentum into developing new resources and sharing ideas. We now have SLANZA (School Library Association of New Zealand) which provides a professional network. That paired with participating with online resources and research will develop information literacy among librarians, which will trickle down to teachers and then students.

As libraries hold a "knowledge manager" type position within their schools there is no reason why they could not take an ICT scanning, collaborative professional development role. With information literacy being such a necessary branch of the current student's education it is important to understand the best and most possible systems for schools to go about enabling this. This study aims to identify what is currently taking place in the libraries and what the librarians' views are of their position as potential ICT leaders. Because school librarians may be the most appropriate ICT leaders for a school in theory, due to environmental impacts and personal attitudes - both real and perceived - this may not be so easy.

Research Method and Analysis

The design of the project was as a qualitative analysis research study, through which school librarians would take part in a one-on-one, 30-60 minute semi-structured, recorded interview. The libraries were selected originally to provide a range (various socio-economic levels, locations, public and private). However due to travel restrictions, along with the school principal agreeing, the interview sample was slightly slanted towards wealthier schools - though there are some lower decile schools included (See Appendix A). Fourteen open-ended questions regarding the librarian's experience, the structure of the school, its library, ICT, leadership and finally their views on the future were posed and can be found in Appendix C. Responses were recorded, transcribed, checked by the participants, then analyzed and grouped into themes and relevance. A 'data analysis spiral' approach (Creswell, 2007) was used for sifting through the information gathered.

Of those interviewed, four were library managers and four were full-time librarians. All had over five years of experience working in libraries and there was a range of qualifications and computer competency. The libraries they worked in were all used for classes during the day and had computers and wifi. Seven of the secondary schools were either BYOD (Bring Your Own Device) or in the process of implementing the following year. The majority of ICT decisions for the schools were made by the ICT committees (some librarians were on these). Seven of the eight librarians interviewed were unaware of when and how the broadband roll-out would effect their school and of the eight librarians interviewed only one of them had an official ICT role title.

Limitations

- Getting a representative normal distribution sample of New Zealand's secondary schools was difficult due to transport and time factors as well as a range being willing to participate.
- It is recognized that by asking both the Principal's permission and for the participants to volunteer for the study, it may draw out certain schools and librarian personalities that are "pro library development" and therefore more receptive to the idea of ICT developmental leadership roles.

Findings

What helps and hinders school librarians' position as technology leaders within their schools?

The three leading perceived reasons that affected librarians' position as technology leaders were: the quality of resources, people's attitudes and the school's structure. These contributing factors affected the way the libraries were used and how the staff were able to function (or not function), within the school system and whether or not they were or even saw themselves as ICT leaders.

Resources

The librarians discussed a broad range of resources that affected their ability to provide their students with a quality, ICT capable library. From environmental impacts like space and hardware to general issues like time and the size of the schools.

All of the schools' libraries had study areas within them for classes to book periods for computer use, for research, along with extra-curricular meetings. The librarians said that their libraries were well-used, however many felt there was a pull between shelf space and computers, and a lack thereof for both. Seven of the eight librarians mentioned their wish for the library to have more and better computers, portable devices, screens, databases, broadband speed, infrastructure and bandwidth to aid in quality learning and the library's service.

All of the schools reported either currently being BYOD or in the process of integrating it within their schools. As BYOD is relatively new, librarians and teachers were still in the process of figuring out how it would work in regards to their curricula. Only one of the librarians had actively been a part of the roll-out of getting BYOD into their schools. The rest simply aided with troubleshooting issues for students' devices. Three of the librarians talked about the stress of having to deal with devices not working, not being charged, having to navigate logins and wifi. They remarked that this put pressure on them, teachers and IT staff, reducing the actual time spent working by all. The actual benefits they had seen varied. All acknowledged a need for such resources, though their understanding of the benefit of BYOD ranged from those that saw huge educational possibilities to those who did not feel they would be contributing to the students using their devices, and some saw them simply as a distraction for students.

Another resource issue discussed was financial support - from librarians' salaries, to quality hardware and software in the schools, to access to students. Five of the eight librarians mentioned issues with pay rates. As school librarians are considered 'support staff' by the Ministry of Education, many are not paid like teachers despite tertiary qualifications and demanding responsibilities. This unevenness resulted in frustration (with their job), disrespect from other staff and some also believed that it reduced the interest in the position for future talented librarians. All of the libraries had small staff numbers, resulting in the librarians never having enough time to do everything they want to do with their libraries (the main thing being environmental scanning) or their ability to connect with all of the staff and students. It was mentioned by five librarians that their libraries' budgets were left alone, and librarians felt able to ask and plan for future resources. The librarians felt that was really good support, and showed they (principal and board) saw value in the library.

Attitudes

Librarian's attitudes towards their job and being ICT leaders seemed to be reflected by their education, professional development, their age and their personality. While some librarians had a "Can do" attitude, others seemed to take more of a backseat approach. While all the librarians seemed to enjoy their jobs, two of the older interviewees seemed to have simply accepted their role and did not really consider pushing for more responsibility. They had accepted the school structure and bought into their place within it. This resulted in some libraries being woven into the school's curriculum and social structure, while other libraries were more separate.

All the librarians interviewed were aware of the importance of creating and maintaining healthy relationships with their colleagues. This affected the value and comfort the staff and students had in the library. However, four of the eight librarians commented on the major issue of their colleagues not being aware or understanding what the library and the librarians could provide for them and their students. Some librarians attempted to counteract this through providing supportive web-based tools, having good communication skills and being recognized as a professional. Along with this some librarians would take book requests from teachers, host morning teas, try to get to the staff room during the break to network and not approach teachers with requests during stressful periods, such as exams.

Another impacting factor for librarians was the mixture of understandings people had towards what their library's values were. Issues of the importance of fostering a love of reading vs. strict traditional rules, such as being quiet were mentioned. Having people not agreeing on rules and values of their library caused a divide between staff. This, according to one librarian, had negative implications on a student's comfort to approach librarians and use their library.

IT rules and restraints were also addressed as a contributing factor to a librarian's attitude toward ICT. Things like blocked websites restricted librarians ability to help students, and it is believed this came from IT staff not completely understanding what librarians were trying to do. Two of the librarians were also not very aware of what ICT planning was occurring within the school. However all the librarians reported that the IT staff were helpful, and one librarian said that although they didn't always understand the requests, they were open to understanding and helping.

Seven of the librarians were quite conscious of the need to "keep up" with the ICT developments going on (the other one said she didn't consciously make an effort to do this – however she was well qualified in IT). Only three of the librarians discussed classes they had taken and how it had helped them in their libraries do things like, create displays, utilize databases and their catalogue more efficiently and communicate with students more effectively. It was quite apparent in the interviews that those who actively did environmental scanning had a better grasp of the possible benefits of using ICT in schools and how their job could and did run into aiding this.

A minority of librarians saw online searching skills as the responsibility of the teachers and not part of their role. These librarians did not have this attitude in a negligent way, but rather in the way that others were more appropriate for the job. This may have stemmed from the personalities of the librarians. Along with this they did not have significant knowledge of what the students were learning, how they were learning or have much contact with the teachers. They focused on their jobs contained in the library. Most librarians did see their role as actively needing to help teachers. From developing curation tools and the cloud to book trailers, the librarians who were integrating these specific resources within their services talked about the positive feedback from both students and teachers. The librarians saw themselves as really supporting the teachers in a way that made the teachers' jobs easier and aided students in preparing for projects as well as for university. This positive and proactive attitude was evidently appreciated, according to the librarians, due to the high numbers of classes using them.

Seven of the eight librarians did not view themselves as ICT leaders within their school because their school already had IT experts fulfilling this position and they did not feel qualified. This did not mean that they were not ICT leaders however. Despite not seeing themselves in a leadership role many were still taking initiatives to promote ICT within their schools.

It was unanimous among the participants that students lacked critical thinking of web-based resources. This was reported to stem from both a lack of understanding in the process of

research as well as sheer convenience. Librarians found students trusting all websites, only using Google to search, not looking beyond online resources and not understanding copyright or original content. Though they all agreed on this, only a few of the librarians had taken action to amend students' approaches. They set up research/digital literacy classes and promoted the homework service "Many Answers". Taking these actions resulted in better use of the library, its resources and the attitude staff have towards librarians.

Another impacting factor was the school's culture. Two of the school librarians interviewed were from very traditional schools. One of the librarians commented that the school had specific approaches to teaching styles and would not convert as quickly to IT integration as other schools. This attitude affected both the way they were able to be leaders in their library and the way students were able to use the library.

Structure

It was apparent at every interview that each school had its own unique hierarchy. As with most organizations, this is fostered by leadership, personalities, rules and size. It was evident that the way each place was set up affected not only how the library could be run, but the opportunity and willingness of the librarians to take on a leadership role.

It was clear from the interviews that the structure and culture of the school, and the library's place in it, was due to the principal. One librarian commented that the school had a positive culture and this was mainly being due to the principal. This echoed through other interviews where librarians described their principals being "pro-library." When the principals set a library-friendly standard and showed support, it seemed to affect the culture of the school's library and the librarians felt more inclined to speak up.

Five of the librarians had more direct contact with their principal or deputy principal, these librarians seemed more inclined than the other three to propose new developments for their libraries. Those who had more contact were typically from smaller schools. Four libraries were able to have a librarian on their school's ICT committee. This increased the librarian's involvement within the school and worked as a flagship for the library in the IT sphere.

If the personalities of the staff meshed well together it appeared to create better team cohesion. Two library managers talked about the importance of not being overly hierarchical within their staff, so that everyone takes responsibility and feels they could share ideas and develop the library.

Another impacting factor to librarians being able to take on a leadership role was simply the school's system structure. Due to one of the school's tier system of promotion they were unable to be promoted due to a lack of qualifications. This meant that the librarian would not get the chance to progress and resulted in them having less access and ability to make decisions for their library and thus depending on other staff more.

Conclusion

The two leading reasons that seemed to hold back or enable a librarian to be an ICT leader are:

- Support from the principal and those in higher management positions.

- The librarian keeping up-to-date and actually creating programs and putting web-based educational tools to use for the teachers (being proactive using technology) relating to their approach of their role.

Principal support enabled librarians to purchase hardware and software, participate in the planning of ICT within the school and obtain professional development so they could offer support to other teachers and students. This support translates to the students having access to high quality resources and encourages the librarians to take risks and attempt to grow their role.

The librarians taking an active role in implementing ICT within their library through classes keeps them up-to-date with what is going on in the digital world, impresses both teachers and students so they know how useful their librarian can be, and marks out their place within the school - enabling them to have input about the infrastructure and resources the school needs.

Implications

The implications for this research is that it highlights the importance of both support from the leaders in the schools as well as school librarians being proactive in their approach to their job. Using the Internet to their advantage, creating new web-based tools, making themselves indispensable as an environmental scanner, a knowledge manager and supporter of teachers and students are examples of this proactivity.

This study also highlights issues of complacency. The importance of remaining enthusiastic about learning seems imperative to providing a quality service. When a librarian would not take the initiative to advocate, the library would not progress. This may mean that librarians need more of an opportunity to be enthused, which may be facilitated by organizations such as SLANZA and library blogs.

While the hierarchical structure is partly to blame in librarians not feeling like they can be ICT leaders, this is a difficult thing to combat. It comes from tradition, the principal and various personalities within the staff. While a librarian may not be able to get themselves onto the ICT committee they should be aware that does not mean they cannot be leaders and find their own ICT niche within their schools. Some of the school librarians in this study discussed paving a way for themselves by creating useful resources and establishing quality relationships. What is implied is that though some librarians did not view themselves as leaders, the researcher identified leadership traits. A leader does not always lead by telling people what to do but sometimes rather by guiding people and supporting them.

The personality of the librarians, along with the schools' unique make-up leads to every case being unique. However through the interview process a number of similarities were established by the librarians in what helps and hinders them in their role. From resources to communication, attitudes and structure, each librarian had their own hurdles as well as support in providing quality service for both students and teachers.

What was found from all eight of the interviews was a positive approach to their jobs. There was a variety of experience between the librarians and they were all at different points in their careers, but overarching job satisfaction was apparent.

Future

“We have to move, we have to evolve.” (Interviewee)

The librarians were asked about the future of school libraries and their role. The majority of the responses were positive in terms of there being a need for a library - “I think there will always be a need for people to need this sanctum. Give them e-books, but they will need this place to be.”

All of the librarians predicted huge changes to the library – both through swapping e-books for physical books and how the library would be used. Two librarians discussed the ‘modern learning environment’ and how that may be a great approach to setting up the library for students, to allow collaboration and IT. “I believe the future of libraries is part of the school, not just your place, not just your library that you can move anywhere, be anywhere with your online stuff.”

For librarians to be leaders they need to be a valued, contributing and used asset, and to develop their interpersonal relationships and library resources. All of the librarians interviewed reported high user rates from classes booking space, to students enjoying using the facility in their free periods and at lunch as a safe, clean space. However, there is potential for more. Consistently, librarians commented on student’s lack of critical thinking when it came to assessing resources and using Internet sites. At a time when there is a plethora of information, the ability to analyze, synthesize and discuss it is a necessary part of our youth’s education. The skills of thinking critically are now an important aspect to a full education. It is school librarian’s prerogative to be a force behind it.

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Appendix A

	Co-ed	All Boys	All Girls
Gender	4	3	1

	1	2	3	4	5	6	7	8	9	10
Decile	1	-	-	1	-	-	-	-	3	3

	500-1000	1001-2000	2000+
# of students	3	1	4

Appendix B

The directory of schools will be found at <http://www.educationcounts.govt.nz/directories/list-of-nz-schools> (NZ Schools, 2013)

Appendix C

Guiding Interview Questions

1. Would you mind please telling me a bit about your background as a school librarian? Both at this school and elsewhere? Jobs? Qualifications? Do you have any ICT training? Do you hold any leadership roles at your school?
2. How do you keep up with day to day learning developments? (information diet) Do you have much contact with outside library organizations such as SLANZA or LIANZA, or other librarians?
3. Bit of background on the school and library? How many library staff? Do you teach?
4. Do you know much about the government's current broadband roll out and how it is going to be affecting your school? Do you have someone keeping everyone up to date?
5. How much are ICTs a part of your school and your library? Is it incorporated as a part of the curriculum? If so what and how is used?

6. Does your school put much focus on using ICTs? How? Have you seen any benefits if students are using them?
7. Where would you rate your computer competency between 1-10: 1 being beginner and 10 being an expert? And in comparison are the students, in your view competent users of the Internet?
8. What are some hindrances that you find to using IT? Do you have all the equipment? Do you have the time/resources to learn more?
9. What do you think about web based education tools? How helpful are they for students and staff?
10. When it comes to ICTs in your school, who do you consider are the main drivers/leaders within the school? And Why?
11. Could you please describe how much support, encouragement and collaboration do you have with your co-workers? ...from teachers, ICT staff and principal?
12. What do you see as barriers in the way your colleges can and do support, encourage and collaborate? E.g. organizational reporting structure, personalities that don't gel?
13. Are there opportunities to become a leader within the school? What helps this? And if not what do you think are the main issues hindering this?
14. How do you view your role as a school librarian in the future? Do you see yourself as someone who may aid in implementing online resources more for both students and teachers? Do you think there are any things that might help or hinder your ability to be an ICT leader in the school?

Author Note

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