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Promoting inclusion in school libraries

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Abstract: Several international documents explicitly point out the responsibility of libraries in supporting people with special needs, actively promoting social inclusion processes. In the school context, one of the challenges lies precisely on its ability to achieve that all students, regardless their differences and their specific needs, are able to succeed in their learning. In Portugal, the integration of students with special educational needs in regular schools brought new challenges to school libraries. In this paper we present some insights from some projects held in the SL. The results of these studies show that in general both teachers librarians and special educators are little aware of the important role that the school library can play with these students and that a collaborative work with the teacher librarian have positive impacts, both in increasing the self-esteem of students and developing their reading and information literacy skills.

Keywords: School libraries, Students with special needs, Reading promotion, Information literacy, collaboration

Introduction

The issues connected to inclusive education are a central concern for different European organizations. In more recent years, these organizations have also been engaged in a broader definition of inclusive education, like the one proposed at the 48th Session of the International Conference on Education (ICE) (2008): “inclusive education is an ongoing process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the students and communities, eliminating all forms of discrimination”. The Strategic Objective 3 of the strategic framework for European co-operation in education and training (ET 2020) - Promoting equity, social cohesion and citizenship – also states: “Education and training systems should aim to ensure that all learners – including those from disadvantaged backgrounds, those with special needs and migrants – complete their education, including, where appropriate, through second-chance education and the provision of more personalised learning”.

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In the context of children with disabilities we must underline the importance of the UNESCO Salamanca Statement (1994). The statement proposes a “Framework for Action” with the guiding principle that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic or other conditions. All educational policies, says the Framework, should stipulate that disabled children attend the neighbourhood school “that would be attended if the child did not have a disability” (p. 17) as “inclusive schooling is the most effective means for building solidarity between children with special needs and their peers” (p. 12). Special education aims to ensure educational and social inclusion, access and educational success, autonomy, emotional stability, and the promotion of equal opportunities, preparation for further study or for proper preparation for professional life and a transition from school to employment of children and young people with permanent special educational needs (SEN).

In the specific context of libraries, we also find several international documents, such as the Manifesto of School Libraries of the International Federation of Library Associations - IFLA / UNESCO (1999) or the declaration of Alexandria for the information society (2005) that explicitly point out the responsibility of libraries in supporting people with special needs, actively promoting social inclusion processes. In the school context, one of the challenges lies precisely on its ability to achieve that all students, regardless of their differences and their specific needs, are able to succeed in their learning.

School libraries and inclusion: Portuguese context

Portugal is one of the countries that adopted the Salamanca Statement but since 1986, the organization of the Portuguese Educational System (Law n.º 46/86, 14th October) already stipulated the integration of students with SEN in regular classes although schools sometimes continued refusing these students until the beginning of the nineties. In 1991 a specific law was published (Law n.º 319/91, 23rd August), stipulating the conditions that schools should benefit to integrate those students. The most recent law, published in 2008 (Law n.º 3/2008, 7th January), has improved some of the former orientations, stressing the principles of equity and success for all students. This law is a framing for educational responses that can be developed within the adequacy of the educational process for students with SEN, and places at the centre of the educational intervention the Individualized Education Plan, a document that describes how the school will meet the child’s educational needs at no cost to the family.

The integration of students with special needs or disabilities in regular schools brought new challenges to school libraries. Due to the work done in the last decade, under the orientation of the Portuguese School Libraries Network, the School Library is now seen as an important educational value, to support curriculum activities and leisure. In this sense, one of its lines of action should be directed to students with special educational needs, namely helping the collaborative work among the teacher librarian, classroom
teachers and special educators, contributing to the development of these children and helping them to achieve educational success. But as we will see, this has not been a practice in Portugal, as it seems to be also a problematic area in other countries (e.g. Farmer, 2009; Myhill et al, 2012).

At this moment, three documents serve as guides for the work in Portuguese School Libraries and our first step is to examine how these documents refer to special education. The first document, published in 1996 (Launching the School Library Network), is the foundational text for SL, stating the principles and the guidelines for the work in the field, and announcing the creation of the School Libraries Network in Portugal. In this document, we only find some recommendations concerning accommodation and access to equipment and resources for students with disabilities (p. 44, p. 178). The evaluation model for school libraries (2010; 2013) and the guidelines Learning with the school library (2012) present the more recent and strategic principles and procedures for Portuguese School Libraries.

In the Evaluation Model (2010) it is explicitly mentioned the necessary articulation between the SL and Special Needs Educators (p. 18, p. 19) in the domain A – “Support to the curriculum”. Effective collaboration requires that both parties contribute to the effort and in these pages the responsibility and initiative of the Teacher Librarian is clearly described in the following “factors for SL success” (p.18):

- The SL works with Special Educational Needs Service aiming to support the work plans of Special Educators
- The SL collaborates with teachers responsible for educational support activities, by helping them to implement the strategies defined for every student.
- The SL is used by special educators and teachers responsible for educational support activities in collaboration with the teacher librarian or in an autonomous way.

The model also includes some suggestions for improvement in this particular issue (p. 19):

- To promote planning meetings with teachers working on Special Educational Services.
- To organize training sessions on the SL for Special Educators and other teachers working in Educational support services.
- To improve communication between the SL and those teachers in order to achieve their resources needs.
- To suggest to those teachers ways for collaborative work concerning different learning activities.
In the recent revision of the model (2013) there is also a mention (p. 44) but this time the reference is integrated in the domain D – “School Library Management”: “The SL works with Special Educational Services, enriching Special Education planning and improving students learning outputs” (p. 44).

Considering the lack of collaborative work that still exists between Teacher Librarians and Special Needs Educators, we think that this change to a “soft” compromise of the TL also shifts the main focus of the TL work (from curriculum support to a management issue) and can contribute for a continuous minimization of collaborative values.

The referential *Learning with the School Library* (2012) that presents guidelines and examples of activities in three areas – Reading Literacy, Media Literacy and Information Literacy – has no particular allusion to students with special needs. For instance, there are several examples of activities with a focus on different curricular areas, but with no mentions to the possible articulation with special education or to a probable adaptation for students with SEN. This absence can contribute to keep those students outside the SL, not beneficiating from the important contributions that the SL can bring to their education and to their integration in society, considering the vital importance of the mentioned topics in today’s world. Taking into account that there is, in general, little collaborative work among the Teacher Librarian and other teachers in the school (e.g. Bastos, 2012) and specifically between TL and special needs educators (e.g. Pinheiro, 2014), this referential should have mentioned in an explicit way the relation with students with special needs. This situation reminds us Farmer words: “Since library use should support the curriculum, school library media specialists can link learning activities with special educators’ strategies. Even more than special educators, school library media specialists work with the entire school community, and can introduce special educators to teachers who might not otherwise come into contact with them” (2009, p. 41).

A final word to the School Libraries Network Strategic Framework for 2014-2020 (2013). This document defines priority areas and lines for intervention that will guide School libraries action contributing to Portuguese educational objectives for this period. The framework identifies thirteen action lines, and number 12, “SL as inclusive organizations, guaranteeing equal access to information services and resources” (p. 22), points out that “School Libraries are, by their nature and mission, a natural support base for pupils with special educational needs” and that they must create “physical and technological conditions that make libraries able to give different answers to students with special educational needs”.

Several studies underline the difficulties that Portuguese schools continue to face as students with various disabilities are integrated in regular classes (and we are that schools in other countries have similar problems). So, it is important to diversify the approaches and at the same time to congregate efforts in the school to improve the educational, personal and social success of these students. In this context, international studies and also some research developed in Portugal show that the school library has a
relevant role to play supporting children with SEN. After establishing the framework for Portuguese school libraries intervention concerning students with special educational needs, we intend to present some results from research held in Portuguese schools and projects that are now being developed.

Insights from the research

As Farmer underlines, “School library media specialists have a broad and deep knowledge about resources across the curriculum and in different formats, which can help special educators match materials with individual students. While special educators might know more about adaptive technologies, school library media specialists are likely to know Internet and other online resources that could be useful for students with special needs” (2009, p. 40).

Taking into account this situation, and considering that the dissemination of good practices is an important way for improving the context that we examine in this paper, in the next paragraphs we will report some results from studies that focus on the relationship between teacher librarians and special needs students in Portuguese Schools. Until this moment, there is little research specifically in the above mentioned topic. In Portuguese academic repositories research we have find just four master thesis (Moreira, 2003; Pires, 2013; Oliveira 2011 and Pinheiro, 2014). The last two are research works done at my University (Universidade Aberta/Open University) and another one is in progress. Those studies have developed different approaches so the findings focus on different aspects according to their goals and evidence collected.

For this analysis I will retain the results of the research studies developed in Universidade Aberta, in the context of a master degree in School Librarianship.

In examining ways to help students with literacy, Oliveira developed an intervention plan with one student with SEN (sixth-grade) and collaborative work with the special educator. She had also interviewed 9 special educators working in the same school aiming to identify what they thought about the role of the SL towards students with special needs and their experience in collaborative work with the teacher librarian. The results with the intervention plan show that the student (with communication and language problems and a previous personal story of educational failures and a significant lack of self-esteem) had a substantial progress in all curricular subjects and also concerning social integration with peers. The areas supervised in a closely way by the TL - reading and information literacy skills - were particularly improved. The interview with the student’s mother confirmed the improvements identified, with special emphasis on the social dimension (a particular concern for the family). It is important to underline that all the activities supervised by the TL had a strong connection with the student’s work either done in an autonomous way or integrated in the regular class with other
classmates, confirming that "the excitement for students is learning centered in solving a problem or addressing an issue they find meaningful" (Taylor, 2006, p.105).

Concerning the results of the interviews with the group of special education teachers, all the teachers had recognized the opportunities that the SL can offer to students with SEN. Nevertheless, they don’t usually integrate SL resources in their work plans. In this sense, the example of the success of the partnership develop with one of the special educators had also a positive impact on the special education teachers group, by increasing opportunities for further collaborative work.

Pinheiro also examined the perceptions of special needs educators about the SL and their experiences in collaborative work with the teacher librarians. He surveyed 59 special educators and 6 Teacher Librarians from 6 groups of schools in a district in the north of Portugal. The findings were similar to the ones presented by Oliveira. In fact, all the teachers recognized the educational value of the SL and the collaborative work with the Teacher Librarian, but only a few usually go to the library or try to articulate with the TL. The most successful example was based in a SL team that integrated a special educator and it showed to be a good practice. Not only the SL had more and better resources to support students with special educational needs but the collaborative work among the TL and special educational teachers was also more visible, contributing to impact student achievement.

The study that is still in progress, done by a master student under my supervision, focus on the implementation of a recent project launched in 2012-2013 by the Portuguese School Libraries Network with the support of the National Reading Plan and other public and private organizations. The project is entitled “We can read all together” (“Todos juntos podemos ler”) and its main goal is to improve reading competences and habits among all students including those with special educational needs. The project intends to equip school libraries with adequate resources in different formats accessible to students with SEN and to develop good practice in promoting reading, taking into account the students individual capabilities and needs. School Libraries that participate in the project receive extra funds so that they can acquire special resources and technological equipment: eBooks, Daisy (Digital Accessible Information System), Braille, audiobooks, LGP (Portuguese Sign Language), Pictographic Symbols for Communication, eBook/ EPUB (electronic publication format) and 3D Draws. With this equipment they became more inclusive spaces and can help students in a more effective way.

Nowadays, the fundamental principle of an inclusive school is that all children should learn together, where possible, and that ordinary schools must recognize and respond to the diverse needs of their students, while also having a continuum of support and services to match these needs. It is important, for example, to diversify technological resources and their use as a way for the improvement of inclusion, namely helping children with SEN to be more autonomous and develop their learning process. The
reports *ICTs in Education for People with Disabilities – Review of Innovative Practice* (2011) and *Raising Achievement for All Learners – Quality in Inclusive Education for People with Disabilities* (2012) highlight the importance of ICT in supporting access to the curriculum and personalized learning. In this particular point, the project “We can read all together” is an important contribution as it enables school libraries to strengthen their technological resources.

The project is focused on reading but other competences are also improved when students participate in activities. School libraries involved in the project display the activities organized through their blogs and other web dispositive, and in fact we can state that a great effort is being done to put “all together” in the school library.

**Final remarks**

In Portugal there is still little research on the relationship between SL and special education so focused studies on this topic and dissemination of good practices thus appear as essential for the development and consolidation of the work that can be done by teacher librarians. The results of the research studies examined show that in general both teachers librarians and special educators are little aware of the important role that the school library can play with these students and that a collaborative work with the teacher librarian have positive impacts, both in increasing the self-esteem of students and developing their reading and information literacy skills.

In their recent work on inclusive pedagogy, Florian and Black-Hawkins (2011) explored the idea that we need a shift in focus from “additional needs” to learning for all, and the last project we have mentioned is trying to meet this aim. Another idea is that all teachers have to respect the dignity of learners as full members of the classroom community. Nevertheless, many school libraries don’t have the necessary resources yet to conveniently support all learners. For example, at this moment in a universe of several thousands of groups of schools with a SL integrated in the Portuguese Network of School Libraries, only 20 groups of schools have the possibility of participating in the project “We can read all together” and benefit from specific resources for students with SEN.

So, in most part of schools teacher librarians and special educators say what the research studies examined concluded: that besides the lack of collaborative work there is also a lack of adequate resources and specialized training concerning the needs of children with disabilities. As Allen (2008) has also reported, a majority of teacher librarians identified an insufficiency in their knowledge in the area of special education. Another problem is the number of students per class and also the high number of students that each TL should support. These are still barriers for an effectively inclusion of students with SEN. Even if everybody is convicted about the benefices obtained with the presence of those students in regular classes and in the school library, in fact the
reality shows us a diverse picture. But we believe that small steps can bring major achievements.

References


**Biographical note**

Glória Bastos – Professor at the Department of Education and Distance Learning, Universidade Aberta (Portuguese Open University), where she teaches Children’s Literature and coordinates the first master for teacher-librarians. Member of CEMRI - Research Centre for the study of Migrations and Intercultural Relations. The areas of interest are children’s literature and school libraries. She has a PhD at Portuguese Studies and has presented sessions and published several books and articles in particular about children’s literature, reading promotion and school libraries. She collaborates with several institutions on Teacher Training and in reading and children’s literature programs.
Connecting Classrooms to the world: School librarian- an agent of change in modern educational approaches to teaching; A case study

The paper will demonstrate a library program of an International School in India which connects its pupils with global partners on various curriculum contents. Technology is the key component used by the teacher librarians to achieve the objective. They build awareness of global issues to pupils and motivate them to research and find partners around the world including their own country with same or similar issues. During the research process students reflect critically on their own practice and compare with the partner schools. The librarians also collaborate with the classroom teacher to take action for embedding the same in teaching. The activities have a great impact on teaching and learning and the collaborations offer a myriad of ICT and global communication skills to students.

Keywords: connecting-classrooms, school partnerships, collaboration, active librarianship, library programs.

What are global companies looking for?
“What global companies look for are people who we think can take a global perspective. Students are well placed to do this if they have taken opportunities to widen their cultural perspective. The people that succeed can work in multi-disciplinary, multi-cultural and multi-locational teams. If students have demonstrated they can work with other cultures and teams, that’s a big plus for us as we need students to be intellectually curious and culturally agile if they are going to work in a global context.”

Sonja Stockton, Director, Talent, PricewaterhouseCoopers

Some of the top leaders in the United Kingdom have presented their views in a survey conducted by Think Global and British council (December 2011) on the education schools are providing to the young generation:
Schools have to work extensively to broaden young people's horizons and teach them global skills. If the country has to compete in the global economy, students in schools have to be supported to think more globally. The leaders expressed their fear that if this does not happen through teaching in schools, UK is in danger of being left behind by emerging economies such as China, India and Brazil.

According to the survey there are proven ways to help young people to think globally and broaden their horizons. Scaling up these learning opportunities will reap significant rewards for young people and for the UK economy. Following findings have surfaced during the survey:

- **For job seekers, knowledge and awareness of the wider world is more important than degree classification or A-levels**: In recruiting new employees, more employers (79%) say knowledge and awareness of the wider world is important than the numbers of employers who say the following are important: degree subject and classification (74%), A-level results (68%), or A-level subjects (63%).
- **Three-quarters of businesses think we are in danger of being left behind by emerging countries unless young people learn to think more globally**, and are worried that many young people's horizons are not broad enough to operate in a globalised and multicultural economy: 75% and 74% respectively agree with these two statements, and just 5% and 7% disagree.
- **The vast majority of businesses think it is important for schools to be helping young people to think more globally and lead more sustainable lives**, and four fifths think schools should be doing more: 93% of businesses think it is important for schools to help young people develop the ability to think globally. 80% think schools should be doing more; only 2% think they should be doing less.
- **Those businesses for which at least three-quarters of their trade is with people from another culture find it significantly harder to recruit employees with the right skill sets than less globally-oriented businesses**: Amongst those businesses who conduct at least three-quarters of their trade with people from another culture, only 30% find it easy to recruit employees with the right skill sets, whereas 35% find it difficult. By comparison, amongst the business community as a whole, half (50%) find it easy to recruit employees with the right skill sets, whereas only a quarter (24%) find it difficult.

**Key elements of global citizenship**

A global citizen is someone who:

- is aware of the wider world and has a sense of their own role as a world citizen
- respects and values diversity
- has an understanding of how the world works economically, politically, socially, culturally, technologically and environmentally
- is outraged by social injustice
- participates in and contributes to the community at a range of levels from local to global
- is willing to act to make the world a more sustainable place
- takes responsibility for their action

What skills, knowledge and values are necessary for a young person to become an active global citizen?
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<th>Values and attitudes</th>
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<td>Social justice and equity</td>
<td>Critical thinking</td>
<td>Sense of identity and self esteem</td>
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<td>Diversity</td>
<td>Ability to argue effectively</td>
<td>Empathy</td>
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<tr>
<td>Globalisation and interdependence</td>
<td>Ability to challenge injustice and inequalities</td>
<td>Commitment to social justice and equity</td>
</tr>
<tr>
<td>Sustainable development</td>
<td>Respect for people and things</td>
<td>Value and respect for diversity</td>
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<td>Peace and conflict</td>
<td>Co-operation and conflict resolution</td>
<td>Concern for the environment and commitment to sustainable development</td>
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<td>Belief that people can make a difference</td>
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**Why are global skills important?**

Just as the digital revolution and adoption of technology skills became a foundational business skill over the past 20 years, Global Skills are increasingly becoming a key skill set for the 21st century. The reasons are clear:

- International business continues to seek global employment solutions, whether through outsourcing, developing virtual teams across continents, retaining local talent or sending senior staff to administer projects abroad, prompting the need for effective and cohesive multi-cultural awareness and communications.
- Increasingly, key functions are being consolidated and outsourced to specific locations. As more companies outsource to various providers around the world, Global Skills take on increasing significance as job functions will require us to engage with numerous cultures.
• Given the complexity and increased emphasis on issues such as Corporate Social Responsibility, employee safety and effective relationship building among global partners and teams, infusing Global Skills plays a demonstrative role in fostering a company culture.

• From small business owners to the world’s largest corporations, products and services are being packaged with an array of specific inputs from many parts of the world. Without Global Skills, these long-distance teams quickly find their levels of professional competence being called into question.

In fact, according to various studies, the majority of cross-border mergers and acquisitions fail due to cultural and communication issues. Data indicates that cross-border mergers focus on operational, technical and commercial synergies, while paying little attention to the very crucial yet less tangible assets including business culture, human capital skills and communication. One need not look further than recent examples of strained mergers such as Daimler-Chrysler, or Danone’s joint venture in China to understand why Global Skills are a priority and not a business afterthought.

Whether a direct investment, merger or strategic partnership, business leaders require Global Skills to effectively integrate senior management and workforce, foster cultural compatibility and raise job competency and performance.

**Role of schools to impart global citizenship skills?**

Global citizenship must be at the heart of school education. This is because it is good education. There are a number of reasons to believe this:

• Global citizenship is exciting and relevant to children, and gives learning a meaning.
• Global citizenship acknowledges that we have the power as individuals: each of us can change things, and each of us has choices about how we behave.
• The world we live in is unfair and unequal, and global citizenship promotes the challenging and changing of this.
• Global citizenship enables the challenging of misinformation and stereotyped views about Majority World countries, and allows children to counter ignorance and intolerance.
• In our interdependent world, global citizenship encourages us to recognise our responsibilities towards each other, and learn from each other.
• In our rapidly changing world, global citizenship is about flexibility and adaptability as well as about a positive image of the future.
• Teaching approaches used to promote global citizenship have a positive impact on pupils and can raise standards.

**School libraries around the world**

School libraries across the world in many countries are at a critical and transition point. On one hand, budget cuts have led to decisions to eliminate or de-professionalize school libraries. On the other hand, the increased emphasis on global skills, college and career readiness and the integration of technology has opened an unprecedented door to school librarian leadership.
The transformed modern educational approaches have radically altered information requirements of school students. Most curriculums emphasize on the students to acquire skills which would support them become global citizens for which the whole school community works.

**Can school librarians be the leaders of change?**

“*The highly technological environment of 21st-century schools has significantly redefined the role of school librarians by presenting the opportunity to assume leadership through technology integration.*” (Johnstone, 2012)

Technology integration is an open end and leaves a space which has width and depth yet to be explored. In the following case study the school librarian of G.D. Goenka World School took up the role of integrating 'International mindednesses under the leadership of head of school. The school applied for International School Award in 2012. The step was taken towards imparting 'Global citizenship skills’ to the students.

**About G.D.Goenka World School**

GD Goenka world school situated in the North of India has sixty acres of campus close to natural environment and is committed to provide global education standards to the ambitious youth of today. The school has students from all around the world and provides robust infrastructure and adopts enriching study techniques that are focused to impart competitive learning. This school of repute works in collaboration with renowned international organizations to design competitive study programs that foster global learning standards. The school offers a diverse and multi-cultural learning platform to stimulate open-minded thinking and boost mutual understanding amongst students.

Opinion sharing and classroom discussions help inculcate a sense of global acceptance within inquisitive learners at the institute. GDGWS strives to promote value-based growth and instil virtues of humanity and cultural unity through a globally accepted pedagogy of curriculum. Its world class teaching standards and a stimulating learning environment make GD Goenka World School a globally accepted education institute of the country. The school follows curriculum of International Baccalaureate, Switzerland.

**International Baccalaureate (IB) Mission**

- The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.
To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.

**GDGWS Mission**

All GDGWS students shall have ample opportunity to achieve their full potential academically and through a wide range of artistic and athletic activities in a disciplined environment that offers challenges at all levels. Each shall develop traits of patience and tolerance along with an openness of mind to diverse cultures, and be exposed to abundant experiences which will help them contribute meaningfully to the National and International society and thrive in an interdependent world.

In the year 2012, the head of school decided to take the students towards becoming global citizens and harness the skills to be compatible internationally in the times to come. She decided to apply for International School Award to British Council Division in India.

**About International School Award**

The British Council International School Award (ISA) is an accreditation scheme that recognises and celebrates exemplary practices of internationalism in schools. ISA provides a framework for schools to develop an action plan and implement international activities throughout the year, and encourages schools to collaborate with overseas schools to create a rich learning experience for students through use of ICT, creative pedagogical practices and real context for learning.

Participating schools begin by drafting an action plan of activities with international dimension covering a range of subject areas and age groups and spread over the entire academic year. The schools record their work and present a dossier of evidence that is assessed by a panel. Schools that are successful in meeting the assessment criteria are awarded the accreditation for a period of three years. The accreditation includes presentation of a trophy and a certificate and the use of ISA logo in school’s publications for a period of three years.

ISA was piloted in India in 2003 and today more than 363 schools in India have been accredited and 323 schools have applied for ISA 2011-12. ISA is now being rolled out world-wide and schools across the world are joining in to celebrate the wonderful diversity of the human race and bridging the cultural divide for a harmonious future.
Action Plan of G.D.Goenka World School
Please see Appendix 1

How did the ‘global citizenship’ activities start and the role of the librarians?
Librarian has been instrumental in compiling the ‘Action Plan’ and its implementation to the whole school community by connecting the activities with the curriculum. Technology and information research skills were extensively used to find partners around the world by way of various websites. By virtue of membership with International Association of School Librarianship, many members became partners for international projects with mutual consent to work together. Many such substantial partnership are rolling on and thriving by connecting many more subject areas between the two schools. Partnerships have not only been extremely benevolent to the communities of the partner schools but have also brought in funded visits to each other’s countries two times in two years. This indicates a phenomenal work using technology on the part of coordinators of the partner schools.

Initial partnerships were first introduced by the International Association of School Librarianship in August 2011 where we were matched in the ISLM Bookmark Project with pupils of many countries. Pupils enjoyed this project and we recognised the benefits of keeping in touch to participate in further international projects. We sent an invitation to the librarians to collaborate on number of projects. One project ‘Learn to Preserve: Endangered Species Project’ was accepted by our Book Marks partner school in Scotland which allowed us to sustain the partnership and create an exciting project for pupils to gain valuable global skills. Pupils of both the schools benefited from the partner school and allowed us to form meaningful links between pupils and staff and facilitate deeper relationships between students.

In a few months time we applied for funding for a reciprocal visit to the British council. The application process was facilitated by experienced project managers of British council in our country. Our application was accepted and a grant of GBP 1500.00 was released for each partner school to visit each other and develop professional learning.

By visiting each other’s country, we were able to forge important links between our schools’ English & Literacy departments. We swapped resources and taught classes as well as took part in whole school assemblies which led to a greater cultural awareness for both schools.

The exchange among the students began through the swapping of emails and exchanging of bookmarks. This was developed through the ‘Learn to Preserve: Endangered Species’ Connecting Classrooms project. Pupils from both schools researched and prepared presentations on endangered species from their own countries which they then exchanged in order to learn from their partner school. Pupils exchanged letters and photographs on their day-to-day lives in their school and in their country. Learning and teaching was enhanced in both schools through the sharing of resources and the opportunities afforded by visiting teachers. The English department benefited from collaboration on teaching Shakespeare and poetry. Whilst the Religious Education department was able to share learning and teaching methods with regards to meditation and spirituality, Physical Education afforded a fun opportunity to learn new cultural sports.
How have these activities had an impact on teaching and learning?
These activities developed pupils’ confidence and sense of global identity as well as encouraging a higher standard of work as they enjoyed sharing their work with the other school. They had also been able to self evaluate their work and compare with the partner school. The conduct and behaviour of pupils has been of a high standard as they immerse themselves in the task at hand and strive for success. By experimenting with various forms of communication pupils have been able to develop their ICT skills. There has been an element of problem solving in the undertaking. For example having different ICT facilities. Pupils from all the partner schools were and are continuing to be enthusiastic and have developed a positive relationship.

What did the young people learn in reference to Global Skills?
The ‘Learn to Preserve’ Connecting Classrooms project gave pupils a firm understanding of endangered species and how they could help preserve and sustain an important aspect of our world. The project developed global themes within the curriculum by allowing pupils to research their partner school’s city and country and swap information, letters, leaflets, power points, scrapbooks and bookmarks with an international school. Pupils learned that their identity was influenced by background and geography, and by swapping information in the collaborative project pupils were able to understand and appreciate other cultures. This allowed them to experience a sense of identity and belonging. Pupils used global skills to communicate to the partner school through the use of art, letters, ICT and photographs.

Other projects like ‘Teacher in Space’ connected our school students with students in ‘Christa McAuliffe’ Elementary School’ in USA and created awareness about teacher space traveler of USA who participated in NASA project and died in the crash. The librarian collaborated with the classroom teachers and whole school celebrated ‘International Women’s Day’ reading through bulletin boards on American citizen ‘Christa McAuliffe’. These relationships named partnerships have sustained and are being interwoven in many more subject areas including Physical Education, Music, Art, Sports, Meditation and Yoga.

Focus for this year’s project is travel and tourism. This will have many factions. Our young people will be able to share their learning experiences and become educators by running activities both within school and within the community. Pupils will engage in art, travel writing, documentary making, and blogging and website construction. To do this they will need to further research the history and geography of their community. Pupils will further their understanding of learning and teaching methodologies by running tutorials and teaching their partner school about customs, sports, dances and music. Through continued communication between partner school a strong link will be maintained. Pupils from Oban High School plan to take this experience even further by visiting their partner school and exploring the history, culture and geography of India. Pupils will enrich the school and the community by sharing their experience through assemblies, local media and community events.
Whole school professional development

British Council also offers professional development free online courses on ‘Global Citizenship’ for the teachers of schools. (See toolkit in Appendix 2)

Partner school teachers in Oban high school, Scotland and G.D.Goenka World School, Gurgaon, India undertook PD courses offered by the British Council which enabled everyone to maintain the equitable relationship and allowed us to participate in high impact collaborative classroom projects. We also had additional CPD experience and skills. The English teacher leading the project at Oban, has completed an internationally recognised Book trailer course involving schools across Europe and acted as our school project co-ordinator. The librarian of Oban High School, Scotland, has completed research on how other nationalities utilise resources and carry out their own research in UK public libraries and used this knowledge whilst establishing the collaborative project with our partner school and designing future projects.

Librarian of G.D.Goenka World School completed a course on the use of web 2.0 tools for teaching and learning which continues to be an asset for this partnership. Our ICT faculty, who are professionally qualified, have provided unconditional support.

How have ‘Global Citizenship’ activities improved education practice in the school?

Both partner schools have agreed to collaborate again on an inclusive project that will offer global skills to young people. In Oban High School, every pupil will undertake the global literacy project and selected pupils of all ages will participate in researching tourism and community in order to develop a greater sense of identity and belonging. G.D.Goenka School has involved 150 students and both schools have agreed on the subject and content of the project.

Formative assessment are continued to be used to measure progress and partners will continue to communicate with each other regularly. Both partners will use a variety of teaching styles and introduce pupils to new methods, allowing them also to lead lessons and assemblies, giving them confidence to experiment with a variety of ICT, including video diaries, photography and communicating via email and letters.

Partnerships with school pupils around the world and exchange have greatly benefited all the schools involved as it allowed quality time to evaluate the projects using technology and face to face in case of exchange program. The partnerships have been supported by the senior management in all the involved schools. There has been substantial appreciation of all the international projects. Schools have recognized and celebrated the success of all the international projects and are keen to sustain. Librarians who have been coordinators have shared communications with those involved in the activities. It is evident with the success of last year’s projects and current year’s running projects that the fact that global education is securely embedded in the curriculum. Feedback from staff and pupils at both schools has been overwhelmingly positive and this is a key motivating factor in maintaining the partnerships.

This case study throws light on the out of sight possibilities of the profession of school librarianship. The possibilities are positive, benevolent, and measurable and ever present for the professionals and present a high platform. The school management approval, appreciation and appraisal will present encouraging pathways to follow, envelop and utilize existing skills and find opportunities to develop and acquire new skills.
Citations

References

Think Global and British Council (December 2011) The British Council is the United Kingdom’s international organisation for cultural relations and educational opportunities. A registered charity: 209131 (England and Wales) SC037733 (Scotland).

Think Global is the working name of the Development Education Association which is a registered charity (no. 291696) and company listed by guarantee (no. 1737830)


Websites

http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol15/SLR_School_Librarians_as_Technology_Integration_Leaders_V15.pdf

http://www.ibo.org

http://gdgws.gdgoenka.com/mission-statement

http://schoolsonline.britishcouncil.org

Biographical note

Madhu Bhargava

Is a veteran school librarian in India. Presently working as Dean of Libraries at G.D.Goenka World School, North India. Is a recipient of IASL softlink Excellence’ and ‘Ken Haycock Leadership development’ awards. Has also been recognised by Indian Library Association as ‘Best School Librarian’. Present focus is connecting classrooms around the world through school libraries.

Appendix 1
## SECTION 3 ACTION PLAN FOR INTERNATIONAL WORK 2013-14

<table>
<thead>
<tr>
<th>Curriculum activity</th>
<th>Teacher responsible Name and title of the teacher responsible for each activity</th>
<th>Subjects</th>
<th>Participants include no. of pupils &amp; their classes and the countries being covered</th>
<th>Period</th>
<th>Evaluation methods</th>
<th>Learning Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>A minimum of 7 projects with 2 activities each</td>
<td>Ms. Madhu Bhargava (Librarian and ISA Coordinator)</td>
<td>Unit of enquiry- solar system under a theme- how the world works-Grades III.</td>
<td>36 students of Grade III-50 Grade IV-50 Country- USA</td>
<td>March-April 2012</td>
<td>Students will research and make ppts and create bulletin boards which will be criteria assessed.</td>
<td>1. Learn about the lives of women space travellers including Kalpana Chawla, space traveller of Indian origin. 2. Learn about the projects of NASA. 3. Learning research skills like collecting, processing and presenting data. 4. Develop skills for intercultural communication on skills.</td>
</tr>
<tr>
<td>Refer to the Guidance Note for the desired mix of activities</td>
<td>Ms. Priyanka Khola (PYP Coordinator)</td>
<td>ICT</td>
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<tr>
<td>Refer to the Guidance Note for ideas</td>
<td>Ms Neelam Dhasan (Grade 3 form tutor)</td>
<td>ART</td>
<td></td>
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</tr>
<tr>
<td>Brief description: A school ‘Christ McAuliffe Elementary School’, in USA, named after a teacher who was chosen to travel in space shuttle ‘Challenger’ under NASA program “Teacher in space” on January 28, 1986 which exploded on its way killing Sharon Christa Carrigan McAuliffe along with other six crew members, has called to join them in their mission to send Christa around the world! NASA announced in July 1985, that McAuliffe had been chosen from among more than 11000 applicants for this program. People in USA wish to send Christa around the world. Participating schools will print her picture and research facts about her and the NASA project. Take pictures and send these back to the organiser. At the end of the school year, May 2012, we will be informed of all the places Christa went. Activity 1: Our students will print her picture from the web site sent by the school and research the NASA program from Internet and biography of Christa. Students will also research more women space traveller including Ms. Kalpana.</td>
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</tbody>
</table>
**Activity 2.** Presentation of the researched facts on Bulletin Board. Pictures of board to be sent to the organizer in USA for compilation.

**Activity 3.** Make prs and present these in school assembly on World Women’s Day (8th March 2012) creating awareness among school community.

**Activity 4.** Students exchange e-mails to discuss and share resources for this purpose via [http://www.epusk.com](http://www.epusk.com)

<table>
<thead>
<tr>
<th>Title</th>
<th>PYP Jamboree</th>
<th>2</th>
<th>300 students of various nationalities like Korea, Japan, Mozambique, and USA from Primary year’s program (PYP)</th>
<th>April-May 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief description</td>
<td>Jamboree will be organised in May wherein each grade and section of PYP selects a country under the curriculum inquiry ‘Where we are in place and time’ incorporating World Earth Day on April 22nd 2012. Thereafter students and teachers do extensive research on different aspects of those countries. These aspects may include: Geographical features, clothes and costumes, food, art and culture, flags, currencies and prevalent language. The Jamboree will be put up in Central Courtyard of the school. Students will be putting up their Country stalls showing above mentioned aspects to visitors.</td>
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<tr>
<td>Activity 1: Research Spree</td>
<td>All country groups will be doing research and bring their findings, sort out information and compile up relevant information pertaining to their country.</td>
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<tr>
<td>Activity 2: Information Bureau</td>
<td>All subject areas</td>
<td></td>
<td></td>
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<tr>
<td>Coordinator</td>
<td>Pretty Khoza</td>
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<tr>
<td></td>
<td>Mrs. Madhu Nangia</td>
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<td></td>
<td>Mrs. Arunima Aggarwala</td>
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<td></td>
<td>Ms. Nehal Chawla</td>
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<td></td>
<td>Ms. Shanta Singh</td>
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<tr>
<td></td>
<td>Ms. Bhavna Dogra</td>
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<tr>
<td></td>
<td>Mrs. Shivani Negi</td>
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<tr>
<td></td>
<td>Ms. Sarvotte Khan</td>
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<tr>
<td></td>
<td>Ms. Karamal</td>
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<tr>
<td></td>
<td>Ms. Sapna Rattan</td>
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<tr>
<td></td>
<td>Ms. Sapna</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Awareness towards diverse nature of our world</td>
<td>Brochures, presentations, charts will be evaluated on 1-to-5 scale rubric.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International mindedness: Valuing and respecting other countries and their cultures.</td>
<td>Feedback forms to be filled in by the visiting parents.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
| Exchanging ideas with other nationalities | Dances, fancy dress show, tasting dishes will also be assessed by the
students will give information about the geographical features of the country assigned to them. They will make charts, power point presentations, brochures etc.

**Activity 2:** Workshops will be conducted by different organisations to make children aware of different cuisines of selected countries, giving them hands-on experience to make main dishes of these countries.

**Activity 3:** Dance workshops will be conducted in the school and children will be putting up performances based on the same.

**Activity 4:** Fancy dress shows will be organised portraying different costumes of different countries.

**Activity 5:** Poster making competition on flags and currencies of different countries on **World Book and Copyright Day on 23rd April 2012.**

**Activity 6:** Communication through Skype with national and international schools.

**Activity 7:** National Anthems of these countries will be learnt and sung on the day of Jamhoree.

**Activity 8:** Visits to museums to show diverse cultures of the whole world.

**Activity 9:** In May, Jamhoree will be organised in a big way in Central Courtyard of School wherein Parent community as well as school community participate with great enthusiasm.

<table>
<thead>
<tr>
<th>Shikha</th>
<th>Social studies and ICT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mrs. Mallika Talukar</td>
<td>Geography, Art and ICT</td>
</tr>
<tr>
<td>Ms. Geetika Sokhal</td>
<td>Language</td>
</tr>
<tr>
<td>Ms. Ashkini Singh</td>
<td>Dance</td>
</tr>
<tr>
<td>Ms. Tanu Smith Jane</td>
<td>First Language and Foreign Language</td>
</tr>
<tr>
<td>Mr. Yeasru Yuenj (Western Music Teacher)</td>
<td>Mathematics</td>
</tr>
<tr>
<td>(All form tutors and co tutors of PYP)</td>
<td>Dramatics</td>
</tr>
<tr>
<td>Mr. Dharmendra &amp; Mr. Vijayanti Gostani (Dance teachers)</td>
<td>Art</td>
</tr>
<tr>
<td>Ms. Napur Jolly (Art Teacher)</td>
<td>parent judges</td>
</tr>
</tbody>
</table>

Poster making entries to be assessed by the Arts department on criteria.
<table>
<thead>
<tr>
<th>Curriculum activity</th>
<th>Teacher responsible</th>
<th>Subjects</th>
<th>Participants</th>
<th>Period</th>
<th>Evaluation methods</th>
<th>Learning Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>A minimum of 7 activities</td>
<td>Name and title of the teacher responsible for each activity</td>
<td>Include all subject areas involved</td>
<td>Include no of pupils &amp; their classes and the countries being covered</td>
<td>Month &amp; duration of activity</td>
<td>Refer to the Guidance Note for ideas</td>
<td>Refer to the Guidance Note for ideas</td>
</tr>
</tbody>
</table>

3 Title: World Wildlife
Brief description:
The pupils of each class are introduced to basic database skills as they plan to manage a wildlife sanctuary incorporating International Day for Biodiversity and Biological diversity on May 22, 2012.
Activity 1: In the process the students complete a map of the area of the wild life sanctuary.
Activity 2: They organize pictures of animals and arrange colourful patterns on various birds.
Activity 3: They also analyse and interpret attributes of the sanctuary workers, rare and unusual creatures by sorting, grouping and ordering data.
Activity 4: The students also do research on the internet and use multimedia CDs to learn more about animals and wild life.

PYP: Shivani Negi
MSP: Shalini Sharma
Overall Incharge: Monica Bahl
ICT Assisted by Neha Shama
ICT Ms. Shamina singh (Art ) Mr. D Gunam

- ICT
- Science
- Social Science
- Environmental Science
- Maths

Students of PYP, Middle School 500 students
One Year Divided into 2 semester
April 2012-2013
Assessment checklist for each level for each class.
Each class shall have 3 mastery levels:
- Level 1: Bronze
- Level 2: Silver
- Level 3: Gold

The internal assessment shall be linked to CIE assessment for
- Initial Steps
- The technology focus:
  - One area to be focused at each level out of the following(Database in this case)
    - Databases
    - Spreadsheets
    - Graphics
    - Desktop Publishing
    - Telecommunication
    - Word processing
    - Applied Technology
    - Operating Environment
sanctuaries across the world.

Activity 5: School arranges an exhibition to create awareness and sensitize children towards Environment and sustainable development at the grass roots level by “Bharat Seva Galkai”, an NCO which works for Peace, culture and Education (tentatively) incorporating World Animal Day and World Habitat Day on October 6, 2012. School also celebrates World Animal day with Inter House Folk Dance competition (Senior Students) with Animal Dance theme.

(Dance)

IGCSE and IBDP students (400)

- Next Steps
- Oc/Track
Each student shall be awarded by CIE on completion of each level

- Multimedia
- Programming
With one technology area as the central focus others are used in conjunction with the same rather than being used as standalone areas.

Featured Objectives/learning outcomes for technology (DATAB ASIS)

- Differentiate between attributes
- Arrange data by grouping
- Compare and contrast attributes
- Classify Objects
- Arranging data using patterns
- Ordering data
- Interpret data
- Analyze data

Central Subject
<table>
<thead>
<tr>
<th>Title:</th>
<th>4 Window into the world of culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief description:</td>
<td>Students are assigned summer vacation work as part of the curriculum in which student's research via internet on various countries of the world to understand the traditions and cultures through purposeful and interactive activities. Project also aims at studying historical monuments, World War I and II national symbols and the heritage of different regions. This work will be compiled by the team leaders on web 2.0 tool.</td>
</tr>
<tr>
<td>Activity:</td>
<td>Create power point presentations, Make Brochures using DTP on monuments, flags, history and Art forms etc. Activity 2: Virtual and physical Field trips to galleries, museums etc.</td>
</tr>
<tr>
<td>Focus:</td>
<td>SCIENCE</td>
</tr>
<tr>
<td>Others:</td>
<td>Social Science, Environmental Science, Maths</td>
</tr>
<tr>
<td>Ms. Priyanka Khosla (PYP COORDINATOR)</td>
<td>History</td>
</tr>
<tr>
<td>Mrs. Anu Ahiwat (Middle School coordinator)</td>
<td>IT</td>
</tr>
<tr>
<td>Ms. Shehnaaz Bano (IGCSE Coordinator)</td>
<td>Languages</td>
</tr>
<tr>
<td>Mrs. Sujata Sinha (Science HOD)</td>
<td>Humanities</td>
</tr>
<tr>
<td>Mrs. Vidhya Sureshwaran (English HOD)</td>
<td></td>
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<tr>
<td>Mrs. Jyoti Uppal Mathematics (HOD)</td>
<td></td>
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<tr>
<td>Mrs. Srijata Pant (HINDI HOD)</td>
<td></td>
</tr>
<tr>
<td>Mrs. Monica</td>
<td></td>
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<tr>
<td>PYP/Middle School/IGCSE (700 students)</td>
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<tr>
<td>May-July (Holiday Assignment)</td>
<td>Student's Work In the form of Brochures, Posters, articles, stories, poems to be assessed by the form tutors based on internal assessment marks.</td>
</tr>
<tr>
<td>1- Appreciate and value diversity of culture and art form.</td>
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<tr>
<td>2- Develop creativity and research skills</td>
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<tr>
<td>3- Make creative and interesting use of holidays.</td>
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<tr>
<td>4- Developing reading skills.</td>
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<tr>
<td>5- Developing Information literacy skills</td>
<td></td>
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<tr>
<td>Learning use of web 2.0 tools.</td>
<td></td>
</tr>
<tr>
<td>Curriculum activity</td>
<td>Teacher responsible</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>• A minimum of 7 activities</td>
<td>Bahl (ICT HOD)</td>
</tr>
<tr>
<td>• Refer to the Guidance Note for the desired mix of activities</td>
<td>Mrs. Shivani Negi (ICT)</td>
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<td></td>
<td>Ms. Shaila Bhal (ICT HOD)</td>
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<tr>
<td></td>
<td>Mr. Sumeet Jain (Economics)</td>
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<td></td>
<td>Mrs. Sedahia (Economics)</td>
</tr>
<tr>
<td></td>
<td>Ms. Shalini Sharma (ICT)</td>
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<td></td>
<td>Mrs. Asha Yadav (Business Studies)</td>
</tr>
</tbody>
</table>

Title: Technology Sharing

Brief description: Students work on web 2.0 tools to research via internet or any other sources like Public Libraries during summer holidays highlighting the famous brands of Germany, France or Spain (e.g., automotive industry, kitchen appliances and accessories etc., marking a new in other parts of the world. Students will connect with schools and Universities in Germany, France or Spain via e-mail/Skype.

Activity 1:
Promotional presentation of different brands as Power point presentation to be submitted through web 2.0 tools (wiki or Google) to the teachers.
Activity 2:
Students will make an International Business project to export a product to Germany/France or Spain from India. They will research business leads on Internet to identify a product, locate an area in a chosen country and explain why there is a good market opportunity at the targeted location. They will decide the name (and state a reason for the selection of name), create company logo, research business customs for that particular country, trade barriers and study competitors. When they come back to school a ‘trade fair’ will be organized where students will role model as sellers to German buyers.

Title: 6
Octave
Brief description:
Research famous songs and National anthems of various countries and sing German/French, Spanish/Korean/Chinese songs and National Anthems by students of those nationalities.

Activity 1:
PYP/Middle/ICSE students research art/each week of Germany/France/Korea/China and create new art work based on selected themes. This Art work is exchanged with Global partner schools.

<table>
<thead>
<tr>
<th>Economics</th>
<th>Mr. Arora (Drama)</th>
<th>Mrs. Jyoti Gupta (Mathematics)</th>
<th>Ms. Shazia Singh (ART)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Shaiba Atta Ameen</td>
<td>Ms. Atika Bawa</td>
<td>Ms. Shazia Singh</td>
<td>Ms. Aishini Singh</td>
</tr>
<tr>
<td>ICT</td>
<td>Modern Languages</td>
<td>Art</td>
<td>Craft</td>
</tr>
<tr>
<td>Middle School,</td>
<td>IGCSE And IB</td>
<td>50 students</td>
<td>Middle School</td>
</tr>
<tr>
<td>Modern Languages</td>
<td>Middle School</td>
<td>Middle School</td>
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<tr>
<td>Middle School, IGCSE And IB</td>
<td>50 students</td>
<td>Middle School</td>
<td></td>
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<tr>
<td>Modern Languages</td>
<td>50 students</td>
<td>Modern Languages</td>
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</tr>
</tbody>
</table>

Rubrics based assessment by subject expert judges.

1. Music as a medium of integration.
2. Develop skills for inter-cultural communication.
3. Awareness of the international music bands and singers (German, Lyricist and bands).

Students become aware of the richness and diversity of their
### Activity 2:
Group Performance by international students of folk music and dances of their countries.
Students perform Indian folk dances as well. A fusion dance will also be performed.

<table>
<thead>
<tr>
<th>Curriculum activity</th>
<th>Teacher responsible</th>
<th>Subjects</th>
<th>Participants</th>
<th>Period</th>
<th>Evaluation methods</th>
<th>Learning Outcome</th>
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<tr>
<td>A minimum of 7 activities</td>
<td>Name and title of the teacher responsible for each activity</td>
<td>Include all subject areas involved</td>
<td>Include no. of pupils &amp; their classes and the countries being covered</td>
<td>Month &amp; duration of activity</td>
<td>Refer to the Guidance Note for ideas</td>
<td>Refer to the Guidance Note for ideas</td>
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**Title:** WORLD OF WATER

**Brief description:**
eKWIP is Educating Kids with International Possibilities and its mission is the coalition for International Initiatives works to leverage social entrepreneurship in order to make a positive impact on the local and global community. eKWIP is an education program that connects school communities nationally and inter-nationally using cutting edge technology for the purpose of collaborative learning. We'll be aiming at different activities relating to water including presentations, competitions incorporating World Water Day on March 22nd 2013.

| Activity 1: | Vijaysheer Pahal (CAS Coordinator) | Environment: management, Social Studies, Physical Education, Art, Media Skills, ICT. | PYP MYP ICSE 500 students | Jan-February 2013 (Some activities to be continue d till 22.3.2013) | All competitions to be criteria assessed with the help of a panel of judges | Students will learn to use technology as a tool to research, communicate and build on previous knowledge. They will also become aware global citizens and build the capacity to deal with environment problems and water scarcity now and in future. They will also learn the protocols while communicating with... |
Theme will be water and it will encourage young ones to explore their creative thinking.

**Activity 2:**
A traditional quiz about water.

**Activity 3:** Story writing competition.
Student will be writing stories about water.

**Activity 4:** "Graphic tells an important story..."

**Activity 5:** Banner and slogan making competition.

**Activity 6:** Skyping with an UN member and discussion regarding water issues.

**Activity 7:** Skyping with students from different countries and discussion on water and issues regarding it.

**Activity 8:** "Walk for Water" -
Student must walk around the school without spilling the water baskets they have. Student who reaches first wins the competition.

**Activity 9:** Fancy Dress Competition (Water Mascots)

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<tr>
<td>The Tasker:</td>
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<td>Brief description:</td>
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<tr>
<td>The objective of this activity is to spread awareness about the African elephants and Asian elephants, at the PYP (Primary Years Programme) level and the Middle School.</td>
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<td>300 PYP &amp; MSP students</td>
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<td>And students of Virendra Bharti school (a nearby)</td>
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<tr>
<td>Questionnaires to be filled in with the help of teacher (Primary school)</td>
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<td>Feedback forms (Middle School)</td>
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| 1. Updating the knowledge of the students |
| 2. To have respect for this animal and |

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The project aims at addressing the role of the library as a Community Learning Center through international collaborative projects, including online and real-time activities. The project will involve exchanging ideas and resources with students from different countries, promoting the use of digital tools, and enhancing the library's role in the educational process.

Some activities include:

- **Activity 1:** Communications through Skype
- **Activity 2:** International Book Clubs
- **Activity 3:** Children's Writing and Storytelling
- **Activity 4:** Digital Storytelling

These activities will be facilitated by teachers and librarians from participating schools.

In addition, the project will focus on promoting the use of digital tools and resources in the classroom, as well as fostering a community of learners who will work together to create and share content.

The project will be coordinated by Ms. Perry, Librarian, and supported by local school districts and libraries.

The project is expected to run from September 2017 to June 2018, with regular feedback sessions and updates for all stakeholders.
Appendix 2

Tool-Kit for connecting classrooms

Has a range of activities designed by education professionals to help your students explore the world beyond their classroom

http://schoolsonline.britishcouncil.org/classroom-resources

Partner with a school around the globe

http://schoolsonline.britishcouncil.org/partner-with-a-school
http://www.penpals.com
http://globaldimension.org.uk/partnership/
http://www.uclass.org

Guide to International learning

http://schoolsonline.britishcouncil.org/your-journey

Professional Development: online courses on Global citizenship

https://schoolsonline.britishcouncil.org/connectingclassrooms-learning/

Linking and funding

http://schoolsonline.britishcouncil.org/programmes-and-funding/linking-programmes-worldwide
Developing Online Master’s Programs for Teacher-Librarians: Connecting Inside and Outside the Virtual Classroom

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Abstract

This paper explores the development of the Teacher-Librarianship by Distance Learning Program at the University of Alberta in Edmonton, Alberta, Canada. It explores the development of the program from 1997 onwards, discusses the challenges and opportunities of Learning Management Systems, and explores key changes in the program over time. One key change has been the impact of technological changes and advances on teaching and learning. Participatory Culture and Connectivism are explained and the implications for this program are discussed. The authors understandings of teaching and learning in online environments have changed over the past 15 years. Key lessons learned and future plans are also highlighted.

Keywords: teacher-librarianship education, connectivism, participatory culture, online education, Web 2.0 social media

Context

Teacher-Librarianship by Distance Learning (TLDL) at the University of Alberta has been providing online educational opportunities for teachers and teacher-librarians for more than 17 years. To be accepted into the Master of Education program, students need to be qualified teachers (Bachelor of Education degree) and have a minimum of one year of successful teaching experience. Most of our students are already working in school libraries and come into the program to gain the knowledge and skills necessary to build successful school library programs. A few students every year come into the program wanting to be teacher-librarians but not working in a school library. This is a drastic shift from twenty years ago when the majority of students were not working in school libraries when they enrolled in our teacher-librarianship education programs.

The Master of Education program consists of ten courses - each course requires the equivalent of approximately 39 hours of class time. Included in the requirements for all
students in the program are a course in educational research and a course in curriculum foundations. Those students wanting to focus on teacher-librarianship can take the following courses:

EDEL 540  Introduction to Teacher-Librarianship
Explores and critically evaluates the management of school libraries programs and services.

EDEL 541  Introduction to Resource Organization and Management
Explores and critically evaluates the management and organization of print and digital resources in a school library collection.

EDEL 542  Inquiry-based Instruction
Explores and critically evaluates the nature and culture of inquiry and the integration of inquiry in teaching and learning.

EDEL 543  Introduction to Contemporary Literacies
Explores and critically evaluates the foundations of contemporary literacies, literacy in the 21st century, and literacy leadership for teachers and teacher-librarians.

EDEL 544  Introduction to Emerging Technologies
Explores and critically evaluates the use of emerging technologies in schools and school libraries with an emphasis on how they might be used in personal, professional and teaching and learning situations.

EDEL 545  Integration of Emerging Technologies
Explores and critically evaluates the integration of emerging technologies into schools and school libraries with an emphasis on the trends, issues, and challenges associated with living and working in digital age classrooms and libraries.

EDEL 546  Introduction to Resource Selection and Evaluation
Explores and critically evaluates the selection and evaluation of print and digital resources for children and young adults in school libraries.

EDEL 549  The Leadership Role of the Teacher-Librarian
Explores and critically evaluates current trends and issues in school library leadership.

As an online program, technology is woven into the fabric of each course, with students completing all of their coursework and assignments online.

More information about the program can be found at https://sites.google.com/a/ualberta.ca/tl-dl/. The program currently has 59 students with one faculty member. Sessional instructors also teach in the program - Dr. Dianne Oberg, Dr. Joanne de Groot, and Dr. Lois Barranoik. Courses are $1000.00 USD each plus non-instructional fees and are available for International Study.

Development of the Program

Dr. Dianne Oberg moved the teacher-librarianship specialization online in 1997. The foundation of the specialization was “high structure and high touch” - courses would follow a traditional 13-week model and students would work together to socially
construct their understandings and build relationships with the instructor and their peers. TLDL started out very small with just a few Master of Education students, a few diploma students and students from other institutions picking up a few courses through a collaborative partnership between universities in Western Canada. It has grown exponentially in the last ten years. As the number of students and the number of courses we offered grew, we decided to focus solely on the Master of Education (MEd) degree.

**Needs Assessment/Curriculum Review**

Many teacher-librarians in Canada do not have a Master’s level degree. This is unlike Britain, the United States and Australia where most, if not all, of the teacher-librarians/school library media specialists (SLMS) will have a Master’s level degree. Most will have a Master of Library (and Information) Science/Studies (MLS/MLIS) degree while others will have a Master of Education degree with a specialization in school libraries. In the US, many states have certification requirements for SLMS and these usually expect a Bachelor of Education (BEd) and a MLS/MLIS degree. The same is true in Australia. From my experience in Britain, many of the school librarians will have a MLS/MLIS degree but not necessarily a teaching certificate and or BEd.

In western Canada, however, we have many “teachers in the library” with no further education in librarianship and some teacher-librarians with a post-graduate diploma. The diploma courses tend to be at the 300-400 undergraduate level. In Ontario, the highest qualification is a School Library Specialist; three courses completed after a BEd and some teaching experience in a library. We believe that this is NOT enough for teacher-librarians in the 21st century. In *Librarians as Learning Specialists: Meeting the Learning Imperative for the 21st century*, Zmuda and Harada (2008) present the idea that teacher-librarians are, in fact, learning specialists.

These specialists generally have no official classroom assignments per se because they work with the entire school population. They may include reading specialists, writing coaches, mathematics coaches, science coaches and instructional technology specialists. Learning specialists are strategically positioned to be teacher leaders. Zmuda & Harada, 2008, p. xvi)

To be a teacher leader, you need to have the same degree as other school leaders. In 2008, did a formal curriculum review and examined the role of the teacher-librarian in the 21st century schools and what knowledge, skills and attitudes would be the focus in our courses. With an advisory group we engaged in lots of talk, reading and throwing ideas around and then the opportunity we had been waiting for arrived. We were successful in an application for a Fulbright Senior Specialist and Dr. Marcia Mardis joined our faculty for three weeks in October of 2008. Dr. Mardis has been instrumental in the writing of American Association of School Librarians’ new *Standards for the 21st-Century Learner* and is a prolific researcher and conference presenter in the area of school libraries. This was our chance to work with a leader in the field and take a good hard look at our courses. In preparation for Dr. Mardis’ visit, we surveyed all of our recent Master of Education in Teacher-Librarianship graduates to find out more about what they were doing in schools and school libraries, how well prepared they felt they were based on their education, and what trends and issues they saw emerging in their work.
Our graduates told us that:

- The M. Ed degree empowered them to take on greater leadership roles in their schools and districts.
- The program was transformational – both personally and professionally.
- The online format provided them with flexibility and the opportunity to succeed while managing their diverse work and home responsibilities.
- They would highly recommend the program to others.
- They developed professional contacts and friendships across the country and in several other countries around the world.
- They enjoyed focusing on global issues of teaching, learning and the school library while having the opportunity for choice in assignments that could be tailored to unique situations and professional learning needs.
- They enjoyed the thoughtful, high quality discussions.
- They appreciated the quality instruction and the support of the TL-DL administration and community.
- This program will make you a better teacher not just a teacher-librarian.
- “What is learned and discovered in TL-DL is for all teachers, not just teacher-librarians.”
- The program is reasonably priced compared to similar programs in Canada and is a deal compared to programs from the US.

**Pedagogical Approach**

Using this foundation we developed the courses listed at the beginning of this paper. We also determined that for teacher-librarians to be effective educators in the 21st century, they need to be familiar and comfortable with Web 2.0. Also known as the Read-Write Web, Web 2.0 refers to the web-based tools that are readily available and used to create, communicate and collaborate with others. Blogs, wikis, photo and video sharing sites (Blogger, PBWiki, Flickr and Youtube), production tools (Animoto, Vocethread, Prezi) and social networking (e.g. Facebook and Twitter) are all examples of Web 2.0 tools. Our approach became one in which we purposefully exposed students (practicing teachers and teacher-librarians) to a variety of Web 2.0 tools in their program and provided activities, assignments, and assessments that helped them become active participants in online environments. The Pew Internet & American Life Project “has found that 64% of online teens ages 12-17 have participated in one or more among a wide range of content-creating activities on the internet, up from 57% of online teens in a similar survey at the end of 2004” (Lenhart, Madden, Rankin Macgill, & Smith, 2007, para. 2). Helping teachers and teacher-librarians understand the digital experiences of young people must be a part of graduate education in teacher-librarianship. These
online experiences are part of participatory culture and are defined by Jenkins et al. (2006) as:

A culture with relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to the novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with one another (at the least they care what other people think about what they have created). (p. 3)

The foundation of participatory culture is the connections made with and between others. Siemens (2005) proposed connectivism as a new learning theory for the digital age. The principles of connectivism are as follows:

- Learning and knowledge rests in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known.
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision. (Connectivism section, para. 3)

These two ideas, participatory culture and connectivism, form the foundation of the practice we have implemented at the University of Alberta to prepare teacher-librarians for their work in schools and school libraries in the 21st century. These two ideas are layered on top of the strong foundation of social constructivism that is evident in our course content, readings, activities, discussion topics and assignments.

Learning Management System

Because this specialization has been online for seventeen years, we have seen many changes in terms of Learning Management Systems (LMS). We began with WebCT – one of the first LMS options - and now use Moodle. We did not move to another LMS (although instructors in TLDL have taught in Angel, Desire2Learn and Blackboard) until the University of Alberta went to a new centrally supported LMS in 2011 when WebCT was discontinued. TLDL instructors were early adopters of Moodle and worked with our eLearning colleagues to pilot and test the new LMS. It is our position that, at this time, there is no one perfect LMS.

Supports and/or Obstacles to Development

The biggest support for the teacher-librarianship specialization’s move to online was Dr. Dianne Oberg and she continues to be a champion for the program. Obstacles to
development include faculty members who do not support online learning, who are threatened by the success of the program and its students, and who are fearful of the university’s push for more online and blended courses. There has been very little money needed to build this program. An initial grant to pay for a programmer and the development of courses by a handful of practitioners was used in 1997 but the program has been run on a shoestring ever since.

Changes in the Program over Time

One of the biggest changes over time have been the move from courses that were full of content (written lectures) to a more graduate seminar model where the course is socially constructed by the students and the instructor. Because we were pioneers in online education, we have seen radical changes in the power of the LMS, the availability of chat, podcasting and videocasting, streaming video, synchronous tools, Web 2.0 tools. Challenges now include how to provide access to this shared content outside of the locked-down LMS.

One of the monumental changes was the development and implementation of a new course in emerging technologies. Over the last few years the course has continued to evolve to reflect the most current trends and to incorporate our own changing understandings of ‘best practice’. While we made changes to the emerging technologies course over time, including the assessment of student work, it didn’t take long for us to notice other changes. Students who had completed the emerging technologies course were using their new knowledge and experience to collaborate with other students in other courses (e.g. wikis and Skype), present their new understandings (e.g. Voicethread, Animoto, Prezi, Slideshare), share resources (e.g. course Delicious or Diigo links, Evernote) and develop connections with others (e.g. blogging, Twitter and RSS Feeds). These students who had completed the course were demonstrating the power of Web 2.0. They were no longer passive consumers of information, they were now producers, collaborators, communicators, and creators who were becoming active participants in this new online culture. Students who hadn’t taken the emerging technologies course were seeing their fellow students sharing ideas, resources, content and new Web 2.0 tools to try. It became apparent that the emerging technology course was changing how we were teaching and learning across the rest of the TLDL courses.

In response to the experiences of students who had completed the emerging technologies course, the EDEL 540 *Introduction to Teacher-Librarian* was revised to include an expectation that students follow a core selection of blogs and Twitter feeds written by leading thinkers in the areas of school libraries, technology, inquiry, resources for children and young adults, leadership, and multiple literacies (see http://tldl.pbworks.com/w/page/4059591/FrontPage). Links to TED talks, webinars, online conferences and live feed videos were shared as part of course content in many of our courses. It was no longer enough for students to support ideas with research and professional articles and books. It became an expectation that students also integrate a variety of social media into their discussion posts, written assignments and presentations. This meant changing our assessment rubrics and expectations. New rubrics were created to ensure that social media was included in assignments and in general discussions. For example, we now use a common participation rubric across all courses in TLDL to evaluate how well students incorporate social media into their overall participation in the course.
As our students followed blogs and Twitter as part of courses, we saw connectivism start to be lived in our program. Discussions about how to build and maintain personal learning networks started to happen. The amount of beginning content (e.g. formal lecture notes) in our online courses started to decrease and we moved to a more connectivist approach. Classes were "emergent, distributed, chaotic, fragmented, non sequential and contextualized" (Anderson, 2010, slide 35). We modelled to our students that our personal professional learning networks, both face-to-face and virtual, were becoming more and more important in the way we learned. We blog, follow Twitter feeds and tweet out ideas, read blogs, participate in the conversations on those blogs, and add those ideas to our courses as they happen. We talk about how to manage our feeds, prune our blog list, and create a positive digital presence to help build social capital. While we did this we also made it an expectation that our students needed to be creating personal learning networks to be successful in the program. We hoped the knowledge and skills built in the program would enable our students to sustain their personal learning networks after they graduated.

By providing these experiences to our students (as learners), we believe that they will be better able to act as technology leaders in their schools and school libraries. In this way, we model and demonstrate our belief in the importance of connectivism and participatory culture as one way of thinking about learning and knowledge.

Evaluation of Program

We have completed a variety of different exit surveys and research projects to better understand the experiences of the students and needs of the profession. Our Associate Dean - Graduate Studies is also involved in creating a faculty-wide exit survey for students and this data can help us better understand our students' experiences within the context of the larger graduate program in the faculty. We learn a lot from our students who tend to stay in touch with us after graduation.

Lessons Learned and Future Plans

Being nimble and flexible is very important. Technology is essential to online learning and technology changes quickly. Be mindful of how technology in integrated into teaching and learning and how it might change experiences in an online program.

Getting outside help is crucial. Having an expert come to dig into your curriculum and the experiences of students can provide you with new directions and exciting ideas. Learn from the mistakes of others.

Sharing the load is important and building capacity is essential. This takes time and support from others.

Our hope is to build connections to other online programs in the Faculty of Education. Jennifer would love students to be able to choose either an online Master of Education or an online Master of Library and Information Studies degree with a teacher-librarianship focus. This would allow for more diversity of options, sharing of the teaching and course development load, and make teacher-librarianship more sustainable within the faculty.
References


Biographical Note

Dr. Jennifer Branch: Jennifer is the Coordinator of the Teacher-Librarianship by Distance Learning program and an Associate Professor in the Faculty of Education at the University of Alberta. She worked as a junior high teacher and teacher-librarian in Inuvik, Northwest Territories for 6 years and as a teacher in Northern Ontario and did research in Aberdeen, Scotland. Jennifer teaches courses in inquiry-based learning, teacher-librarianship, technology in schools and libraries and foundations of library and information studies. Jennifer’s areas of research are information-seeking processes, information literacy education, inquiry teaching and learning, and teacher-librarianship education. Please contact jbranch@ualberta.ca for more information.

Dr. Joanne de Groot: Joanne de Groot is Manager of the Highlands Branch of the Edmonton Public Library and an Adjunct Assistant Professor in the Department of Elementary Education, University of Alberta, Canada. Joanne has also been an online instructor for the University of British Columbia and San Jose State University. Her teaching areas include Web 2.0, educational technology, children’s literature, school librarianship, services for children and young adults in libraries, and collection development. Joanne’s research interests include teacher-librarian education, technology in schools and libraries, and summer reading programs in public libraries. Please contact degroot@ualberta.ca for more information.
The Promise of MOOCs: Communities of Practice and Affinity Spaces to Support Life-long Learning for Teacher-Librarians

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Abstract

This research paper presents the findings from a final survey of those who registered in The Hyperlinked Library MOOC (Massive Open Online Course) offered by the School of Library and Information Science at San Jose State University in the fall of 2013. The survey questions analyzed deal specifically with the development of a sense of community within the MOOC. Key findings include: purpose (shared interests and shared experience), people (connecting with others – participants and instructors and those outside the MOOC), participation (reading, writing, sharing, joining, responding, etc.), pedagogy (decisions about teaching and learning in the MOOC are so critical) and platforms (spaces for collaborative learning inside (BuddyPress) and outside (social media). School library organizations should look to the power of MOOCs to connect teacher-librarians with each other and provide professional development.

Keywords: MOOC, The Hyperlinked Library, professional development, community, teacher-librarians

Introduction

Teacher-librarians often work in isolation in their schools and school districts and professional develop opportunities available in schools and districts may not always meet their learning needs. Technologies such as blogs, Twitter, Facebook and YouTube allow teacher-librarians to access professional development opportunities and make connections with others. A new professional development opportunity for teacher-librarians is the emergence of the MOOC (Massive Open Online Course).

This research paper presents the findings of a survey that examined the experiences of participants who completed The Hyperlinked Library MOOC offered by the School of Library and Information Science at San Jose State University in the fall of 2013. The
MOOC had 363 registrants, was modeled on connected learning, and was hosted on BuddyPress ("a fully featured social network inside a wordpress.org site").

**Research Questions**

This paper will explore the respondents understanding of the term community and what community mean in terms of the course and the MOOC. The paper will also describe if, how and when a sense of community in this course developed for participants. Respondents who developed a sense of community were asked to identify the ways they saw community being constructed within this MOOC. The paper will also describe the experiences, formats and/or tools that participants felt contributed to this sense of community. Using these findings, the authors will discuss the implications of the MOOC environment for the professional development needs teacher-librarians, in particular, and for librarians and teachers, in general.

**Literature Review**

Much has been written about one-size-fits-all professional development (PD) approaches (Lieberman & Pointer-Mace, 2008) and current research suggests there are many PD alternatives to consider such as online communities (for example, Dede, Ketelhut, Whitehouse, Breit & McCloskey, 2009; Duncan-Howell, 2010), professional learning communities (for example, Lieberman & Pointer-Mace, 2010), and informal learning (for example, Hoekstra & Korthagen, 2011). A new form of PD is emerging as a possibility for teachers, librarians and teacher-librarians.

In the literature, although the development of MOOCs is attributed to the theory of open education, an educational model that has been around since the late 1990s and early 2000s (e.g. Massachusetts Institute of Technology’s OpenCourseWare initiative or MIT OCW launched in 2002), MOOCs are considered a relatively recent phenomenon. The term “MOOC” was coined in 2008 by David Cormier and Bryan Alexander when they described an open online course on Connectivism and Connective Knowledge” called CCK08. Widely considered as the first MOOC, CCK08 was created and facilitated by two prominent Canadian educators, George Siemens and Stephen Downes.

However, it was not until July 2011 when Stanford University announced its online course called “CS211: Introduction to Artificial Intelligence (AI),” taught by Stanford professor Sebastian Thrun and Google’s Director of Research Peter Norvig, that MOOCs exploded onto the scene of higher education and became more popular. Stanford’s open and free online course on AI garnered about 160,000 registered participants from all over the world, of which 20,000 completed the course (Rodriguez, 2012, p. 6), a course registration number that was more massive in scale compared to that of the first MOOC. The New York Times declared 2012 as the “Year of the MOOC” (Pappano, 2012). The “Year of the MOOC” also saw the launch of MOOC start-up companies in the United States, such as MITx, Udacity, Coursera, and edX. There are three key themes in the current debate about the impact of MOOCs in higher education. These themes include the dichotomy between cMOOCs and xMOOCs, the issue of MOOC accreditation and sustainability, and the overall efficacy of MOOC for student learning and success. In this review, we will briefly summarize the differences between cMOOCs and xMOOCs and discuss MOOC for learning and success.
Rodriguez argues that there are two types of MOOCs: cMOOCs or connectivist MOOCs and the “AI-Stanford like courses” (2012, p.1). On the one hand, cMOOCs are known as the type of MOOC that is based on connectivism and networking (Daniel, 2012 p.2), while on the other, the “AI/Stanford-like courses” (Rodriguez, 2012, p.1) or what is now known as “xMOOCs” is based on behaviorism (Daniel, 2012 p.2). The Hyperlinked Library MOOC was a cMOOC.

According to a study of MOOC participation in Edinburgh University, MOOC students are diverse – from high school students to retired professionals and individuals with a Master’s degree, only 33 per cent of its MOOC students wants to get a certificate from the university which suggests that there are other motivations at play as well, such as, learning new things, trying online education, improving one’s career, meeting new people, etc. (Swope, 2013). Hence, apart from the acquisition of “credits” or at least a “certificate of recognition,” MOOC participants have other reasons in mind for their willingness to join MOOCs.

The topic of student success or lack thereof is also a major concern for educators who are keeping track of the MOOC phenomenon. Indeed, how do we evaluate what participants are learning in a MOOC? How do we assess what is being learned if there are no requirements to take final examinations and/or hand in projects at the end of the course? Guzdial (2013) explains that MOOC’s completion and retention rates can be as low as 10 per cent (p. 18).

Indeed, the two popular kinds of participation in a MOOC, that is, active participation and lurking, are seen as an interesting aspect of this new educational model. Particularly, the concept of lurking challenges our traditional ideas of learning. This level of autonomy bestowed upon the students in MOOC settings is also what is considered attractive and unique about MOOCs. Indeed, as De Coutere (2014) points out, “in a MOOC, people self-register based on interest. Through a process of self-selection, a community of learners who have reached the learning goals at least as well as they would have done in a classroom program emerge, but on top have shown their dedication for the topic” (p. 21). Moreover, De Coutere believes that a “MOOC is probably the formal learning format that gets closest to achieving [for years now what we have been talking about in terms of “putting the learner in the driver’s seat of his own learning process]” (p. 22).

To continue examining of the notion of a community of learners, Wenger (2006) shares the three necessary components of a community of practice: the domain, the community, and the practice. “In pursuing their interest in their domain, members engage in joint activities and discussions, help each other, and share information” (Wenger, 2006, para. 4). Communities of practice can be small or large, local or global, face-to-face or online, formal or informal. However, Gee (2004) cautions the overarching interpretation often associated with communities of practice, particularly as these communities can create “belongingness and close knit personal ties among people which do not necessarily always fit classrooms, workplaces, or other sites where the notion of a community of practice has been used” (Gee, 2004, p. 77). Instead, Gee (2004) suggests the idea of affinity spaces as a more representative term to identify a socially situated group of learners.
DeVane (2012) questions, “How can communities have hundreds of participants?” (p. 165). Essentially, affinity spaces “are not centered on a social group’s constitution or boundaries of membership, but rather on the knowledgeable activity undertaken by learners and knowledge domain in which said activity takes place.” (DeVane, 2012, p. 166). Affinity spaces are centered upon the common endeavor of the space, as compared to class, gender, race or disability. An individual’s participation is concentrated upon their affinity for the space, whether they are newbies or masters. As we come to think about what a MOOC experience might mean to a learner, we can also consider how might the experiences of library professionals in The Hyperlinked Library MOOC help us to understand how the professional development needs of teacher-librarians might be met.

**Methodology**

Participants in The Hyperlinked Library MOOC in the fall of 2013 were asked to complete two Web-based surveys at the beginning and end of the course. A little over 40% (135) of the participants completed the final survey about their MOOC experiences. The survey included demographic queries, Likert scales, and open-ended question types. This paper analyzes questions related to the participants’ experiences in the MOOC community. The survey results were analyzed by looking for common themes and trends that emerged across questions and throughout the respondents’ comments (Bogdan & Biklen, 1992; Miles & Huberman, 1998).

**Findings**

The paper presents the findings from a survey completed at the end of The Hyperlinked Library MOOC offered by San Jose State University. The findings will be presented based on the themes that emerged from the analysis of the four open-ended questions. In one closed question, 105 of the 135 respondents felt that they belonged to a community in the course.

One question asked participants to describe what the term community meant in terms of the The Hyperlinked Library course and a MOOC in general. The majority of respondents indicated that community meant commonalities – shared experiences, shared interests, shared backgrounds, and shared commitment. One respondent shared that “community is a group of people with common ties and goals.” Another felt that the MOOC “was a place in the cloud where you can interact with like-minded people.” A third respondent explained “communities are made up of people with similarities... either in goals, locations, jobs, etc. In this case the community was made up of librarians or library students who were interested in social media.” Several participants were clear that community could be “physical or virtual.” A respondent summed this up when (s)he wrote that a community is “a sense of belonging to a larger than life group of LIS professionals who have collectively brought so much to the course.”

Respondents also indicated that community meant finding a “cozy” place in the MOOC – either within a homeroom (group of 40 students who worked together) or as part of a tribe (self-selected and created interest groups). One respondent stated, “I really liked
the small homeroom that I was assigned to along with the different tribes, so that would be my community.” Another respondent stated that a “community is a group that has something in common. For MOOC the community could be broad - 400 participants or more cozy, tribes and friends. Some community members are active and engaged and others live on the fringes.”

Respondents also noted that working collaboratively and cooperatively to learn new things and share information helped create a sense of community. One respondent wrote that “a community should support/help achieve your goals by supporting you and challenging you to be better. It involves active participation, thoughtful ‘listening’ and responding.” Another respondent wrote “I want to begin by stating that I love the word ‘community.’ In terms of this course, community meant a safe and supportive group of individuals who wanted to discuss anything about libraries. It was a group of collaborative and creative people.”

For some respondents, contributions made the MOOC a community. One respondent shared that “this MOOC did a great job identifying a large number of venues for community (tribes, homerooms, etc.). The most successful ones shared things. The least successful just had performance for the teacher.” Another respondent wrote that the MOOC was a community because of “interaction, content creation, the “feeling” of a collegial community, sharing with each other for the sake of it without expecting anything in return, common collective interest in furthering the goals of the library world.” Another respondent added that “in this course and in a MOOC, a community is a group of students who share their information, their learning, their knowledge. They meet virtually in a forum, or via social media. They give each other peer feedback. All learning should be open and accessible to all students.”

Others highlighted connections as the key to a community and in the MOOC this meant between participants, instructors and homeroom leaders. Some of the respondents felt very connected in the MOOC but others did not. One respondent wrote, “I never developed a sense of community in the course. It wasn’t obvious to me how to get involved. I was told to post my interests and establish communities. I didn’t as I couldn’t find other communities to join. I never figured out the purpose of homerooms or even who else was in mine.” Another respondent wrote, “In general, community means the place someone lives/works/spends a lot of time - some people helpful, others not so much. There is a life lesson in general in that definition. In terms of the MOOC, a community is represented by the members of the MOOC and the instructors. Again, some people are helpful, some not (to be clear instructors and homeroom moderators were in the helpful category). Community - a place where you go to live, learn, ask questions, hopefully get answers, and possible provide insight for others as well.”

Respondents were asked to identify when a sense of community developed in the MOOC. The findings indicated that community developed when the participants were involved in some sort of action: joining, blogging, writing, responding, commenting, sharing, reading, viewing, belonging, encouraging, and interacting. One respondent felt that a sense of community developed “from the beginning. Especially when I joined particular groups that related to me.” Another wrote that community developed, “once I started joining tribes and accepting friendships we could further share ideas and each other’s blogs.” Another shared, “I took the time to subscribe to some tribes and read posts of the people in my homeroom.” A further respondent shared that a sense of community developed “immediately upon joining. The week before the first lecture
materials were released the MOOC felt like being back in the dorm before the semester started, everyone getting to know each other, finding their way around, helping each other out, creating and joining tribes and chattering with enthusiasm.”

Respondents indicated that the act of blogging helped a sense of community to develop. One respondent wrote, “I am one of the community members who struggles(ed) with social media, struggled with the technology behind the course tools (e.g. creating my own blog), and struggled with exposing myself to peer review. But I stuck it out and did manage to create my blog (first time ever) and keep up with weekly postings to correspond with our modules. I found that being able to read my colleagues’ blogs made me feel part of a community, and eventually I started to feel more comfortable with putting my opinions ‘out there’.” The acts writing, responding and commenting on blogs was key to developing a sense of community for many of the respondents. One respondent shared that “I felt through comments to my blog posts and the ones I gave to others, I developed a sense of community.” Another respondent explained, “I was so excited the first time someone commented on my blog post. I never expected that. I felt I was creating a conversation.” A respondent shared, “I am not a natural blogger so this was a new development for me. It was great to see that people commented on posts and offered suggestions. Very cool form of engagement.” For one respondent, “Logging in to read and contribute comments was important to me to ensure that I didn’t become isolated.”

There were also respondents who found The Hyperlinked Library MOOC to be difficult in terms of building a sense of community. Reasons for the lack of sense of community included “not being able to fully engage”, “lack of time”, “not in my nature, there were lots of opportunities to connect with others, but I didn’t take advantage of these”, “didn’t have enough energy after work to participate in the MOOC”, “didn’t participate”, “some personal issues and not doing the work.” One respondent wrote, “I wasn’t as fully involved as I could have been, maintaining a blog and communicating virtually with a large number of people is new to me, and I am of an age (or generation) that still finds it difficult to be so open to a virtual world, to virtual self-exposure.” One respondent noted, “At first it was really difficult for me because I am a very private person and I don’t like to post information about myself online. As the course progressed I felt more comfortable and it was great to find other people who shared the same passions. Another respondent shared, “several people reached out to me. If that has not happened, I think I would have felt like I was just writing and responding for myself.” A third respondent explained that “the number of participants is too large to feel that I was a co-community member with everyone. I did however feel we were doing something together/having a shared experience.”

Several respondents highlighted the idea of a shared experience in the MOOC by speaking specifically about the importance of sharing in building a sense of community. One respondent wrote that, “I like sharing things that were related to the course. I found the off topic sharing to be a little distracting. There were a lot of things I immediately used and that was some of the best instances of community. Discussions related to badges, public libraries and cutting edge tech were useful. Another respondent shared, “My first community experience was probably the sharing of websites in the Big Blue Marble group. There was a lot of back-and-forth in that group; later the library resources group had the same kinds of interactions.” A third respondent noted, “My reading of fellow students’ posts including useful information, inspiring reflections and people’s
comments these days further touched me by their candidness and spirit of sharing for the best."

For some respondents, the acts of reading and viewing helped to develop a sense of community. One respondent wrote that, community developed, “as I read more of the writing of other participants.” Another respondent shared that the “videos by lecturers helping give a feeling of one-ness to the large group since I knew that everyone was seeing the same videos.” “From the very beginning Michael and Kyle made it feel like a community by the way they delivered the lectures (talking to us not at us)” wrote another student. Another respondent noticed that, “the lecturers referred in their lectures to blog posts they had read and sometimes that commented [on blog posts].” This notion of reading and viewing was highlighted by another respondent who wrote, “By reading and viewing the selecting course materials with a large group and then reflecting via blogs and homeroom chatter, the community developed. The video presentations felt personally developed for the MOOC community to guide us, I especially liked them.” Another noted that, “the lectures by Michael, Kyle and the guests were empowering and passionate. This was a critical part of the community as they sparked conversations, ideas and learning among participants.”

The themes of belonging and encouraging were also present in the responses to the survey question. One respondent shared that, “everyone was welcoming, helpful and encouraging of each other.” According to another respondent, the sense of community “started with the first email after being accepted to participate. The tone was welcoming. The first message from my homeroom leader Carlie was encouraging and understanding.” Other respondents used words like “inviting”, “overwhelmed by support”, “helpful”, and “personal feedback” to describe different experiences within the MOOC community. One respondent stated that, “Michael by his friendly professionalism, caring, knowledge, stature, helps set a tone from the beginning of the many positive values and respectful, authentic interaction to come.” Another respondent summed up these feelings by writing that, “the group valued my input and my contribution and this makes me feel valued and gives me a sense of belonging.”

Respondents were asked to identify the ways community was constructed within this MOOC. The use of BuddyPress as the learning platform and of other social media technologies (LinkedIn, Facebook, and Twitter, for example) enabled participants to build their community on many different levels. Respondents indicated that blogging was very important to the development of community with the MOOC. One respondent stated it clearly, “I think the blogging was the best means of developing a community.” Another shared that, “being forced to create a blog (I struggled greatly at first) and post to it regularly and being able to read/comment on my colleague’s blogs created a sense of community for me.” “The blogs, tribes and updates forged a really strong sense of community. Encouraging us to comment on each other’s assignments was a great idea” wrote another respondent. Further comments included sharing that, “the blogging experience (reading the comments from the other participants) gave me a feeling of classroom that I have not seen replicated in other online environments.”

Tribes and Homerooms - smaller groups within the larger MOOC - were very important to developing a sense of community for several respondents. One participant shared, “I enjoyed the use of ‘tribes’ to make me feel connected to a smaller group within the wider community. Everyone was welcoming, helpful and encouraging of each other.” Another participant explained, “I was friended by people I never would have met F2F. I learned
things I would never have learned without participating in this experience. I thought it was quite useful assigning people to ‘homerooms’ so there would be some closer mentoring for those of us who are unfamiliar with MOOC process. The ‘Tribe’ concept was also fun, especially some of the silly ones that sprang up; it was a great example of how we can be separate, but similar.” The community was built by “having a homeroom the friendly and approachable nature of those running the course, the Facebook-like interface and design, the various tribal interest groups, the common sense that we’re in this together.” According to other respondents, the Tribes “was a great idea”, “gave a sense of belonging”, and was “a means of connecting those with like interests, experiences, and library settings.” One respondent stated that, “the tribes - and the ability to create them and be invited to others - was helpful.” “While the vast majority of tribes failed to stay active, I think the process of setting them up got people talking to each other” summed up one respondent.

Many of the respondents in the MOOC commented on the use of a Facebook-like social media platform called BuddyPress and how it supported the development of a sense of community. One respondent indicated that (s)he “really liked just clicking the recent activity link and dipping my toe into the stream of content that was flowing out from other students.” Another respondent commented that, “the social media-esque design of the website had a lot to do with it. I felt I could post interesting things and leave a comment on anything that piqued my interest.” “Logging into the Hyperlinked WordPress site and seeing who had recently been online and made comments was also wonderful. It motivated me and illustrated how the community was a living thing” wrote another respondent. The MOOC instructors created a badge system within BuddyPress that allowed students to be rewarded for completing a task. One student wrote that, “I’m not one that really cares about badges as a priority - but when you get one you feel pleased. Like you truly accomplished something. Then you look and you see other participants awarded and you feel a similar proudness for your co-learners. If you are competitive, it gives you something to aspire to. It was truly amazing how the interactivity created an authentic cohesive participatory experience that some onsite classes do not achieve.”

Respondents also indicated that they like the “allowing of the MOOC conversations and connections to go beyond the MOOC, i.e., Twitter, GoodReads, etc.” Twitter was one tool that participants in the MOOC used to help build a sense of community. One respondent stated that, “the Twitter backchannel (#HyperLibMOOC) was also enormously helpful to me to find a smaller group of people who were interacting with the MOOC in ways that worked for me.” Respondents indicated that Twitter was a great tool for finding “communities of interest” and for “helping identify who else was in this experience with you.” One respondent felt that Twitter might be better used. (S)he suggested that, “maybe the instructors could engage via a twitter chat or the people involved could run a twitter chat and become more involved and be able to share their own work and places of work more.” Some respondents felt that the many options for tools made the MOOC “overly complex” and some did not use “Twitter or Facebook” for the course. The pedagogical decisions of the instructors and the unique features of BuddyPress were critical to building community for many respondents. The responsive nature of the course and the role of the instructors were also key.

Discussion

Understanding how students experienced community in The Hyperlinked Library MOOC can help us when we think about ways to reach out to teacher-librarians (and teachers
and librarians) to connect and provide professional development. The majority of respondents indicated that community meant commonalities – shared experiences, shared interests, shared backgrounds, and shared commitment. Teacher-librarians tend to work in isolation and their work is quite different from that of other teachers in the school. A cMOOC for teacher-librarians would be a place to share experiences, interests and to advocate for school library programs. Respondents to the survey also indicated that community meant finding a “cozy” place in the MOOC. When thinking about online PD, it is important to remember that some participants may need to have a cozy place within a larger learning space. Respondents also talked about working collaboratively and cooperating to learn new things and share information. Teacher-librarians like to share and collaborating with other teachers is central to their work. A MOOC must have a place for sharing of resources. Having an opportunity to collaborate with other teacher-librarians could be a powerful learning experience. For some respondents, contributions made the MOOC a community. It is important that teacher-librarians see their professional development as contributing to some bigger than themselves and their own school library. Connections were also seen as an important part of the development of a sense of community in the MOOC. Teacher-librarians who work in isolation especially need the opportunity to develop connections with others - researchers, teacher-librarianship educators, and other teacher-librarians from around the world.

The findings indicated that community developed when the participants were involved in some sort of action: joining, blogging, writing, responding, commenting, sharing, reading, viewing, belonging, encouraging, and interacting. It is important that a MOOC for professional development for teacher-librarians be an active space where participants are creating new knowledge. While many of the respondents to the survey felt that they developed a sense of community in the MOOC, others found it difficult to be successful. If an organization was to offer a MOOC for teacher-librarians, there must be an understanding that it cannot be too time intensive. One option might be to run smaller modules within a larger MOOC where people can pop in and out as their time allows. The importance of belonging and encouraging of participants was also highlighted in the responses to the survey questions. Any professional development opportunities offered in a MOOC format must allow for different ways to belong to the community and there needs to be MOOC leaders who will model encouragement, support and respect for all participants. It was also clear that the MOOC platform is important to the development of community. BuddyPress, for example, provided a social media-like space with an activity stream that allowed participants to follow the progress of the course and develop tribes (affinity spaces) to connect with others. The Hyperlinked Library MOOC also provided opportunities for participants to connect in other social media spaces such as Twitter, GoodReads and Facebook. There is much to learn from the participants in The Hyperlinked Library MOOC in terms of if, when and how they developed a sense of community.

Implications and Conclusions

Understanding the experiences of library professionals who participated in The Hyperlinked Library MOOC can help us think about and plan for effective professional development for teacher-librarians. Key findings include: purpose (shared interests and shared experience), people (connecting with others – participants and instructors and those outside the MOOC), participation (reading, writing, sharing, joining, responding, etc.), pedagogy (decisions about teaching and learning in the MOOC are so critical) and
platforms (spaces for collaborative learning inside (for example, BuddyPress) and outside (Twitter, blogs, Facebook, GoodReads, Instagram, Pinterest, etc.)).

The notion of affinity spaces seems to apply to the way participants connected to each other through the MOOC. School library organizations should look to the power of cMOOCs to connect teacher-librarians with each other and provide professional development. In a profession where many teacher-librarians work in isolation, the authors see great potential in cMOOCs. Providing a learning space and a program of topics would be welcomed by teacher-librarians at the provincial/state level, at a national level, and at an international level (IASL and IFLA). Associations could work together to host different cMOOCs at different times in the year making professional development opportunities available to large numbers of teacher-librarians.

References


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“This role pushed me in new directions”:
Understanding the Transition from Teacher to Teacher-Librarian

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Abstract
This study explores the experiences of five participants as they transition from teacher to teacher-librarian. The study examines reasons for becoming a teacher-librarian, the opportunities, barriers/challenges and successes in the first year as a teacher-librarian, and the previous experiences that informed their practice. Some these emerging included: exposure to teacher-librarians while teaching, desire for change in their professional life, sharing a love a reading and/or inquiry-based learning, desire for more of a leadership role in a school, collaborating with teachers, building a reading culture, promoting literacy initiatives, trying to have an impact on the whole school, lack of understanding of the role of the teacher-librarian, technology and connectivity challenges, library design and space issues, clerical work, time and priority management and debunking stereotypes about librarians. This study contributes to our understanding of the early experiences of teacher-librarians and brings in the framework of possible and provisional selves as a lens to examine teacher-librarian identity.

Keywords: New Teacher-Librarians, Possible Selves, Identity, Teacher-Librarianship Education

Introduction
Do you remember your first years of teaching? Your transition from student to teacher? The change(s) in your identity? Your opportunities, barriers/challenges, and successes? Would it have helped you to understand how other new teachers experience this transition?

In hopes of helping new teacher-librarians understand the transition from teacher to teacher-librarian, this study presents findings from the first year of a three-year study following five teachers as they transition to the role of teacher-librarian. As instructors in the Teacher-Librarianship by Distance Learning program at the University of Alberta in Edmonton, Canada, we are interested in how current students and recent graduates experience the
early years of becoming a teacher-librarian. We also believe that other new teacher-librarians, teacher-librarianship educational programs, and researchers will be interested in this study.

Research Questions

The following questions inform this paper:
1. What factors influenced these new teacher-librarians to take on the role of a teacher-librarian?
2. What were the opportunities, barriers/challenges and successes in the first year as a teacher-librarian?
3. What previous experiences (formal and informal) did new teacher-librarians value as they transitioned into their new roles?

Conceptual Framework

This paper explores the concept of “possible selves” in the transition from teacher to teacher-librarian (Markus & Nurius, 1986). “Possible selves derive from representations of the self in the past and they include representations of the self in the future” (Markus & Nurius, p. 954). These selves are individual and personal while also being social. This concept is interesting as we look at the crafting of the professional identity of teacher-librarians. Ibarra (1999) introduced the idea of “provisional selves” and suggested that a person transitioning into a new role follows an iterative process of observing role models, experimenting with provisional selves and evaluating provisional selves (p. 787). Ibarra’s research examined a business culture, the transition of people within the organization to a new role within that same organization, in much the same way that teachers transition to the role of a teacher-librarian.

Literature Review

There is very little research about the first few years of becoming a teacher-librarian and nothing looking at teacher-librarians in the Canadian context. To prepare teachers to become teacher-librarians we do have Canadian (Achieving Information Literacy) and American (Standards for Initial Preparation of School Librarians) Standards, as well as the work of other library organizations around the world. In Canada as a whole, a very small number of teacher-librarians will have an MLIS degree or a Master of Education degree in Teacher-Librarianship. In a recent survey of teacher-librarians in Canada (Branch and de Groot, 2011), only 10 of 178 respondents had an MLIS degree and only 10 more had a Master of Education degree. In western Canada, many more teacher-librarians have a post-graduate diploma. The courses tend to be at the senior undergraduate level. We also have “teachers in the library”; those that are assigned to the school library for a part of the school day but with little or no further education in teacher-librarianship. As a result, in Canada we have a very diverse group of teachers in the role of teacher-librarian. This study is interested in new teacher-librarians who are qualified for the position; those that have completed or will soon complete a Master of Education degree in teacher-librarianship.

There is much research about teacher identity and pre-service preparation to help inform the experiences of new teacher-librarians (for example, Battey & Franke, 2008; Florio-Ruane & Williams, 2008; Horn, Nolan, Ward & Campbell; Olsen, 2008; Thomas &
Beauchamp, 2007). Thomas and Beauchamp highlight that the success and well-being in a new profession is dependent on a strong sense of professional identity. Horn et al. tell us that “teaching identities are an ongoing project and this identity construction is a productive place to connect to novice teachers’ own learning goals” (p. 70). Battey and Frank remind us that “we do not develop our identities in isolation” (p. 128) and that “local communities limit the variety of practices that teachers have access to” (p. 129). Forio-Ruane and Williams (2008) encourage us to examine “the stories of our own paths and the stories of the paths taken by others...as a significant part of the development of one’s identity not only as a teacher - but as a member of the larger teaching profession” (p. 8). Enyedy, Goldberg and Welsh (2005) remind us that teachers may struggle with “multiple conflicting beliefs, goals and knowledge” (p. 91). Olsen encourages the inclusion of learning and teaching autobiographies, conversations about contradictions and paying formal attention to personal and emotional effects of identity transitions (p. 38).

Research on the unique professional learning needs of teacher-librarians indicates that “interaction with other school library professionals is not a regular occurrence” (Mardis & Hoffman, 2007, Online focus groups as a motivator for decreasing educator isolation section, para. 2). Providing opportunities for teacher-librarians to reflect and connect resulted in both “a sense of shared circumstances (I am not the only one like this) and the opportunity to learn of successful strategies for school librarians [ies] that had immediate relevance (I want to try that out here)” (Mardis & Hoffman, Online focus groups as a motivator for decreasing educator isolation section, para. 2). This study allows new teacher-librarians to reflect on their experiences, make connections between previous formal and information learning and their new role, and think about their new identities.

Methodology

This research project is following five new teacher-librarians for three years. The five teacher-librarians included in this research are working in a variety of school settings, including elementary, junior high school, and high school libraries. They have all been classroom teachers in the past and at the time that this research project began, were all currently enrolled in, or recently graduated from, a graduate level teacher-librarianship education program. This research paper presents the findings from year one of the study. Individual interviews were completed three times in year one (September 2012, January 2013, and June 2013). The interview transcripts were analyzed, by looking for common themes and trends that emerged across questions and throughout the comments (Bogdan & Biklen, 1992; Miles & Huberman, 1998).

Findings

This study follows five new teacher-librarians through the first three years of their transition from classroom teachers to teacher-librarians. This purpose of the study was to document their successes and challenges in their new roles and to better understand their experiences as new teacher-librarians. This paper focuses on their first year and the findings presented below were gathered from three interviews with each of the five participants. This paper reports only on the findings related to three of our initial research questions. This section presents findings using three overarching interview questions to organize the findings and uses representative quotes to support the key ideas and themes from each question.
**New Teacher-Librarians**

The first research question asked what factors influenced these new teacher-librarians to take on the role of a teacher-librarian. Two participants indicated that instability was one factor in deciding to become a teacher-librarian. “Declining enrollment and yearly layoffs” meant that these two classroom teachers were looking for more stable teaching positions in their district. One participant indicated that it was exposure to the role of the teacher-librarian that excited her. “Two days after being assigned to the library for one block of prep-time for a full-time teacher-librarian, I knew this was the place for me.” For another participant, it was “working in the school with a TL that was a mentor and collaborator” that was the reason for wanting to pursue further education in teacher-librarianship. She stated, “I wanted to do an M.Ed. but I didn’t want to go into administration.”

For several participants, the move to teacher-librarianship was based in a need for change. One participant spoke about “loving to read and wanting to share my love of reading.” Another talked about wanting to do more inquiry-based learning and wanting to share that with others. A third participant was offered a district librarian position and was tempted to take it until she realized that she was committed to “the teaching piece” of the role rather than the administration piece. One participant spoke at length about being in a specialized position (French immersion teacher) and wanting to be more of a generalist. She wanted a more senior leadership role, desired a change, wanted to renew her skills, wanted to develop another area of expertise, and learn more about technology.

**Opportunities, Barriers/Challenges and Successes**

During each of the three interviews, the researchers asked new teacher-librarians to describe the opportunities, barriers/challenges, and successes in their school library program. We report the findings from the fifteen interviews together here.

**Opportunities**

Participants listed many opportunities for their first year as a teacher-librarian. They were excited to be working with teachers and enjoyed collaborating. Comments included opportunities to “mentor new staff” and work with teachers “you know but haven’t worked with.” One participant added, “People are happy to work with me.” One participant saw that building a reading culture in her school was a huge opportunity because of very low circulation statistics. Three teacher-librarians mentioned that the first year as a teacher-librarian provided them with the opportunity to reinstate silent reading initiatives such as DEAR (Drop Everything And Read).

One participant said that her greatest opportunities were a supportive administrative team and “working with an amazing library tech with similar goals and vision.” Two participants talked about inquiry learning/project-based learning opportunities in their schools. Another new teacher-librarian felt that having a flexible schedule allowed her so many opportunities to make a difference in the school library. One participant felt that the first year as a teacher-librarian provided her with “opportunities to continue to expand my educator’s toolbox, expand or add to my own experience, and work with the whole school body.” For her it was a chance “to have an impact.”
Barriers/Challenges

All of the new teacher-librarians articulated barriers and challenges they saw in their new role. One teacher-librarian was filling in for another on leave and so the biggest challenge was the library was not “her space.” She told us that the previous TL was much loved and staff would always say, “Susan always…. Susan would never….“ This theme of staff resistance came out as a barrier in several of the interviews. One teacher-librarian suggested to a fellow teacher, “Hey, we could try this….” But the other teacher was quick to reply, “No, I do this on day 67.” “Staff responses haven’t always been positive” shared one new teacher-librarian and another commented that, “It takes time to develop relationships with staff.” Several new teacher-librarians also noted that understanding the role of a teacher-librarian was also a barrier to their work. One teacher-librarian shared that, “Administrators don’t know what the role is.” Another teacher-librarian worried about “being perceived as competent.” A third teacher-librarian felt that she struggled with the “stereotype” of a librarian.

Technology was another theme that came out of the interviews with the teacher-librarians. One teacher-librarian reported that the school and school library have low access to technology. Another was concerned with bandwidth and the blocking of social media sites. A third said that “lack of connectivity” was a big issue in the school library.

A challenge for one teacher-librarian was the physical space. For another teacher-librarian, a challenge was the “logistics of taking over” a new space including passwords and learning about the library management system. Two teacher-librarians felt that budget issues were barriers to the development of a quality school library program. One teacher-librarian responded that while there is enough money for this year, “I am concerned about the budget going forward.” Several teacher-librarians were concerned about time and “finding time to do everything.” This included the large amount of clerical work when there is insufficient support staff - “I am not a clerk, I am a teacher.” Another teacher-librarian noted that she struggled to “find enough time to do everything.” A third teacher-librarian commented that, “Time management is a challenge trying to determining which projects to take on that will have the most impact.” For one teacher-librarian, the biggest challenge was “keeping up with the momentum of change.”

Successes

The theme of literacy/reading initiatives came out as a success for several of the new teacher-librarians. This included silent reading promotion in the school (DEAR), collection development in the fiction section, and increasing circulation. One teacher librarian told us that her greatest success was being able to “focus on literacy. I love talking about new books and the kids are always surprised when the library has the newest book.” Another new teacher-librarian that she loved “developing her role in the school for readers’ advisory.” After putting a lot of effort into collection development, this teacher-librarian could report that “circulation statistics were way up for fiction and recreational non-fiction.” One teacher-librarian noted that her successes included “leading the school’s professional book club.”

One teacher-librarian felt that a success was that she was “more confident in her abilities to help students with research.” This confidence allowed her to start “recommending information and forwarding information to other staff members.” Another teacher-librarians commented on how she had developed a “good rapport with staff.” A third
teacher-librarian worked with 36 of 42 teachers over the year on projects and saw this as a huge success. A fourth new teacher-librarian told us about the woodshop teacher in her school who went to the administration to insist that they needed to keep the teacher-librarian “in the role because she hasn’t missed a beat.” That same teacher-librarian felt that she was “making good connections with LA and SS teachers.” Two of the teacher-librarians felt that one big success for the year was “providing professional development for other teachers.” These successes helped to increase the time in the school library for one new teacher-librarian from “four blocks out of eight to five.”

Several new teacher-librarians shared their excitement in improving the school library space. One completed “weeding to allow for some renovations to occur.” Another created a section for board games and “built a board game collection for students and teachers.” A third felt that “creating a welcoming space where students want to be” was her greatest success. Other successes for the new teacher-librarians included their work in building their libraries virtual spaces. One was excited about “initiating the process of getting access to databases for students.” Two more were pleased with their work building their library websites.

**Previous Experiences**

The third question in the research study sought to determine what previous experiences (formal and informal) the new teacher-librarians valued as they transitioned into their new roles? All of the new teacher-librarians spoke about the importance of the learning in their graduate programs. Two spoke specifically about the “Web 2.0 course” and one stated that the course was “paradigm shifting.” The importance of understanding educational research was felt to be important for one teacher-librarian. This was seen as crucial for “knowing how to assess results of standardized tests.” One teacher-librarian felt that being in the Teacher-Librarianship by Distance Learning program “had given her a wealth of knowledge and information and had made the transition smoother.” One teacher-librarian noted that discussions with colleagues in graduate courses had been very important.

One new teacher-librarian spoke at length about her previous teaching experiences. She explained that having 20 years of classroom teacher experience was essential for her new role. She described that her teaching in “French immersion was resource-based.” Therefore she was “very comfortable with teaching with resources.” She elaborated that in French immersion “you are the program and this is the same as a teacher-librarian.” Her experience of “speaking another language made her better able to make connections with other people.”

New teacher-librarians spoke of the importance of the knowledge of literature, having an English teacher background, and being readers. One new teacher-librarian felt knowing the curriculum was very important in this new role. Another spoke about her knowledge of inquiry and said that “inquiry-based learning had a huge role in the success I am having now.” Several new teacher-librarians spoke about mentorship - from other teacher-librarians in their school districts and from instructors and colleagues in their graduate programs. Several of the new teacher-librarians also spoke about the importance of informal mentorship through following blogs and Twitter feeds of practicing teacher-librarians around the world. Mentors were seen as a critical support system in the first year as a new teacher-librarian. For one teacher-librarian, “asking big questions and sharing successes and failures with mentors” was the key to her growth as a new
teacher-librarian.

The new teacher-librarians did feel that there were things that wished they knew more about. One felt that she needed to know much more about “designing an engaging physical space.” Another teacher-librarian found that she needed help with book preparation and the clerical work. A third wished she knew more about effective searching. Several spoke about the lack of district leadership in school libraries.

Discussion

This study documents the experiences of five new teacher-librarians as they transition into their new roles and seeks to understand their experiences as new teacher-librarians. The first research question asked what factors influenced these new teacher-librarians to take on the role of a teacher-librarian. Participants indicated that instability in their teaching role, exposure to teacher-librarians, desire for change, sharing a love a reading and/or inquiry-based learning, and desire for more of a leadership role in the school were some of the reasons to become a teacher-librarian. Participants listed many opportunities for their first year as a teacher-librarian. They were excited to be collaborating with teachers, building a reading culture, promoting literacy initiatives, and trying to have an impact on the whole school. These findings remind us of the importance of a strong sense of professional identity (Thomas & Beauchamp, 2007).

All of the new teacher-librarians articulated barriers and challenges they saw in their new role. These included: filling in for a teacher-librarian, working with teachers, lack of understanding of the role of the teacher-librarian, technology and connectivity issues, library design and space issues, the amount of clerical work, time and priority management and debunking stereotypes about librarians. These struggles with “conflicting beliefs, goals and knowledge” mirror the work of Enyedy, Goldberg and Welsh (2005). The teacher-librarians had a clear sense of the work they should be doing in their school libraries and struggled when they were unable to do that work.

Successes for the teacher-librarians included: literacy/reading initiatives, research and information sharing, good rapport with staff, physical and virtual library space changes, and feeling welcomed, praised and rewarded for their work. As Olsen (2008) noted, it is essential to pay formal attention to personal and emotional effects of identity transitions. Celebrating successes and understanding barriers and challenges were a part of the ongoing identity construction for these new teacher-librarians (Horn et al., 2008).

The research study sought to determine what previous experiences (formal and informal) the new teacher-librarians valued as they transitioned into their new roles. Findings included: importance of the learning in their graduate programs, exposure to new and emerging technologies, discussions with fellow students, previous teaching experiences, knowledge of literature, having an English teacher background, knowledge of inquiry, comfort with teaching with resources, and mentorship both local and global. The researchers feel that it is essential for teacher-librarians to look to their past to see how this informed their new identities (Forio-Ruane & Williams, 2008).

Implications and Conclusions

As instructors in a program that educates teacher-librarians, we feel it is essential for us to understand the early year experiences of teacher-librarians as they transition from being
classroom teachers. We also believe that new teacher-librarians, other teacher-librarianship educators and researchers in the area of school libraries will also be interested in the findings of this study. There is very little research about the first few years of becoming a teacher-librarian and nothing looking at teacher-librarians in the Canadian context. This study contributes to our understanding of the early experiences of teacher-librarians and brings in the framework of possible and provisional selves as a lens to examine teacher-librarian identity.

Several themes emerged to help new teacher-librarians as they transition to their new roles. We heard that the new teacher-librarians built on their own personal strengths - whether it was inquiry, literacy or relationships with teachers. They were trying to make themselves indispensable. The participants all mentioned that they were becoming curriculum experts and were demonstrating that they could be technology leaders in their schools. The participants were championing their collections - whether is was readers’ advisory for fiction and popular non-fiction or sharing resources from databases and the web. In the interviews, the new teacher-librarians highlighted the importance of developing relationships with teachers and building a support system with mentors. It was also noted that these new teacher-librarians were taking advantage of opportunities and championing the role of the teacher-librarian in their schools and school districts.

This study informs classroom experiences, assignments and projects in pre-service teacher-librarian courses, the professional development experiences required for new teacher-librarians, and the way we model the role of the teacher-librarian in pre-service teacher-librarianship programs. More broadly, this research may also help school districts and professional associations develop formal and informal learning experiences and mentorship opportunities for new teacher-librarians. Most importantly, this study will help new teacher-librarians understand the experiences of those that went before them as they navigate the shift from teacher to teacher-librarian.

References


**Biographical Note**

Dr. Jennifer Branch: Jennifer is an Associate Professor in the Faculty of Education at the University of Alberta. She worked as a junior high teacher and teacher-librarian in Inuvik, Northwest Territories for 6 years and as a teacher in Northern Ontario and did research in Aberdeen, Scotland. Jennifer teaches courses in inquiry-based learning, teacher-librarianship, technology in schools and libraries and foundations of library and information studies. Jennifer’s areas of research are information-seeking processes, information literacy education, inquiry teaching and learning, and teacher-librarianship education. Please contact jbranch@ualberta.ca for more information.

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School libraries and school librarianship in Brazil

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This paper aims to outline a summary of the situation of school libraries in Brazil and of issues that affect their development, using the methodology of textual analysis. Two points emerge from the analysis: 1) the emergence of academic research groups since the 1990s and the consequent increase in school library studies indicate that the theoretical foundation for the improvement of these institutions is being built and 2) the enactment, on May 24, 2010 of Act 12244 which enforces that each Brazilian school of basic education has a library represented a great achievement but its effectiveness remains to be proven.

Keywords: School libraries, School Librarianship, Brazil

Introduction

The first school libraries emerged in Brazil in the sixteenth century in the convents of the Jesuit priests who arrived in the country to convert the Indians and instruct the first Portuguese settlers. In the seventeenth century, other religious orders were established and its facilities housed libraries that supported the teaching role of these institutions. Although the convents have suffered a period of decline in the eighteenth century, religious orders continued to maintain schools now to meet the learning demands of the society elite: children of businessmen, intellectuals and government officials, like what happens until today. Currently, in the private education sector, in addition to religious schools, there is a range of secular educational institutions with various pedagogical orientations. Within public schools, libraries began to be created around the 1930s, when education was influenced by innovative learning methods stimulated by the movement called New School (Silva, 2011), coinciding with the creation of library schools in the country.

Nowadays, although the curriculum guidelines for basic education recommend teaching based on constructivist theories and consider the school library as a key learning resource (Brazil, 1997), many studies point to the precarious situation of school libraries.

Objective and Methodology

This paper aims to outline a summary of the situation of school libraries in Brazil and of issues that affect their development. The methodology was textual analysis made of relevant documents selected among those presenting statistical data, and critical and evaluative studies on the panorama of Brazilian school libraries.
School Libraries Overview

The latest data on basic education in Brazil were collected by the 2012 School Census of the Ministry of Education (MEC). The Census summary document reveals that there are 192,676 establishments of basic education in the country. Basic education serves students 0-17 years. It is divided into: Preschool, which serves students 0-5 years; Fundamental School, students 6-14 years and High School, students 15 to 17 years. In these establishments there are 50,545,050 students enrolled, being 8,322,219 (16.5%) in private schools and 42,222,831 (83.5 %) in public schools. Of these, concerning school jurisdiction, the county accounts for nearly half of all enrollments (45.9 %), the equivalent of 23,224,479 students, followed by state schools, which serve 37.0 % of the total of public schools (18,721,916 students); the federal public schools participates with 0.5 %, namely 276,436 students (Brazil, 2013). The Census document presents the percentage of libraries/reading rooms in fundamental and high schools, shown in Table 1.

Table 1: Students in Fundamental and High Schools with Access to a Library/Reading Room

<table>
<thead>
<tr>
<th>Education level</th>
<th>School jurisdiction</th>
<th>Number of schools</th>
<th>% of schools with library/reading room</th>
<th>Number of students</th>
<th>% of students with access to library/reading room in the school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamental school</td>
<td>Public</td>
<td>122,716</td>
<td>42.2%</td>
<td>25,431,566</td>
<td>75.1%</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>21,989</td>
<td>84.4%</td>
<td>4,270,932</td>
<td>90.9%</td>
</tr>
<tr>
<td>High school</td>
<td>Public</td>
<td>19,279</td>
<td>87.4%</td>
<td>7,310,689</td>
<td>92.4%</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>7,885</td>
<td>93.4%</td>
<td>1,066,163</td>
<td>94.5%</td>
</tr>
</tbody>
</table>


The above numbers indicate that the library is not available for many students from six to fourteen years old, in a stage of education in which access and use of books and other informational materials will have a strong influence on their literacy. The library is not available mainly for students with more difficult access to these resources outside of school, that is, those who attend public school. The numbers improve in private schools and also at the high school level.

Theoretically the school library has been for a long time recognized as essential to the learning process. "Teaching and library are not mutually exclusive, they complete each other; without a library a school is an imperfect instrument" said the Brazilian educator Lourenço Filho in the forties (Lourenço Filho, 1946).

The discourse of sectors involved with education in the country is lavish in reinforcing the importance of the school library. Several documents of public education policies emphasize the value of the school library in improving reading (Brazil, 1997; Paiva & Berenblum, 2009). The library profession also recognizes the importance of a good library at school and has been striving continuously to show their value in improving education (Campello, 2003).
School Libraries Surveys

Since 1979, at least eighteen surveys raised data on school libraries, confirming their fragile condition and showing concern and, in some cases, outrage, about their situation. The surveys analyzed sets of libraries in specific areas, with the clear intention of exposing precarious situations and to raise awareness of needed changes, thus focusing primarily in the libraries shortcomings (Campello et al., 2012).

One can then say that the situation of school libraries in the country has not yet been resolved. The presence of good libraries is limited to a few schools (usually in the private sector and located in larger cities, especially the capitals of states in the Southeast and South regions).

In 2009, the Ministry of Education, with the participation of the Organization of Ibero-American States, conducted a large study that resulted in the document Assessment of School Libraries in Brazil (MEC, 2011), that concluded that books distribution policies, which were the main instruments for improving reading levels of students in Brazil, had little influence on improving public schools libraries.

The study confirmed some of the results of previous surveys, as described below.

- The foregoing bond between the school library and the school pedagogical project

  The library exists as an appendix, according to the study often as a "nuisance", occupying a space that could be allocated to classrooms (MEC, 2011). In fact, it often happens that the library be disassembled to transform its space in a classroom. There is little school community participation in planning library activities, hindering its integration into the curriculum. The classroom teacher understands the importance of the library but does not use it as a space for empowerment of his/her work. The library staff seems quite aloof from school activities as a whole, not interacting with the pedagogical staff.

- The lack of skilled professionals

  Those responsible for the library are mostly teachers, which at first sight might be considered a plus point given the possibility of counting with them to develop educational projects in the library. However, there are several negative aspects: these teachers are usually retrofitted without specific training for the role, they usually split time in the library with another function at school. It is common that these teachers assume the classroom teacher function in case of teacher shortage, getting the library closed at such times.

  The number of graduate librarians in school libraries is low: in the Ministry of Education study it ranged from 34.8 % (in the State of Santa Catarina) to none (in the State of Acre). Other studies (Campello et al., 2012) showed that there is variation in these percentages, depending on the region and libraries jurisdiction (whether public or private schools). The absence of a skilled professional to take responsibility for the library brings several consequences, from deactivation of space, to limiting opening hours, and precariousness of the services offered.

- The precariousness of physical space
Although most schools have a specific space for what they call the school library, there are several problems with this space. They are confined spaces, adapted from conventional classrooms, most of them with 538.2 ft². Some share the space with other activities, eg, photocopier, computer room, school office. The lack of space is a limiting factor, precluding carrying out library activities with a whole class or with larger groups of students.

● The collections

The collections consist primarily of material for students, received through donations from the National School Library Program (Programa Nacional Biblioteca na Escola - PNBE) which, despite its broad denomination, is an annual project which aims to provide public schools with library materials selected by public institutions of higher education, according to guidelines and criteria established by the Ministry of Education. Other donations sources are government agencies or either campaigns organized by the school. Many collections are formed predominantly of textbooks and, in some cases the library is used as storage and distribution space of these books. Few libraries have financial resources specifically for the acquisition of library material. The collections are diverse and include books, newspapers, magazines, audiovisual resources, games, maps. It seems that only now library collections are beginning to show an increase in number and quality resulting from the dispatch since 1997 of PNBE material. However, these rich and varied materials are not used properly, the books received usually remain in their original packaging and/or stored in locked cabinets, unavailable for use.

● The poverty of the services offered

The services offered in the library are commonly home loan and on-site use a situation coherent with the lack of skilled personnel: these are routine services, which do not require planning or proactive action and do not demand any degree of interaction with teachers. It also confirms the user’s conception of the library: a collection of books. There are no systematic and sustained programs for teaching information skills, although the concept of information literacy is being discussed in academic LIS environments.

● Inadequate technical treatment of the collections

Techniques for collection organization do not generally follow bibliographic standards. Some libraries use a color code to identify different subjects. Computerized systems are rarely used in public school libraries, although currently some library networks begin to acquire software for collection organization. The lack of poor technical organization brings consequences: the library remains a particular field of the employee working there. It is only he/she who knows the entire collection, who knows how to find each book or who took a particular book for loan, among other things.

● Possibilities for internet access

There are no consistent data about internet access in school libraries. Some studies indicate that equipment and technologies start, tenuously, to be present in public school libraries. The 2012 Educational Census (Brazil, 2013) indicated the existence of internet access in 44.8 % of the 122,716 public schools in the fundamental level. This number
increases significantly in private schools and in high schools, repeating the same trend observed with respect to the existence of the library/reading room.

Currently there are three government programs at the federal level aimed at expanding access to the Internet in schools:

- National Program of Educational Technology (PROINFO), created in 1997, which aims to promote pedagogical use of computer and telecommunications technologies in public fundamental and high schools by implementing technological environments equipped with computers and digital resources in schools. (http://portal.mec.gov.br/index.php?Itemid=462)

- Broadband Program in Schools (PNBLE), created in 2008, with the purpose of connecting all urban public schools to the internet, enabling the installation of network infrastructure and ensuring the maintenance of services without charge until 2025. (http://www.mc.gov.br/acoes-e-programas/programa-nacional-de-banda-larga-pnbl)

- One Laptop per Child (PROUCA) started in 2010, aiming to promote digital inclusion by distributing one laptop equipped for wireless network and Internet connection for each student and teacher in public schools of basic education. (http://www.uca.gov.br/institucional/)

The trend thus is the increasing access to equipment, although it is not clear how school libraries will use technological resources to expand their collections and enhance their services.

This analysis of the main problems affecting Brazilian school libraries can be closed with the observation made in the document Assessment of School Libraries in Brazil:

"... in the historical process of the construction of the library, there is the coexistence of a sophisticated world accelerated by technological innovations and another who has not succeeded in appropriating the writing and reading code, represented by the absence of equipment and technology in the libraries, the book remaining the main learning material..." (MEC, 2011).

In the next part of this paper the following aspects related to school libraries will be addressed: librarians’ education, research, events, publications and professional associations.

**Librarians’ Education**

Formal education of librarians in Brazil began in 1915 with the creation of a librarianship program at the National Library in Rio de Janeiro, which was intended to train specialists to work in the Library itself. The program had a humanist bias, with strong influence of the École de Chartes of the French national library. The second program was created in São Paulo in 1929 in the Mackenzie College, under the coordination of the American librarian Dorothy Muriel Gedds, and inspired by the American model, with emphasis on technical aspects of the profession. In 1936, another program was created by the
Department of Culture of the city of São Paulo and in the 1940s and 1950s seven new programs were created (Valentim, 2002).

In 1962, librarianship gained the status of a high education profession; existing courses were assimilated by universities and others were created and there was the standardization of curriculum disciplines, through the first Minimum Curriculum established by the Ministry of Education. In 1982, the Curriculum was updated with the establishment of the second Minimum Curriculum, which divided subjects into three groups: general basic subjects, professional technical subjects and instrumental courses. In the 1990s, with the modernization process of Brazilian higher education, the Minimum Curriculum was replaced by Curriculum Guidelines, which provided more freedom to the universities to set their curricula, giving faculties the possibility of organizing their pedagogical projects according to their interests. Curriculum flexibility, a current trend, allows students to compose their academic trajectory within limits defined by the faculties (Valentim, 2002).

Currently there are 39 undergraduate programs that make up the degree in library science: 25 in public universities and thirteen in private institutions. It is observed from Table 2 a large concentration of courses in the Southeast Region, which includes the more developed states.

<table>
<thead>
<tr>
<th>Regions</th>
<th>Number of programs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Northeast</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Midwest</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Southeast</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>South</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26</td>
<td>39</td>
</tr>
</tbody>
</table>


The training of four years and a minimum of 2,500 hours includes time for internships and supplementary activities. It is a generalist training, preparing the librarian to work in any type of library.

**School Librarians’ Education**

Diversification in librarians’ training, that could result in a more appropriate professional profile for different types of libraries, could happen in undergraduate programs through elective courses, internships and supplementary academic activities. But the fact is that most programs do not offer elective courses in a regular basis. Most students often fulfill their internship projects in academic and special libraries, which is where are more and better employment opportunities. Thus, specific training of school librarians does not occur during under their undergraduate courses. There is, however, a desire consistently expressed by the library community that library schools include in their curricula courses related to school libraries in order to provide opportunities for students who want to work in school libraries. But the generalist education of librarians at the undergraduate level is
a practice that should remain. As a result, those few students who are interested in a career in school librarianship seek complementary specialization courses in education subjects, usually after they are already in the job market.

Specialized programs at the graduate level on school librarianship (some in a distance learning mode) began to be offered by LIS departments after the enactment of Act 12244/2010, which requires that all schools in the country should have a library. These programs, with duration of 360 hours, however, usually do not have a regular offering, depending on the availability of candidates, which in general is not abundant. Besides they confer no formal degree in library science.

In order to increase the number of librarians, the Ministry of Education provided funds for public universities that already have a program in the classroom mode to offer undergraduate programs in librarianship in distance mode under the Open University of Brazil (UAB). Federal University of Rio de Janeiro (UFRJ) was the institution chosen for the development of educational materials and for support to the programs to be offered. At the moment the project is at the stage of preparation of teaching materials and is planned to start receiving students in 2015.

Research

Academic research in the field of library science in Brazil began in the 1970s, when graduate courses started to be created at the master level, followed in the 1990s by doctoral programs. At that time most programs that began as library science programs, had changed to information science. Even with this new denomination, most programs continued to host projects on library issues, including school library. However, the first master thesis and the first doctoral dissertation on school library were completed in schools of education in 1975 and 1992, respectively.

Since the emergence of graduate programs in library science in Brazil, some sporadic surveys revealed a small production of research on the subject of school library. A study published in 2007 (Campello et al., 2007) identified in the period 1975-2002, 39 research reports on school library, among which 35 academic dissertations and theses. More recently a study covering the period 1975-2011 (Campello et al., 2013), identified 91 studies on school library, among doctoral dissertations (07), master theses (31), journal articles (10) and conference papers (22). Of these, seventy studies were located, obtained in full text and analyzed, under the following categories:

- School library as a learning space: 11 studies
- Teacher / librarian collaboration: 08 studies
- Use and users studies: 13 studies
- Collection: 06 studies
- Reading: 17 studies
- Research process: 15 studies

The traditional involvement of the school library with reading reflects in the amount of studies of this category (17 studies). On the other hand, the concern to better understand the research process, category which ranks second in number of studies (15), shows that the area is seeking knowledge to support their educational action that extends beyond reading and incorporates issues related to information literacy. It draws
attention that the last study on reading was done in 2007, while the last one on research process was done in 2011, what may be a sign of a changing focus. Another aspect that the analysis revealed was that, in performing their educational function, librarians believe they must work in collaboration with teachers (category with 8 studies), and in line with the school's goals. Use and users studies, although with a significant number of studies (13), are still stuck to the traditional approach, failing to conduct an effective dialogue with pedagogical issues, essential in the school library environment.

One of the conclusions (Campello et al., 2013) was that there was a lack of clarity in the use of the theoretical framework in the studies. Although this problem appears to be being surpassed, there are still a considerable number of studies that did not use a clear theoretical framework, representing a theoretical weakness. Another conclusion was that, following an international trend (Clyde & Oberg 2004; Oberg, 2006; Mardis, 2009) academic knowledge about school library in Brazil is expanding, which can help to get a better understanding of the issues surrounding the topic, to sustain an evidence-based practice and encourage policy actions that lead to the improvement of school libraries in the country.

Noteworthy are the following academic groups who conduct research and other actions aimed at the school library:

- The Collaboratory for Infoeducation (ColaborI), coordinated by Prof. Ivete Pieruccini, based at the Department of Library Science and Documentation, School of Communication and Arts, University of São Paulo (USP), focuses on the relationship between school library and education, the creation and redefinition of concepts, methodologies and practices linked to notions of school library as an educational, informational and cultural device (http://www.eca.usp.br/nucleos/colabori/).

- The Research Group on School Library (GEBE), coordinated by Prof. Bernadete Campello and headquartered in the School of Information Science, Federal University of Minas Gerais (UFMG) integrates researchers and students around teaching, research and outreach activities especially related to the educational role of the school library, looking for a better understanding of its potential as a learning space (http://gebe.eci.ufmg.br/).

- The Information Behaviour and Information Literacy Research Group, coordinated by Prof. Helen de Castro Silva Casarin, in the Department of Information Science, State University Júlio de Mesquita Filho, in the city of Marília, São Paulo focus their studies is information literacy, with an emphasis on the library and the school librarian, conducting studies on the development of strategies for teaching information skills to different groups of users (http://plsql1.cninq.br/buscaoperacional/detalhegrupo.jsp?grupo=0330607Y5FR07H#identificacao).

- The Research Group on Practices and Reflections on School Library is coordinated by Prof. Cláudio Marcondes de Castro Filho, since 2010 in the Department of Education, Information and Communication, Faculty of Philosophy, Sciences and Letters of Ribeirão Preto, University of São Paulo, with in two research lines: 1) discourses in and about the school library; 2) the information professional: reflections on the school librarian (http://dgp.cninq.br/buscaoperacional/detalhegrupo.jsp?grupo=0067607PW6IRZ8).
Conferences

There are two general conferences in which librarians have the opportunity to present and discuss their research and practice:

- Brazilian Congress of Librarianship, Documentation and Information Science (CBBD), promoted since 1954 by the Brazilian Federation of Librarians, Information Scientists and Institutions (FEBAB), in partnership with affiliated associations, being a consolidated event on the national scene. It is a space for presentation and discussion of professional papers primarily.

- National Research Meeting on Information Science (ENANCIB) is organized since 1994 by the National Association for Research in Information Science (ANCIB), where research carried out in academic institutions are presented and discussed.

These conferences also welcome papers on school library that are then published in their proceedings. Specific events in the area of school library have occurred sporadically. Some of these were:

- Seminar School Library, Space of Pedagogical Action: the 1st and 3rd of these Seminars were organized by GEBE, in 1998 and 2004 respectively, and the papers presented have been published in proceedings that are available in the Group’s website.

- International Forum of School Librarianship (FIBE) performed only twice, in 2008 and in 2011, incorporating the 4th and 5th Seminar School Library, Space of Pedagogical Action. FIBE, although without call for papers, had the presence of foreign lecturers and was the occasion for discussion of important questions about school libraries. However, these lectures were not published, limiting the impact of presentations and discussions.

In 2012, the Forum on Research in School Library, organized by GEBE and held in Belo Horizonte, congregated the leadership of school librarianship in the country and paved the way for the consolidation of a specific event in the area (Caldeira et al., 2012). The following year, GEBE in partnership with the representation of the International Association of School Librarianship (IASL) in Brazil and the Federal Council of Librarianship (CFB), organized the 1st Forum of School Librarianship: Research and Practice, under the 25th CBBD. The Forum brought together, and intends to continue to do so, researchers and professionals working in school libraries. There is an expectation that the partnership with CBBD ensures its permanence, in view of the fact that CBBD is a consolidated event, taking place since 1954 (Ferreira, Toledo and Ferreira, 1979).

Publications

Academic research generates theses and dissertations that are virtually disclosed in institutional repositories or digital libraries and sometimes published as articles in information science journals.

There are about 15 journals in the field of information science listed on the ANCIB website, but only one specializing in school library (Biblioteca Escolar em Revista (http://revistas.fclrp.usp.br/berev), a biannual publication, started in 2002 that rather
welcome original research articles. Therefore, there is a lack of publications that takes
the results of research to practitioners and that encourages evidence-based practice.

With regard to books, there is a slow increase in production with some commercial
publishers starting to have an interest in the subject of school library. Noteworthy is the
work of Autêntica Editora which has since 2000 been publishing books produced by
GEBE, standing among them Portuguese translations of two Carol Kuhlthau’s books:
School Librarian’s Grade by Grade Activities Program: a complete sequential skills plan
for grades K-8 and Teaching the Library Research Process.

Conference papers on school libraries are few, considering, as above said, there are
only two consolidated conferences in LIS in general, offering opportunity for the
presentation of papers on school librarianship. Nowadays proceedings of the two
conferences are published in digital format in the promoting institutions websites.
Unfortunately the organizers of some sporadic events on school library have not
bothered to record the presentations in proceedings and this opens a gap on the
knowledge and actions on the subject.

Brazilian literature on school librarianship is gathered in LIBES database (Brazilian
Literature in School Library) under the responsibility of GEBE and updated by UFMG
School of Information Science where the Group is headquartered. The database seeks
to gather the entire production on the subject of school library and currently contains
about 400 references, including papers published since the 1960s, referring to the
complete document when available in digital format (http://libes.eci.ufmg.br/).

**Associative Movement and Political Actions**

The librarian’s associative movement is fragile in Brazil. Although most states rely on a
library association, they are poorly active, developing sparse actions that have little
impact on improving the profession or the school libraries in the country. Since 1959
FEBAB brings together eighteen of these state associations and has as its main mission
to advocate and promote the development of the profession. It aims to coordinate and
develop activities that promote libraries and their staff; to support the activities of its
affiliated and associated professionals; to act as a documentation center for the memory
of LIS in the country; to interact with international institutions in the LIS field; to stimulate
the creation and development of special committees.

The FEBAB special committee on school library (Brazilian Commission on School
Libraries - CBBE) was created in 2013, during the 1st Forum of School Librarianship:
Research and Practice with the following agenda:

- To work in collaboration with CFB to develop actions that put the school library in the
  public policy agendas of education in Brazil;
- to promote the 2nd Brazilian Forum of School Librarianship: Research and Practice;
- to encourage the participation of Brazilian librarians in international forums such as
  IASL.

Since librarianship in Brazil is a profession regulated by law (Act 4084/1962), there are
agencies responsible for overseeing the practice of professional librarians. CFB is the
federal agency that coordinates the fourteen Regional Councils. Since its installation in
1966, CFB has been not only performing the task of inspecting libraries, along with the Regional Councils, as well as conducting and supporting other activities related to the profession.

With regard to school libraries CFB launched in 2008 the School Library Project: building an information network for public education (CFB, 2008) seeking to mobilize society and government leaders to the need to create school libraries in the country. One result of this action was the enactment, on May 24, 2010 of Act 12244 which enforces that each Brazilian school of basic education has a library.

The Law requires that the library collection has at least one book title for each enrolled student. The local school systems are responsible for the expansion of this collection, as well as for establishing guidelines for maintenance, preservation, organization and operation of school libraries. The law recommends that the library profession ensured by legal Acts 4084/1962 and 9674/998 be respected, and establishes a maximum term of ten years for its effectiveness.

Some Regional Councils have a more active share in promoting school libraries. The State of São Paulo Regional Council for instance, especially in the last two years, initiated several actions to disseminate a new concept for libraries, based on the document of the American Association of School Librarians Standards for the 21st Century Learner, which was translated into Portuguese. Also the State of Rio Grande do Sul Regional Council organizes, since 2009, the Gaucho Forum for Improvement of School and Public Libraries, which aims to encourage the creation of libraries in cities in the state countryside. Conducted in partnership with various public and private institutions, the Forum works through meetings in each chosen city, bringing together local education leaders, government officials, teachers and persons concerned about the library issues. To date about 30 meetings took place, with lectures, experience reports, workshops and short courses (Moro, 2011).

Stands out the initiative of Ecofuturo Institute in partnership with civil society organizations: in 2012 the Institute launched the campaign "I want my library" in order to inform policy makers, educational leaders, teachers and others interested in school library about legislative actions for the implementation of Act 12244/2010.

School Libraries Standards

Another action under the School Library Project: building an information network for public education (CFB, 2008) was the CFB collaboration with GEBE to set out standards for school libraries (GEBE/CFB, 2010). This initiative was based on the fact that, although the importance of the school library is recognized, there is a general lack of knowledge about the technical features that define what actually constitutes a school library. Thus, the setting of objective standards gives a starting point for the creation of libraries and establishes the basis for the compilation of statistics that can reveal the real situation of school libraries in the country.

Conclusions

The emergence of academic research groups since the 1990s and the consequent increase in school library studies indicate that the theoretical foundation for the
improvement of these institutions is being built. The growing availability of documents on
the subject on the web and the existence of LIBES as a consolidated and continuously
updated database support the training of librarians committed and able to develop a
more evidence based practice in school libraries.

The desired consolidation of a specific school library conference, with call for papers and
proceedings publication, may strengthen this base, providing opportunity for discussion
and dissemination of research results and best practices reports.

Still there is a lack of more effective political action to convince government leaders to
invest in the creation and improvement of libraries in schools. The low rates achieved by
Brazil in educational indicators such as PISA – Program for International Student
Assessment may be a factor that induces the federal government to invest in more
effective programs for the development of school libraries, whereas the simple
distribution of books, which favors more the editors than the students, has proved not to
be working, as demonstrated by the evaluation of PNBE, which found that

[ ... ] Many libraries seemed deposits of books piled up without any criteria or
organization and often bundled material in their original packaging were
founded. Others were reduced to shelves, the books being kept in locked
cabinets, unavailable for students or teachers use. In many libraries there
were no records of books in catalogs, which implied ignorance on the part of
the school community about the quantity and quality of the materials
available to them (Paiva & Berenblum, 2006, p. 58).

On the other hand, the Ministry of Education survey (MEC, 2011) found that investments
by the federal government in selecting and sending collections for schools through
PNBE have been a positive fact or in mobilizing the local school systems in creating a
"culture of attention to the school library". Upon receiving the PNBE collection the school
needs to decide: where and how to store and organize it, who will take care of the
collection and then mobilize action for its use. This mobilization results in local
investments and forces schools to make pedagogical decisions that generate, according
to the researchers' expectation of autonomy and usefulness for the school library
(Brazil, 2011).

The effectiveness of Act 12244/2010 remains to be proven. Although the library
community has shown to be hopeful that it will modify the situation of school libraries, it
was also critical about the content of the law. Firstly, it is considered extremely limited,
setting school library merely as "a collection of books, videographic material and
documents in any format for consultation, research, study or reading". Issues such as
collection organization and conservation and library functioning are treated superficially.
Another criticism is the lack of instruments for monitoring compliance with library
standards and quality indicators.

The strong point of the law is the presence of the librarian: it states that the profession
should be respected in accordance with Act 4084/1962 which defines that the practice of
librarianship is ensured to undergraduates in library science. Although Act 12244/2010
does not clearly define that each library should have a librarian, the number of
professionals needed to minimally meet the requirement is an issue that has been
raised, although the figures are not grounded in scientific studies. According to a survey
released by CFB in June 2013, there are 34,805 registered librarians in the country, but
only 18,374 are active. The training takes place at a slow pace: from 2009 to 2012 the total number of graduates in librarianship was 5,319 (see Annex 1), which gives an average of 1,330 graduate librarians per year over the last four years. Considering the amount of schools in the country (192,676), one can get an idea of the librarians’ deficit over the next seven years, the time remaining to law enforcement. Only the State of Amazonas seems to be preparing to comply with Act 12244/2010 and drafted a bill for the creation of libraries in the state, but this project just mirrors the federal law, repeating its shortcomings, and was still in progress in 2013.

A trend observed both in the public and in the private education systems is the formation of school libraries networks. Collaboration schemes with different characteristics are seeking ways to optimize these libraries such as the sharing of a librarian (who oversees several libraries), the sharing of cataloguing records, of staff training programs, or the design of collection development policies. But the contours of this trend are still not clear.

The proceedings of a conference that occurred in 1982 (the 1st National Seminar on School Libraries) revealed participants' concerns in showing the ideal picture of school libraries in the context of education. The recommendations presented at the end of the event reflected the participants' desire that Brazilian school libraries should have quality and be recognized as a key element in learning (Anais, 1982). Over these thirty two years many things changed and one can say that there is a more solid understanding of the nature of the school library, enabled by academic research.

With regard to statistical data which could offer a better picture of the characteristics of school libraries, there is need to improve data collecting procedures, stating more precisely what constitutes a school library, differentiating simple cluster of books from real libraries. It is expected that the library standards set by GEBE and CFB (GEBE and CFB, 2010) can support the collection of consistent and realistic data. We believe that academic knowledge and quality statistics can help to sustain a political action that leads to the improvement of school libraries in Brazil.

References


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**Biographical note**

Abstract

The main purpose of this paper is to present the School Libraries Network Program of the Ministry of Education and its strategy concerning the creation and the implementation of a National Strategic Framework for School Libraries: 2014-2020.

According to “Europe Strategic 2020”, the School Libraries Network Program (SLNP) conceived an action plan to align with and contribute to the European goals for education.

To respond to the current challenges, due to the digital revolution and the way we deal with information and acquire knowledge, the educational systems need, more than ever of strong school libraries, able to teach and support students achieving a good educational attainment and the skills essential to the future.

With this professional paper we propose to underline the need of new managing tools and a new strategic thinking and discuss how this standards framework can contribute to the progress of the school libraries in a rapidly changing world, a world much more demanding and much more focused on results, that have an impact on students’ achievement and make a difference in their lives.

Keywords: School libraries; School Libraries Network Program; Strategic management; Library standards; Literacies

School Libraries Network Programme (SLNP) was launched in 1996. Its main goal was to install and develop libraries in state schools at every level, supplying its users with the necessary resources to read, access, use and produce information, regardless the format. Now all schools have a library or, in very small schools a library service and the great challenge is to strengthen this network, accompanying social and technological changes and placing it at the service of the improvement of education and learning.

Thus, following the “Europe Strategy 2020”, the SLNP conceived a strategic framework to align with and contribute to the European goals for education. The Strategy Europe 2020 sets out the main objectives of the European Union to be achieved in the period 2014 2020. The plan, whose goals are to improve the levels of education in each member state, raised the need for definition by the SLNP of a number of areas and priority lines of intervention, in order to guide their action and contribute to the achievement of the goals set to Portugal in this domain.
The national targets in the area of education point to the reduction in the rate of early exit of the education and training systems and the improvement of the qualifications and skills of the Portuguese population, through the achievement of different goals:
- Raise the results of national tests in Portuguese and Mathematics;
- Reduce the retention and drop-out rates;
- Increase the rate of schooling in the Secondary Education;
- Strengthening vocational education and other vocational and education/training courses in Basic and Secondary Education;
- Reorganizing, streamlining and qualify the School Network;
- Involve and engage schools and educational communities in achieving the national goals of improving the basic skills of the students and the extension of compulsory schooling.

School libraries are an important partner of any strategy to improve education and to combat school drop-out and failure, so the SLNP can help to ensure that these goals are achieved by associating its own development strategy to this overall plan.

To this extent, the strategic framework of the SLNP has defined a set of standards for school libraries to be achieved within the timeframe of 2014-2020, according to the Europe 2020 Strategy that Portugal and the Ministry of Education and Science have signed:

1. Places for knowledge and innovation, able to incorporate new pedagogical practices.
2. Spaces for social integration, essential to combating exclusion and school dropout.
3. Places for training and development of reading competence, condition of all knowledge.
4. Spaces diffusers of the pleasure of reading, essential to the construction of reading habits.
5. Teaching areas, essential to the training for the digital, media and information literacy.
6. Centres of pedagogical support, crucial for the fulfilment of goals of school education.
7. Flexible environments adapted to technological change and to users needs.
8. Structures led by skilled teacher-librarians, able to respond to functional and pedagogical requirements of the school.
9. Information services with digital contents and technological resources able to respond to social changes.
10. Dynamic and sustained networks with consistent practices, embedded in the community.
11. Cooperation systems with the society, sharing resources and knowledge.
12. Inclusive organizations, guaranteeing equal access to services and information resources.
Implementation of the Strategic Framework of the SLNP
The SLN is currently made up of more than 2,400 libraries. More than one million students have library in their schools. Following the implementation of policies to ensure the value and the excellence of these libraries, the SLNP purpose is to promote and monitor all the libraries in a dynamically and systematic way and to take the appropriate measures to the challenges they face, promoting the continuous improvement of their services.
In this context the program decided to establish a set of standards and action lines that define the vision and the path to pursue by the libraries and guide the global policy development of the SLN for the period 2014-20.
The Strategic Framework is, in this sense, a guiding instrument for the management of the SLN and the school libraries. Its standards, for which libraries must progressively tender, and its lines of action act as guidelines and require the coordinated action and the compromise between the SLNP and the schools.
The creation of the Strategic Framework has been designed in conjunction with two other documents, both very important to operationalize its actions in the ground:
• Learn with the School Library: learning standards associated with the work of the school libraries in Pre-school Education and in Basic Education.
The document Learn with the School Library establishes a set of performance standards associated with reading, information and media competencies, essentials for learning and students' integral education, which school libraries have to develop. The document aims to promote the integration of knowledge, skills and attitudes related to these literacies in educational activities and curricula developed with the library, providing it with the planning, operationalization and measurement tools necessary to this purpose. It is, therefore, an important work instrument, that makes easier to obtain data and evidence that demonstrate the actions of library in these areas and attest its impacts in students' learning and global education.
The School Library Evaluation Model (SLEM) seeks to know the results of the activity of libraries in the educational process, the degrees of efficiency and effectiveness of the services provided and the levels of user satisfaction, to improve its overall performance. The model has four domains, related to the action areas of the library: in the support of the curriculum and the development of literacies (A); in promoting the skills and habits of reading (B); in projects and partnerships (C); and in the management of the resources and services (D). The SLEM 2014-17 corresponds to the new phase of evaluation of school libraries, accommodating the experience of the previous cycle. The main changes with respect to the previous edition, now updated, consist in establishing a simultaneous evaluation of the four domains; in the creation of alternating periods of evaluation and improvement, giving time to the libraries to
develop actions that enable them to overcome the weaknesses detected; and in a greater value given to the appreciations of users about the benefits of their interaction with the library and its impacts.

The relationship of this document with the SLN Strategic Framework led to the inclusion of the strategic framework descriptors in the four domains evaluated, to indicate the level of excellence to achieve in each domain. It is intended that, by the end of the evaluation cycle of 2014-2017, all libraries have a rating level assessed equal to or greater than 3 (the scale goes from 1 to 4 points) and until 2020, it is expected that libraries continue this improvement, reaching the standards set in the Strategic Framework.

The Strategic Framework 2014-2020 works in this way, not only as a guide for the SLN activity but also as a guiding instrument for the improvement plans of the libraries, carried out in the context of the use of SLEM.

Thus, monitoring the evolution of the libraries and the implementation of the action lines defined by the SLNP will be done in two distinct periods, related to the evaluation process in schools: the first will take place until 2017, coinciding with the end of the evaluation cycle defined in the SLEM; the second will integrate the evaluation results obtained until 2020, with the ending of the Program Portugal 2020 and the term of the Strategic Framework.

**Description of the Strategic Framework of the SLNP: vision and priorities**

School libraries have undergone great transformation processes derived from global changes, like technological developments, that revolutionized the modes of access, management and production information, and proximity factors related to the changes that have occurred in the context of the school and the educational system.

To respond to the current challenges, due to the digital revolution and the way we deal with information and acquire knowledge, the educational systems needs, more than ever, of strong school libraries, able to teach and support students achieving a good educational attainment and the skills, essential for the future. SLNP aims to contribute to these purposes and continue its mission of development of libraries, adapting policies, objectives and modes of intervention to the social changes and to the requirements of the new information culture.

The results already achieved expressed in the creation of a set of facilities, equipments, information systems, collections and professionals, able to make a difference and influence positively in the learning and students' global education advising the continuation of a strong bet on the Program.

After a long trajectory the SLN reached a stage of maturity, but it is necessary to continue to invest in consolidating and ensuring their quality, promoting the upgrade of the existing resources for the current digital and technological requirements, the creation of educational services with visible impact in the life of the school and in the success of students, the continued improvement of levels of literacy and skills and the offer of innovative spaces of knowledge, personal growth and citizenship.
It was on this background and with this determination that it was established a standards of excellence framework, which act as a reference for the conduct of the work of school libraries and the strategy of the SLNP until 2020. Below, the profiles to achieve by school libraries in different fundamental dimensions are translated and transcribed as well the lines of action to pursue by SLNP for each of these dimensions.

1. Places of knowledge and innovation, able to incorporate new pedagogical practices.

Libraries are nuclear structures of the schools, provided with resources, services and technologies, able to contribute for the enrichment of the curriculum and teaching practices. Libraries are spaces where we read, research, have access and use all kind of information and explore varied environments, resources and learning techniques. Libraries are places of learning and innovation, inducing new modalities of use and school work, individual and autonomous, in small groups and with the classes, in formal and non-formal educational contexts, in presence and online.

Lines of action:
- Provision of educational contents and computer applications to support research, communication and students schoolwork.
- Training of human resources in areas related to the curriculum and the information, media and digital literacy.
- Follow-up of the implementation of the benchmark Learn with the School Library.

2. Spaces for social integration, essential to combating exclusion and school drop-out.

Libraries promote equal opportunities in the access to knowledge and citizenship. They stimulate the curiosity for literature, the arts and science, acting as places of enjoyment and educational and cultural development. Promote the meeting and sharing of interests and knowledge, social relations and the democratic experience. They are learning, support and testing laboratories, therefore developing inclusion practices that combat exclusion, failure and drop-out and constitute an important social asset.

Lines of action:
- Adaptation of the work of libraries and expand their capacity to respond to new types of audiences and needs.
- Framing school libraries in the global policies and strategies for combating failure, exclusion and students’ drop-out.
- Strengthening the social, cultural and educational value of libraries in schools and communities, through initiatives and projects of social intervention.

3. Places of training and development of reading competence, condition of all knowledge.

The libraries provide a regular and close contact with books and the practice of reading, while privileged instruments of learning and
training of reading comprehension. Learning to read and reading to learn are basic principles of formation of competent readers. These skills are structural and nuclear to knowledge acquisition and determinant to the educational background of the students. The library contributes significantly through its mediation and action to the qualitative improvement of the learning and the mastery of reading skills.

Lines of action:
- Production of materials and instruments to support the work of the libraries in the areas of learning to read and of readers training.
- Enhanced support for projects and contests geared towards the development of reading skills.
- Participation in initiatives to stimulate the relationship between reading skills and other domains of knowledge - Science, Literature, Art, ...

4. Spaces diffusers of the pleasure of reading, essential to the construction of reading habits.
Open to creativity and knowledge, libraries encourage the work around the book, reading and different expressions associated with reading, assuming themselves as places of personnel construction and training of critical and autonomous readers. School libraries create a culture of reading, printed and digital, exploring resources, technological equipments and strategies capable of enriching the experiences of each reader and of promoting the taste and the pleasure of reading.

Lines of action:
- Promotion of updated information resources, by encouraging the introduction of new lending forms and reading devices.
- Partnership with promoters of autonomous reading programs and recreational, in particular the National Plan for Reading.
- Participation in research studies on new ways to read.

5. Teaching areas, essential to the training for the digital, media and information literacy.
Libraries promote the collaborative work with teachers and participate in projects and in educational activities, contributing for the improvement of students’ results and for resolving learning problems. They are living and working environments where training and learning pathways stimulate the students interaction with technologies and diversified sources of information. They occupy a vital place in school as they encourage the training for digital media and information literacy, preparing students for the research, use, production and communication of information and for the safe and informed participation in social networks.

Lines of action:
- Follow-up of the implementation of the benchmark Learn with the School Library.
- Articulation with other services of the Ministry of Education and Science, with the purpose of integrating the library into the curriculum and into programs or activities associated with the development of different skills.
- Partnerships with universities and other organizations for the production of contents, training and studies.

6. Centres of pedagogical support, crucial for the fulfilment of goals of school education.
To fulfill their mission, the libraries require a planning that establishes relations with the educational project and the plan of activities of the school. Investment in articulation with other structures of the school and in particular with the principal is also essential. Libraries play an open-door policy, participating in school activities, educational support, study support, curricular enrichment activities, projects, clubs, occupation of leisure time and other recreational and cultural initiatives.
Lines of action:
- Adequacy of policies, guidelines and management of libraries to changes in school and in the education system.
- Coordination with other services of the Ministry of Education and Science, to include the school library and its goals in the general educational measures.
- Promotion of an institutional dialogue with the schools management bodies, to improve their educational service.

7. Flexible environments adapted to technological change and to user needs.
Libraries are workspaces face-to-face and online environments of distance work. The dilution of the boundaries that separate media and functional zones and the emphasis on production and networking change the traditional library setting. The libraries are counting on more workstations provided with devices and software for research activities, information processing and content production. The exponential growth of online digital content, equipment portability and user-friendly handling of production and communication tools transform the way users relate to information and flexible physical and virtual access to resources, services and technologies.
Lines of action:
- Revision of the technical guidelines and conditions for the installation and equipping of school libraries.
- Conversion of the physical space of the libraries and upgrade of equipment and software.
- Contacts with institutions and companies providing furniture, equipment, software and other specific goods.

8. Structures led by skilled teacher-librarians, able to respond to functional and pedagogical requirements of the school.
The teacher-librarians, supported by teaching and non-teaching staff, play an active role in the processes of management, leadership and innovation in schools. They have a crucial pedagogical intervention in the school life of students and in the training for reading and for digital and information literacy, with impact on learning and educational success. They develop cultural activities, essential to the acquisition by pupils of personal and social skills and the appropriation of school library by the community. They are information managers, assuming a fundamental mediator function in access, validation, and dissemination of information and creation of contents.

Lines of action:
- Ensuring institutional procedures which ensure the affectation of qualified professionals to school libraries.
- Further training of teaching and non-teaching staff, partnering with Training Centres Associations of Schools, Universities and other training providers.
- Definition of human resources management policies to ensure the smooth operation of the libraries.

9. Information services with digital contents and technological resources able to respond to social changes.
Libraries are resource-rich environments of reading and learning, adequate to intellectual interests and the needs of the school community. Technological developments and changes in the publishing market, relating to copyright and the methods of acquisition and loan, revolutionized the ways of access and dissemination of information, reinforcing the need for change of the collections and of the practices associated with their management.

Lines of action:
- Incorporation of results of studies and recent practices, to pursue the cooperative management of the collections, the acquisition of documents in digital formats and the implementation of electronic loans.
- Promote interlibrary partnerships and pursuing the creation policy of digital libraries and collective catalogs.
- Revision of the guidelines of the SLN on the management of the collection.

10. Dynamic and sustained networks with consistent practices, embedded in the community.

The relationship of school libraries with each other and with municipal libraries accompanied and institutionally supported at the municipal level, is essential for the balanced and sustainable growth of the libraries. Libraries take advantage of applications, contests, projects, and other local initiatives and from SLN, ensuring the rooting, the visibility and the dissemination of consistent and sustainable practices at school and in the community.

Lines of action:
- Development and consolidation of local networks – collectives catalogs, portals, cooperation projects, training, ...
- Increase and diversification of partnerships with communities, involving families and other interlocutors.
- Provision of platforms and information systems that facilitate the creation of networks and systems of cooperation at the local level.

11. Cooperation systems with the society, sharing resources and knowledge.
The cooperation of school libraries with other organizations (universities, libraries, museums, archives, associations, companies,...) and the participation in collective projects of different size and scope, are an indispensable asset to their value and integration in society. At a time when the networks and digital tools favour the conjugation of synergies and the implementation of common projects and activities, the library is strengthened by the sharing of resources, by establishing partnerships and by taking advantage of collaborative work.

Lines of action:
- Consolidation of partnerships, projects and cooperation agreements established with different entities.
- Creation of new partnerships at national and international level.
- Elaboration of studies and evaluation reports on results of projects developed.

12. Inclusive organizations, guaranteeing equal access to services and information resources.
Spaces of inclusion, free and open to all, libraries ensure equal access to equipments, diversified information resources and services, able to respond to specific needs of different users. The libraries are, by their nature and mission, a natural base of support for students with special educational needs, with differentiated curricula or with other forms of individualized treatment.

Lines of action:
- Support for updating and continued diversification of information resources, in order to accompany the variety of interests and needs of different audiences.
- Creation of physical and technical conditions to make libraries able to provide differentiated answers to students with special educational needs or other specific needs – professional, vocational courses, education and training, other.
- Strengthening of partnerships and projects promoting equal access to information and social inclusion.

The organizational and pedagogical suitability of libraries to face the challenges posed by the school and by the society constitutes a determining factor for the quality of its functioning. The paradigm shift in the forms of access, use and communication of information
redirects the focus of libraries towards strengthening the role of education and training. This approach requires the adoption of new management practices, in direct link with the curricular goals of the schools and the learning of students. The efficiency and effectiveness of this management policy demand a culture of evaluation, based on evidence and on a strategy of continuous improvement.

Lines of action:
- Dissemination of good practices and results of the libraries.
- Carrying out studies showing the impact of libraries.
- Support for the improvement and development plans of the libraries, particularly those which present major difficulties.

Monitoring and evaluation of the Strategic Framework of the SLNP

The implementation of the Strategic Framework is operationalized through annual action plans that contemplate the objectives and measures to achieve, according to the intervention lines previously defined.

The monitoring of the entire process will take place in two interconnected levels:
- the first, concerning the achievement of the annual initiatives under the direct responsibility of the SLNP;
- the second concerning the continuous measurement of the results arising from the application of the SLEM in the schools.

Monitoring the strategic framework make it possible to adapt the different actions to the evolution of the results and track the success of convergence of libraries with the established standards. This route can be affected by conditions and factors of uncertainty, forcing adjustments of both the objectives and the timetables laid down.

To carry out this work, the SLNP will use its information system and its coordination services operating on the ground. In addition, the Program will benefit from the support and collaboration of other services of the Ministry and of their partners, as well as other individual contributions.

The operationalization of the Strategic Framework should include accomplishing indicators that allow knowing the execution scope of the measures and objectives outlined in each year. In schools, the use of the SLEM will provide, in turn, results that will indicate their level of performance over the evaluation cycle and assess the degree of success of the developed improvement processes.

The carrying out of studies, the survey of good practices, the exchange of ideas and experiences, specialized training, the production of research theses, networking with other organizations, the conduct of pilot projects (such as, for example, the use of the benchmark Learn with the School Library) will also be encouraged for this purpose.

Finally, it should be noted the interest of the external evaluation of the SLNP, held by ISCTE – Lisbon University Institute in 2009, which should be continued as a quality factor and improvement, sustainability and projection of the SLN. The
possibility of making an external evaluation on the implementation of the Strategic Framework could be an asset to its validation.

In conclusion, we would like to note that the importance of this Strategic Framework does not end with its results. Through its implementation, we hope to contribute, not only for a more effective management of the SLN but also for an increase in their ability to seize the opportunities and meet the challenges facing libraries in the 21st century, and continue to demonstrate the indispensable value of a public policy for school libraries, reading, new skills and the social inclusion that they provide.

References


Biographical Note

Elsa Conde has a degree in History, a specialization in Librarianship and a master’s degree in Educational Sciences. She taught between 1980 and 1995. In 1997 she joined the School Library Network Program (SLNP), within which continues to exercise functions as school librarian adviser and municipal coordinator. She has collaborated in several publications of the SLNP and has accompanied various SLNP projects, like the cooperation project in Moçambique and others. She has participated in various conferences and events in Portugal.
and abroad on school libraries. She has also been a trainer in the area of libraries, especially in b-learning.
Kindness counts: encouraging empathy in secondary school library programs

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Abstract
What is the role of the school library in creating a compassionate school culture? How can we forge a stronger connection between empathy and literacy? Why are libraries the best place to teach the communication skills that facilitate empathy? Inspired by recent research proving the connection between literacy and empathy (Castano and Comer 2013), we decided to make empathy a priority in our library services.

Our two primary goals were to 1) create literacy-based programs that would encourage empathy 2) to encourage the exhibition of empathetic behaviors by training a library volunteer corps. We designed simple activities to encourage both empathy and literacy simultaneously. Our anecdotal survey positively reflected that students and staff noticed a more caring, empathetic library environment.

KEYWORDS: empathy, international secondary school, literacy and empathy, school library programs
The international school library: an important place to start caring

The international school library is an important place to develop a compassionate school culture. By virtue of its contents, it already considers viewpoints from multiple viewpoints and disciplines. By virtue of its size, it allows for team teaching and intermingling of students and staff outside their normal classroom routine. And by virtue of the librarians who care for it, the library already espouses values, such as freedom of speech and a love of knowledge, that support and promote empathy.

School librarians who value intellectual freedom and literacy support values that encourage a reflective and democratic world. In disseminating a variety of ideas we are allowing patrons to reach more informed conclusions that are less likely to be biased, and in providing students with recreational fictional texts we are giving students the opportunity to imagine the life of someone else outside the context of grades and rewards.

Additionally, the library is a neutral environment for staff and students to gather and learn together. In an international environment, where heterogeneity is the norm, it is imperative that libraries support staff and students to model peaceful, tolerant global communities. We have found that both staff and students, either by inclination or frequently due to language barriers, seek out familiar companionship. In some situations, the very differences that make an international learning environment so valuable can also be the cause of tension and intolerance. We sought to improve the relationships between students and between staff with library programming at our international school in Doha, Qatar during the 2013-2014 school year, and were encouraged by anecdotal praise and by survey results taken by staff that showed that 96% of respondents felt that the library explicitly supported empathy.

Qatari Culture

The majority of our students are Qatari. Qatar is a small, wealthy gulf nation bordering Saudi Arabia. Our school also contains students from many other parts of the
world. Most are affluent. Boys and girls are segregated but share some of the same spaces. Despite being the wealthiest nation in the world, there are only a few bookstores and they are poorly stocked.

However, we wanted to make empathy as culturally relevant for our students as possible. Since empathy is focused within large, close, extended family groups, many of our book promotion programs emphasized discussing books and reading within the family or with friends. Qataris also follow a conservative branch of Islam, so we used examples from the Koran where possible and made connections for the students between charity and imagining the plight of another. For example, when students showed unkindness towards stray cats, we emphasized that Mohammed had a tabby cat that he loved, and suggested books such as Erin Hunter's *Warriors* series to these particular students, so that they might hopefully imagine cats as having a meaningful inner life. Additionally, by relying on our students' Muslim background, which encourages them to be generous to charitable organizations, we encouraged students to fundraise for libraries and literacy and to consider everyone’s right to read a book.

We are sadly hindered by a lack of YA written for and about Arabic youth, and feel that if there were more books written for Arabic youth, our students would have a better chance to connect the empathetic benefits of reading to their own lives, and students from other cultures would reap more awareness as well. However, kindness is universal, and our students reacted positively to our programs, even though most of the books we used are written by western authors.

**Models and resources for empathy-based programs**

For our models, we relied heavily on previous experience with public library programs. The public library sector has many programs that support empathy, whether it is reading aloud during the classic story time, reading to puppies, encouraging family reading time, homework help or by creating community spaces. We hoped to use this spirit of whole community involvement as a model, and to begin in a small way by connecting with parents to organize book discussions. We had little response and so we hope to try again next year, but we did find that students were receptive to reading together, reading to their pets, and creating and participating in story times throughout the year.
Outside the public library programs, we found an excellent resource in the new online “Empathy Library” (http://empathylibrary.com/library) to help us guide teachers who were looking for more resources.

Six Easy Library Programs that Encourage Cognitive Empathy

Program One: Make me a book! Empathy and Reader Advisory

Partners: English Teachers or Modern Language Teachers
Class Time: Two 50 minute class periods

Reader advisory [IS THIS WHAT IT’S CALLED? SEEMS AWKWARD] improves the better you know your subject. Recommending a book is a giving, empathetic act a certain gesture of kindness. We thought students might benefit from making some of their own recommendations. Most of them lack extensive knowledge of books, however, so to put them into a reader advisory role we had to get creative.

To teach about reader advisory, students were given an introduction that asked them to consider who they make recommendations to about video games and television shows and why. Next, Year 8 students were paired with each other in teams of two. With the help of the teachers, we ensured that students did not know each other well and were from different classes. Their task: to recommend an imaginary book to that person that they would like based on a survey of interests (Appendix 2). We allowed the students to come into the library and sit where they wanted, then divided them up to be as diverse as possible. After giving students plenty of time to get to know each other, during a second lesson each student was given time to create an imaginary book for the other student. They were given materials for the book, and were asked to come up with a title, a synopsis, and a few good images for the cover.

The results were displayed the next week, and students were very excited to see the books created for them. One student brought in manga for his new partner and said “I’ve got to give him this book Miss because we both liked this show.”

This lesson is easily adaptable for the modern language department as well.
Program Two: *Book Choices and Displays*

Partners: English Teachers, students  
Class Time: None

Fictional narratives, especially classics, have been shown to have a positive effect on developing empathy (Bal and Veltcamo 2013). Adult readers know that the literary canon is full of books that encourage seeing the world from another perspective, be it Hester Prynne or Humbert Humbert, great literature elicits compassion for our shared human frailties.

However, for a young adult librarian teaching Arabic EL students English as a second language, many of the classics that encourage empathy for outsiders are not the best choices for our students’ reading levels and conservative backgrounds.

We therefore came up with a short, developing list of books that have empathy as a major theme. This list was delivered to staff and students, and teachers who chose to read any of the books with their classes were invited to special library lessons and provided with resources and lesson ideas. These books were also incorporated into monthly book promotions. We feel there is a need for a more definitive list, and for research into what young adult literature would elicit empathy.

To accompany the list, we did a book promotion display that asked the students: *What would it be like to be me?* And then gave examples of the different struggles faced by heroines and heroes from texts. For example, “A girl in Afghanistan who disguises herself as a boy so she can work to feed her family?” Was accompanied by a picture/QR code of Deborah Ellis’s *The Breadwinner*. The next month, students made footprints based on characters read about in their English classes and displayed them in the library, with quotes from major characters under a “walk in our shoes” theme.

Program Three: *Who will YOU read with?*

Partners: Students, parents  
Class Time: None

After posting pictures of various staff members reading with each other and their families, students were challenged to read as many books as they could in one month with their families or friends. They could read in groups of up to four and completed
forms that directly asked students to consider the perspectives of each person in their group. We were not sure if we would have any participation, because the challenge was voluntary and did not come with any certain reward beyond appreciation. However, the library was bustling with students talking about their shared books, and many forms were turned into our front desk. Our favorite anecdote: Jessim in year 9 read Percy Jackson with his little brother in year 6, and told us he was feeling a little irritated because “his brother wanted to read with him every night” and now “wants to read the whole series.” 89 forms were completed and turned into the library. Students even partnered with students they did not know well but were reading the same books, so new connections were made.

Program Four: Reading proud and Reading aloud: Book Buddies
Partners: Primary School & English Teachers
Class time: Up to four 50 minute class periods

Struggling young men in year 10 classes were asked if they would mind helping some year 3 students read more. First, the boys were given a library lesson on “How to read aloud and why you should.” The presentation featured good looking Arabs in traditional dress reading to their children and reading with their friends, and emphasized that one way to be a good father in the future might be to read to your children. Next, the students were instructed on reading techniques including predicting, reading with expression and making connections between the readers and the text, and were then asked to practice reading simple texts with each other.

Over the next two weeks, students practiced reading children’s books. All texts came with a recording so that students could model the reader and follow along with the text. Since many of the boys had reading scores that were at a year 3 or year 4 level, but we lack the high interest easy read texts appropriate for their age, these “easy” books gave the year 10 classes a reason to practice and develop their own literacy, unbeknownst to them, without compromising their self-esteem. Empathy for the younger students, some of whom were cousins and/or siblings, as well as a desire to entertain the young ones overshadowed their reluctance to read, and their English teacher remarked that “they have not been so excited about anything all year.”

For the year 3 students, having the older boys read to them was quite enjoyable, and several of the young students requested specific books be read to them. Whether
literacy fostered empathy or empathy fostered literacy in this case requires further research, but the results of such an easy activity were quite beyond expectations.

Program Five: Where do your words fly? Kindness in thoughts and action.

Partners: Arabic or English Staff

Class Time: 1 class period.

After being told the eastern European parable about the man who gossips unwisely and realizes he has made a mistake, only to learn that his words have spread and are like feathers from a broken pillow and that he can quite possibly never collect them again, students were asked to consider something for which they admired someone else but had never expressed aloud. To make sure they were honest and to keep anyone from being embarrassed or from feeling that they were not admitted, they were asked not to name the person they admired, but to just write down a compliment. They were then given paper “feathers” that said: The person I am thinking of is admirable because:

Students created a myriad of compliments, most of which were vague enough to apply to anyone. We placed the kind words around the library and students liked to speculate to whom the compliments were directed. They were written in both Arabic and English.

This lesson can also be easily adapted to teach about cyber bullying using technology, text messages and twitter in lieu of paper.

Program 6: Story time for young teens

We offer teachers the option of signing up for a daily “Teen Storytime” where we read to year 7 and 8 students books such as Gregor the Overlander or A Tale of Despereaux. The important part of teen story time is one that all primary teachers are familiar with and that secondary students can enjoy as well: creating participation with text. However, as analysis becomes more sophisticated, sometimes secondary students get caught up in what is the right answer and not whether or not they enjoy or connect with the text. So we let students sprawl out on bean bags or lay on chairs to create a calm, comfortable atmosphere. The important part is that the reader stops to ask plenty of questions that connect the students directly with the narrative and empathy. “Do you
have a sister? If you were Gregor, how would you feel after she disappeared?” or “Do you ever feel like you do not fit in with your family? How does love make Desperaux brave?” “How would you help Desperaux?” The more advanced the class, the more sophisticated the text and questions for story time, but the questions that connect to students’ lives, and particularly the things they care about, bring about a positive association between caring for others and reading.

Student Volunteer Programs that Foster Empathy

Doha, Qatar could be labeled a place with few volunteer opportunities. According to a survey conducted at the beginning of the school year, most students do not volunteer in the community, although they are interested in doing so. While recognizing that students who volunteer might be predisposed to be empathetic anyway, our hope was that by training a small group of students to promote an atmosphere conducive to reading and helping, they would influence other students with less motivation to read or volunteer.

We received over 70 applications from potential student volunteers, and interviews took several weeks to conduct. Because of the gender segregation rules and time limitations at our school, all of our volunteers were female students.

Several students who were not chosen to be monitors came in to help anyway, and were eventually added to replace students who did not show up for their shifts. In this way, we were able to recruit a group of fifteen students, called the “library monitors” who were dedicated to helping throughout the school year.

Additionally, we tapped our school CAS program for more student volunteers from our school’s AS and IB programs. We found three ways that library volunteerism strengthened the connection between empathy and literacy: 1) Enforcing a communal and safe space to read; 2) Consideration of day-to-day library operations including reader advisory; 3) Awareness of other library communities and students in need of books.

Volunteer Mandate One: Creating the Space

Every librarian wants the library to be a safe, comfortable space for all students. However, we have found that during breaks, when the library is very busy, it can be difficult to ensure that the library atmosphere is pleasant for all students. Although the library is often a refuge from the bullying that goes on in school hallways and
playgrounds, our two simple rules, “No eating!” and “Be nice!” are not always followed. Students will still occasionally insult each other, and disagreements will erupt. In order to counteract this growing problem, we asked our student volunteers to assist us in ensuring that students maintain kindness and politeness toward each other during all unstructured library time. We found that by appointing other students to reprimand bullying behaviors, we avoided embarrassing students who are bullied, and instead gave them the support of their peers. Students who are in charge of the library atmosphere are the oldest students at our school and therefore have more confidence in disrupting negative behaviour. This also solved the problem of bullying in Arabic, since most students but only one staff member can speak Arabic.

These Library Monitors were instructed to stop any conversations or behaviors that attacked students for their race, religion, or country of origin and to report to staff any directly insulting or potentially violent behaviour. The results were evident after only two weeks: after the monitors were trained and in place, there were no more physical fights and negative behaviors were quickly averted. IB and AS monitors were especially good at resolving conflicts, and might have been peacemakers between their younger siblings at home.

We chose Library Monitors who were avid readers, and asked them to help with reader advisory. They were asked to pick their five favorite books and to recommend them by creating a bookmark with their favorite quote from the book, their year group and initials. The bookmarks were then placed in the corresponding books. Other students would look for these bookmarks, and were able to find books they liked more readily.

Students were also asked to share their favorite books with other students, and were given their own shelf for “Student Staff Picks.”

**Volunteer Mandate Two: Consideration of Day to Day Operations**

In becoming more involved in clerical work in the library, such as stamping and labeling books, many students found more opportunities to find interesting books to read, and were able to adopt some of the empathetic values that are inherent in librarianship, such as the kindness of giving a younger student a book that was meaningful to them at some point. They were also routinely thanked with specific praise such as “Thank you Salma, because you stamped these books I was able to finish a
neat lesson for Year 7 students” or “Thank you Hajer, because you put that book away I was able to help this student research a paper.” We believe that by specifically praising the students they were better able to understand why their volunteer work is important.

Every student who became a library monitor dreamed of the big day when they would be allowed to check out books using the amazing librarian ray-gun, i.e. barcode scanner. However, we wanted to be careful that in allowing students to check out material they would not comment on or repeat to others what material was being circulated to whom.

Students were therefore trained for two 20 minutes sessions about privacy, and its role in an international environment. Students were asked to imagine themselves as a person from a different culture, and how what is right for one family might not be so for another family.

Censorship is still widely practiced in the Gulf region, and our library follows strict guidelines for collection development and requires parental permission for many checkouts. While some of our material is censored at customs and young adult books are restricted to IB students and students with parental permission, we still wanted to give students an opportunity to think about the library as a place where free speech is important both for the transmission of knowledge and as a means to respect the viewpoints of others.

**Volunteer Mandate Three: Everyone has a right to read.**

After teaching students about censorship, banned books and privacy, Fatima, a year 10 student who recently participated in a food drive for the Philippines asked: “What is the point of all this if so many people can’t eat, and will never have books anyway?” The relief education provides to poverty was something that needed further discussion! Students were asked to research charities involved in giving books, and to consider how education effects quality of life. Then we asked students if they could think of solutions, and they decided to fundraise to help a library in a poorer country.

Recently, the French students had been working in the library on sending letters to a Haitian library, and so the volunteers decided to extend this into a
fund raising campaign for the ARAKA library in Haiti. Since they had contacted
the students in Haiti, they felt more of an interest and connection with them than
they might have otherwise.

After discussing it among themselves, they came up with a plan. Once a
month, they would do a video game tournament in the library to fundraise for
another library. They would also ask students who were returning books late if
they would like to make a small donation.

While the amount raised was relatively small, the discussion it created
about reading was quite valuable. Most charitable giving done by the students
involved food relief for natural disasters and giving books was seen as a luxury.
By thinking about reading as a right that not all young people have, students
were able to consider the important effect of education on quality of life and see
books as something valuable- and giving them to others as a charitable and fun
activity!

Volunteer Programs: Results and Conclusion

Our positive anecdotal feedback was strong and sincere for the Library Monitor
project, and we counted 32 instances of kind behavior toward other students in the form
of book recommendations, bullying prevention and altruism. We hope to continue to
develop a formal program with student volunteers.

However, it is time consuming to ensure that volunteer training is reinforced, and
that volunteers are given frequent feedback and clear direction. Additionally, despite
extensive training, we found many, many shelving disasters!

Resources for Staff: Improving Empathy for Staff Members

Due to language barriers, our Arabic and English staff rarely interact, and stay on
opposite sides of the staff room at all times. The only place where this segregation is an
exception is in the library; due to the open space that is more conducive to cooperation
and the presence of a friendly bilingual staff member, we are able to bridge many of the
communication problems experienced by other staff.
We worried that students would notice that their teachers do not talk to each other often. We therefore organized staff library insets so that the different ethnicities would have ample opportunity to interact and learn from each other. Our first opener: What book would you recommend to someone who wanted to learn more about your culture?

We hope we can find more ways to create a welcoming space for team teaching, and to create positive interactions for teachers.

Room for Improvement

Unfortunately, empathy is on the decline among young people, at least in the United States (Zaki 2010).

This is not news to most teachers, but there is still much we can do as librarians to help students become more empathetic. One librarian suggests using primary source material to give students a direct connection to the text (Stripling 2012). Many librarians teach digital citizenship and cyberbullying, which are skills that would be improved by an empathy driven library programs.

One concern we had is that fictional narratives, specifically those on television, contribute to “just world beliefs” (Appel 2008) by virtue of their easy and certain resolutions. Any reading is good reading in our library, but we would like to promote books that are both entertaining and thought provoking.

While young adult literature does handle complexity and unfairness, it seems that the books that fly off the shelves are usually not ones that challenge the fairness of the world or have empathy as a major theme. Additionally, the positive effect of reading on empathy was shown only to occur when the reader is “emotionally transported “(Bal and Veltcamp 2013). As many school librarians know, it is a challenging enough task just to get all the students to read for pleasure, let alone ensure they are “emotionally transported.”

If students are not reading books that disturb them, or that push them toward changing and improving the world, they might not experience the benefits of the reading-empathy connection. Indeed, a survey conducted in the United
States found that among students aged 15-25 (Safrit 2002) only 40% felt that they had a responsibility to change and improve society.

We hope that by providing empathy-based literacy lessons and programs, encouraging the values of librarianship and giving students an opportunity to volunteer, that we can at least make our library a kinder place to be, and start the long process of cultivating more empathy-centered lessons, resources and programs.

**Works Cited**


Appendix 1
Caring in your classroom

While there are many thousands of books that inspire empathy, here are a few selections for young people where empathy is a significant, driving force in the work and we hope will encourage student discussion about kindness.

For more ideas see the empathy library [http://empathylibrary.com/library](http://empathylibrary.com/library)

Fiction

*Dick, Phillip K. *Do Androids Dream of Electric Sheep?*

Non-Fiction


Short Stories


*Recommended especially for older students with no censorship concerns*

Appendix 2
HELP! I NEED A BOOK! READER ADVISORY ASSIGNMENT
YOUR TV DIED ON THE SAME DAY ALL THE MALLS IN QATAR CLOSED DOWN! ONLY YOUR PARTNER CAN SAVE YOU FROM DEATH BY BOREDOM.....

1. WHAT IS YOUR NAME AND WHERE ARE YOU FROM?

2. WHAT IS SOMETHING FUNNY THAT HAPPENED TO YOU OR SOMEONE YOU KNOW?

3. WHO ARE THE MOST IMPORTANT PEOPLE IN YOUR LIFE?

4. WHAT IS YOUR FAVORITE FOOD?

5. WHAT KIND OF MOVIES DO YOU LIKE? (ACTION, CARTOON, COMEDY)

6. WHAT IS THE LAST BOOK YOU READ THAT YOU LIKED?

7. WHY DID YOU LIKE THAT BOOK?

8. DO YOU LIKE HORROR STORIES OR ADVENTURE STORIES BETTER?

9. IF HORROR STORIES, WHAT FRIGHTENS YOU AND WHY?

10. IF ADVENTURE STORIES: WHO IS YOUR HERO AND WHY?

RECOMMENDING STUDENT
BASED ON YOUR INTERVIEW WITH YOUR PARTNER, CREATE AN IMAGINARY BOOK THAT YOUR PARTNER WOULD LIKE TO READ. INCLUDE A BOOK COVER, AN AUTHOR, TITLE AND SUMMARY ON THE BACK OF THE BOOK THAT TELLS WHAT THE BOOK IS ABOUT IN 1 TO 2 PARAGRAPHS.
EXTRA CREDIT: CREATE A TABLE OF CONTENTS WITH CHAPTER NAMES
Abstract

As the idea of global citizenship grows stronger in a world with blurring borders, issues of social justice and international human rights should be available in the school library collection and alive in the curriculum. This paper reports findings on a study exploring the perceptions of preservice educators in using international literature to teach youth about international human rights. The 2013 Batchelder Honor title Son of a Gun (de Graaf, 2012), translated from the Dutch into English, tells the story of a young brother and sister forced to become child soldiers during the Liberian civil war of the 1990s. Study participants enrolled in a masters level course in the United States read the title and the United Nations’ Declaration of the Rights of the Child (1959) and then participated in group literature circles to apply the DRC to Son of a Gun and discuss teaching international human rights to youth.
Keywords: international human rights, global literature, translated literature, literature circles, global citizenship

Introduction
As people across the world become more interconnected than ever before, the need for global awareness becomes increasingly imperative. The school library is in a strategic position in the school community to be the place where students can experience other cultures and learn more about their world, both past and present. The school library may also be a place where students are encouraged to develop awareness of international human rights issues. Unfortunately, human rights education is rarely taught in schools in the United States today (Dunkerly-Bean, 2013). However, including international and global literature in the school library collection is a practical way to offer opportunities for students to explore issues such as social justice and international human rights.

In this study, our purpose was to investigate the perceptions pre-service teachers and school librarians had about using an international children’s book to promote awareness, discussion, and activism related to international human rights with their students. We used Anne de Graaf’s (2012) novel Son of a Gun, a book about child soldiers in war-torn 1990s Liberia, to facilitate literature circle discussions about human rights in the context of an online children’s literature class. Discussions were framed within the United Nations’ 1959 Declaration of the Rights of the Child (DRC), a document outlining ten fundamental rights such as an education, medical care, a name, and even love that every child in the world deserves “without any exception whatsoever” (UN, 1959). The study was guided by the following questions:

1. What meanings do participants make after reading Son of a Gun (de Graaf, 2012)?
   a. What are their overall perceptions of the quality and appeal of the book?
   b. What are their perceptions of using the book with children?
   c. What connections do they draw between this title and the DRC?
   d. What are their perceptions of using the book to understand and teach about international human rights with youth?

Literature Review
The literature review which follows addresses the use of literature circles to discuss social justice issues, the potential of international literature to facilitate global awareness and understanding, and some background about de Graaf’s (2012) novel and the DRC (UN, 1959).

Literature Circles
Other studies have used literature circles with pre-service teachers as a way to understand their pedagogical perspectives on learning, encourage the integration of literature into their practice, and study the impact of participants’ cultural backgrounds and experiences on their teaching (Alger, 2007; Escamilla & Nathenson-Mejia, 2003; Thein, Guise, & Sloan, 2012). In an effort to promote cultural responsiveness in a class
of predominantly White pre-service teachers, Escamilla and Nathenson-Mejía (2003) used Latino children’s literature in literature circles. Through the discussions, the students made universal connections with characters and situations in the stories, but were also hesitant to address more controversial content in the titles based on cultural differences. An example was the presumed focus on death in the Latin American holiday, El Día de Los Muertos, where families celebrate and remember their deceased friends and family. Thein et al. (2012) found that using children’s literature dealing with social class issues and then discussing these titles via literature circles encouraged pre-service and in-service teacher participants to inquire about social class issues at the local level that may be directly impacting their students. Alger (2007) found success in using professional titles in literature circles with pre-service teachers to force them to confront their perspectives on illiteracy with older students. The findings from these studies give our research a base for using literature circles to investigate how pre-service teacher librarians can use international children’s literature to engage students in discussions of social justice and human rights and develop global citizenship.

**International Literature**

Scholars have called on educators from primary to secondary levels to engage youth in discussions and action on topics such as social justice and international human rights (Grant & Gibson, 2013; Martin, Smolen, Oswald, & Milam, 2012). Including international literature in the school library is one way that educators might foster such global awareness. International literature refers to books that were originally published outside the United States; it is distinct from global literature, which refers to books that are set outside of the United States but may have been written by American authors (Montero & Robertson, 2006; Moreillon, 2013). Reading books with international origins is regarded as a means of promoting appreciation of other cultures as well as developing respect for diversity (Buck et al., 2011; Louie & Louie, 1999). International literature “has a key role to play in developing our young people’s global understandings” (Moreillon, 2013, p. 35).

Unfortunately, international children’s literature is risky business for American publishers. International books do not sell well and can be more expensive to produce than books with domestic origins (Biamonte, 2002). However, in order to encourage the publication of international children’s literature in the United States, the Association for Library Service to Children (ALSC), a division of the American Library Association, established the Mildred L. Batchelder Award in 1966. The Batchelder Award’s intent is “to encourage American publishers to seek out superior children’s books abroad and to promote communication among the peoples of the world” (ALSC, 2014, para. 2). The award is given annually to an outstanding children’s title originally published outside of the United States, translated to English, and then published for an American audience. Though one award winner is selected, the ALSC committee has the option of conferring the Batchelder Honor on quality titles that also merit literary recognition. Batchelder books thus make selection of high quality international literature simplified for librarians and teachers. Access to these books also opens the possibility for engaging youth with
international literature in order to show them other ways of life and encourage them to consider global issues.

**Son of a Gun (de Graaf, 2012)**

Son of a Gun (de Graaf, 2012), originally published in Dutch in the Netherlands, is set during Liberian civil war in the early 1990s when children were kidnapped from villages and forced to fight as soldiers in the conflict. While the story is fiction, de Graaf did extensive research including interviews with former child soldiers to tell the story of brother Lucky and sister Nopi. This book was selected for our study because it is a current example of international literature that addresses an ongoing global issue: child soldiers (see Mangier, 2013). Additionally, Son of a Gun (de Graaf, 2012) has been recognized for its literary merit: ALSC awarded it with a 2013 Batchelder Honor. Further, Anne de Graaf both wrote the original Dutch version of the book and translated it to English, which curtails some of the issues involved with what can get lost in a translation like names and cultural context (see Metcalf, 2003; Yamazaki, 2002). Moreover, Son of a Gun (de Graaf, 2012) is a strong reflection of what can happen to children when a society fails to support the beliefs expounded in the DRC (UN, 1959). Thus, it was an appropriate choice for our goal of addressing international human rights using children’s literature within online literature circle discussion.

**The Declaration of the Rights of the Child (UN, 1959)**

The DRC (UN, 1959) was chosen as a framework to examine the violations of the basic rights of Nopi, Lucky, and the other child soldiers in the novel, Son of a Gun (UN, 1959). The researchers have previously used the DRC (UN, 1959) to do content analyses and examinations of the content within international children’s titles that have won the Batchelder Award or Honor since 2000 (see Garrison, Kimmel, & Forest, 2013; Garrison, Kimmel, & Forest, 2014). This document holds strong potential for engaging children in discussions and activism efforts regarding international human rights and other social justice issues around the world. The United Nations includes a plain language version of the rights which would be useful to use with children in lieu of the more formal, official version. (See Appendix A. for the Plain Language version.) This is the format we used in this study and shared with our participants.

**Methods**

This study employed a qualitative design to investigate the research questions listed above. The participants in this study were pre-service school librarians and teachers enrolled in two sections of an online children’s literature class as part of their Masters of Education coursework from August to December 2013 at a university in the United States. In this class, groups of four to five students participate in synchronous, digital literature circles to gain experience with this teaching strategy while interacting with children’s books. As part of this assignment, students were required to: 1) read Son of a Gun independently; 2) read the DRC; 3) choose and prepare roles for the literature circles (e.g. leader, summarizer); 4) create questions to accompany the discussion, relating them to the DRC; 5) record the transcript of the talk on their course website; and
6) submit a reflection of the discussion following the experience. The students’ work including the questions, reflection, and recorded transcripts became the data sources analyzed to investigate the research questions. Sixteen students participated in this study and a research assistant pulled their responses and discussions from the literature circle transcripts and gathered their work from the class instructors. A qualitative data analysis approach was employed to code and analyze each of these data sources (Merriam, 2009). Each researcher was assigned a research sub-question and read through the data sources to find references to these topics. The research team then gathered to review the data as a team and discuss the findings holistically as well as for each sub-question.

Findings

Our overarching research question sought to explore the meanings pre-service teachers and school librarians made after reading the 2013 Batchelder Honor title *Son of a Gun* (de Graaf, 2012) and the *DRC* (UN, 1959). Findings revealed interesting and divergent perspectives from the participants. These are organized by each of the four sub-questions.

**Appeal and Quality of the Book**

Based on the transcripts of the literature circle discussions, it is evident that this book was appealing to the participants themselves. While some felt the book and violent topic of child soldiers and war would be difficult for youth, others noted it as an important read for all. The title for this paper given by Claudia (“Sometimes we have to expose children to ‘the realities of their world’”) expounds this view as well as that of Alice who “made [her] nieces and nephews read it.” Several participants were very engaged with the book, noting they “couldn’t put it down” and that it was inspirational, “a great story of not giving up.” They especially appreciated how the author’s real-life interactions with former child soldiers informed the story. A few mentioned being particularly interested in the author’s notes at the end of the story, where the author describes her experiences with children who have experienced war. These notes seemed to add quality to the book as participants described it as more “authentic” and “genuine” to them.

At the same time, participants also noted that the book was difficult to read due to the content. One participant called the book “heart-wrenching.” In addition to the harsh nature of the content noted as an unsatisfactory quality of the book, one participant remarked that the characterization of Nopi poor and under-developed. Nonetheless, a few thought it would be too difficult (in terms of content) for children while others felt children would still enjoy the book.

**Using the Book with Children**

While students saw promise in using this book with youth to engage in discussions about international human rights, the age appropriateness of the novel was a subject of disagreement. The language and reading level of the book are low and students agreed
that middle school aged youth could read it independently and comprehend it. However, the topics of violence in the content made them think it would be more emotionally appropriate for secondary students. There was a discussion in one of the groups about the need for parental consent to read the book. It was also suggested by Rosa to use the book “as a reading choice for a student who want to read it,” but not a required read. It is important to note here that many of the allusions to violence are implicitly described and not explicit in nature. de Graaf (2012) gives tactful descriptions without graphic details so the reader must often infer what is occurring as in the discussion of rape that Nopi has with another young girl (both made “wives” to the same soldier) who has become pregnant.

Nonetheless, participants noted specific groups of readers that would benefit from engaging with *Son of a Gun* (de Graaf, 2010). Lisa said, “I think this would be a great book for students with disabilities to read to see [Nopi’s] courage and resilience” as the main character becomes deaf during a battle. In the questions the students made pre-circle, Alexis directly addressed social issues enlisting the readers to consider what “educationally privileged students in America” would think about the nature of school in Liberia at the time of this novel. This question may have further implications given the recent events in Nigeria where 276 girls were kidnapped from their school by militants on April 14, 2014 (Abubakar, 2014).

Participants also discussed curriculum connections and uses for the title in the classroom. Some noted its practicality in a writing assignment. Alexis had an array of ideas to use this book with youth and support global citizenship and awareness. In particular, Alexis described how it could be used to help discuss “the impact that slavery in America had on other countries.” She talked about the book being a “great way to tie in classroom cultures” through a pen pal program. She also suggested using Skype as a way “to really break down barriers that prevent students from having a global understanding of the world.” Alexis was also a participant who brought up the idea of sister cities and making connections with other countries through that avenue.

**Connections with the DRC (UN, 1959)**
The *DRC* (UN, 1959) was used as a framework for students to consider how the rights of Nopi and Lucky were condemned during the novel. Students mentioned the *DRC* in the questions they created prior to the literature circle discussions. Examples of these questions are listed in Table 1.
Table 1. Literature Circle Questions from Participants

<table>
<thead>
<tr>
<th>Student Pseudonym</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kristy</td>
<td>In the second point it says that children will be protected “to enable him to develop physically, mentally, morally, spiritually, and socially in a healthy and normal manner and in conditions of freedom and dignity.” How did Lucky and Nopi develop in these areas, was it normal, if not, what was affected?</td>
</tr>
<tr>
<td>Lucy</td>
<td>What, if any, steps should be taken by the United Nations to ensure children are protected during civil wars?</td>
</tr>
<tr>
<td>Melanie</td>
<td>There are still children soldiers in more than 25 countries today. How is it that with stories like Nopi and Lucky and the laws of the Declaration of the Rights of the Child that countries are still employing children into war?</td>
</tr>
<tr>
<td>Courtney</td>
<td>How could Nopi’s and Lucky’s involvement in the war be different if the Declaration of the Rights of a Child were intact?</td>
</tr>
<tr>
<td>Katie</td>
<td>What are some examples of direct violation of the Declaration of the Rights of the Child in Son of a Gun?</td>
</tr>
<tr>
<td>Angela</td>
<td>Number 5 says you have a right to special care if you are handicapped. Why does Nopi not want anyone to know she is deaf?</td>
</tr>
</tbody>
</table>
During the literature circles, a common theme of accountability occupied the discussions in regards to the DRC (1959). Participants asked each other who was responsible, how they could be brought to justice, and how such terrible events can be rectified. Katie compared the plight of child soldiers with that of the Jews in the Holocaust during World War II. Lisa summarized her group’s discussion in such terms:

“We held a long discussion on who we thought was responsible or should be held accountable for the abuse of these child soldiers. We all agreed that according the Declaration of the Rights of Children, these children were not protected. We discussed that every adult that had a hand in the Liberian war and forcing these kids into adult roles should have been held accountable and also how impossible it was to track them all down."

The students were able to use the DRC (UN, 1959) as a framework for examining the different violations of international human rights in the title. It is clear from their discussion transcripts, pre-created circle questions, and discussion summaries that this was an effective tool for them personally to use. The next sub-question asked them to connect this to the classroom

**Teaching Children about International Human Rights**

Participants had divergent perspectives on using this book to teach children about international human rights. In the title of this paper, Claudia noted that this global perspective offers the opportunity of “expos[ing] children to the realities of their world.” Alexis also described the potential for *Son of a Gun* (de Graaf, 2012) to serve as a catalyst for discussions about the history of Liberia and other African countries and how current social issues in this area have been impacted on slavery of the past. At the same time, participants in the literature circles were mindful of the implications that discussions of violence and war could have in the classroom. Laurie and Meghan from the Green Group deliberate below:

Laurie: I think this book would pique the interests of children too to learn more about the war...
Megan: orscare [sic.] them.
Laurie: I think (de Graaf) did a good job of revealing just enough for kids to know what these children went through without making it to [sic.] gruesome and detailed.

Alexis from the Blue Group led an interesting discussion when she noted resources on the UN website for helping to teach youth about child soldiers. She made a connection to *Son of a Gun* (de Graaf, 2012) with Jerry Piasecki’s book *Marie, The Shadow of a Lion: A Humanitarian Novel* (2000), which was published by the United Nations and includes a Teacher’s Resource Guide on the Cyberschoolbus website for using with youth. Alexis noted that, “it is free to read and it is a similar perspective [to *Son of a Gun*], but from the view of a young girl who watches how the boys become killers.” It is
evident from the discussions among the participants that there are diverse perspectives on how to go about teaching youth about international human rights and perhaps if at all.

**Study Limitations**
There were some limitations to this study that need to be addressed. Firstly, while there were potentially 39 participants, only 16 students gave their consent. Since the students were not required to do anything extra beyond their class requirements, this was quite surprising. It is unclear why students did not agree to participant, but could perhaps been due to the extensive study description given to them in their participation request letter. This was created in order to fully address the requirements of the Human Subjects Review Board at the university, but it is possible the researchers could have simplified this slightly to be more welcoming to potential participants and still have passed the review.

Another interesting limitation that is not so obvious was the students’ engagement with *Son of a Gun* (de Graaf, 2012). They got so into reading the book and the real-world pieces of the story that their discussions of using the book and the *DRC* (UN, 1959) with children were a bit muted. While this does reinforce that fact that the book is of literary quality and holds appeal for reading, more direct discussion about classroom applications would have enhanced the findings for this study.

**Significance**
The search for culture is one that can and should begin in the world of the school library. As educators, we have a responsibility to give our students the opportunities to experience their world. International literature, like *Son of a Gun* (de Graaf, 2012), is a great way to offer these chances and encourage them to consider issues of social (in)justices in their own communities as well as the broader global context as noted in the *DRC* (UN, 1959). While discussions about the violations of international human rights and violence are no doubt difficult to have with children, having them in the school library gives students a safe place to unpack what these global issues mean for humanity and how they can make potential impacts. As shown in the literature review with the study of primary students, students are never too young to begin considering how they can enact change with social injustices in the world. Being informed and educated is the first step toward such changes and attitudes. There are useful resources out there to help guide teacher with these difficult topics. For example, the United Nations’ Cyberschoolbus website which discusses global issues for children presents extensive information and a webquest about child soldiers around the world (For more information, see http://cyberschoolbus.un.org/childsoldiers/webquest/). This is a great start and reference for school librarians and educators hesitant to engage students in discussions of international human rights. As shown in this study, international children’s literature holds strong potential in being another useful tool.
References

Alger, C.L. (2007). Engaging student teachers’ hearts and minds in the struggle to address (il)literacy in content area classrooms. *Journal of Adolescent & Adult Literacy, 50*(8), 620-630.


Appendix A.

United Nations' *Declaration of the Rights of the Child* Plain Language Version

(1959)

1. All children have the right to what follows, no matter what their race, colour, sex, language, religion, political or other opinion, or where they were born or who they were born to.

2. You have the special right to grow up and to develop physically and spiritually in a healthy and normal way, free and with dignity.

3. You have a right to a name and to be a member of a country.

4. You have a right to special care and protection and to good food, housing and medical services.

5. You have the right to special care if handicapped in any way.

6. You have the right to love and understanding, preferably from parents and family, but from the government where these cannot help.

7. You have the right to go to school for free, to play, and to have an equal chance to develop yourself and to learn to be responsible and useful. Your parents have special responsibilities for your education and guidance.

8. You have the right always to be among the first to get help.

9. You have the right to be protected against cruel acts or exploitation, e.g. you shall not be obliged to do work which hinders your development both physically and mentally. You should not work before a minimum age and never when that would hinder your health, and your moral and physical development.

10. You should be taught peace, understanding, tolerance and friendship among all people.
Biographical Notes

Kasey Garrison is a lecturer in Teacher Librarianship in the School of Information Studies at Charles Sturt University in Wagga Wagga, New South Wales, Australia. Kasey earned a Ph.D. in Education with a focus on Curriculum and Instruction from Old Dominion University in Norfolk, Virginia, USA, in August 2012. With a Masters in Education and a Bachelors of Arts in Spanish, Kasey has experience at the preschool through secondary levels in the library and also teaching Spanish and students with special needs. Her research interests are focused on diversity within children’s and young adult literature and reader responses to such titles.

Danielle Forest is an Assistant Professor of Elementary Education and Literacy at the University of Southern Mississippi in Hattiesburg, MS, USA, where she teaches courses in language arts and reading methods. She received her Ph.D. in Curriculum & Instruction from Old Dominion University in May 2014. She has also earned a master’s degree in Curriculum & Instruction from the University of Massachusetts-Lowell and was a grade four teacher prior to her doctoral studies.

Sue Kimmel earned her Ph.D. in Curriculum and Instruction from the University of North Carolina at Greensboro in 2010. She is currently an Assistant Professor at Old Dominion University in Norfolk. Previously a selector for The Elementary School Library Collection, she has extensive experience reviewing children’s literature and has served on the ALSC Caldecott, Newbery, and Notable Books for Children committees. Her research interests include multiple literacies and the socio-cultural impacts of children’s literature.
Literature Quizzes
Celebrating the Ongoing Importance of Wide Reading

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Literature Quizzes
Celebrating the Ongoing Importance of Wide Reading

Literature Quizzes are an integral part of the Southwell School Library programme. Students read widely, hoping to represent us in the annual Kids’ Lit Quiz™ (www.kidslitquiz.com). In this time of electronic entertainment entice your students to enjoy literature, books and ebooks. Reading encourages empathy with others whose lives and situations differ, global awareness, and knowledge of history. Myths and legends influence cultural practice and social realism helps them cope with life’s problems. Reading is a resource for our humanity. At this workshop play brain-training games. These will be given away along with signed books from New Zealand authors. Learn how to write quiz questions and select teams. Hear how we use cognitive technology to help students retain and retrieve literary information. Make Lit Quizzes part of your library programmes and see your readers grow exponentially. There may be a regional of the Kids’ Lit Quiz™ near you!

Keywords: Literature, Quizzes, Wide Reading

Literature Quizzes – Celebrating Wide Reading

This Workshop includes a visual Power Point and a lot of interaction with participants including literary games, learning activities and a quiz. What follows is an explanation of the workshop’s context.

Southwell School in Hamilton, New Zealand was founded in 1911 with three male students. Girls were included in 2000 and there are now 620 students aged 5-12. In my 17th year at Southwell, I am now job sharing (70%/30%) with Julie Huggins who has also been working with Lit Quiz teams for the same length of time. Resources made by her will be credited on the Power Point shown at the workshop.

Literature Quizzes are an integral part of the Southwell School Library programme. We have Junior and Senior Inter House Lit Quizzes in Book Week, a Lit Club and ‘Super
Keen Readers’ who train with hopes of representing Southwell in the annual regional of the Kids’ Lit Quiz™. Just what is the Kids’ Lit Quiz™ and why is it trademarked?

Twenty-three years ago when University lecturer Wayne Mills’ children were at school he saw students getting awards for Maths and Science and Sport. But where, he asked himself, were the awards for reading? In 1991, with the help of the Waikato Children’s Literature Association he organized the first lit quiz for Hamilton school children in Year 7 & 8 (11-12 year olds). It is now known as the International Sport of Reading with heats and national finals this year in New Zealand, the United Kingdom, South Africa, Canada, USA, China, Hong Kong, Singapore and Australia. National winners qualify for the World Finals which, in 2014, are in Truro, Cornwall, England.

Because he considers the many thousands of questions he has written and the particular format of his quiz his intellectual property, Wayne has trademarked it. So, in consideration of this, our quizzes at Southwell are a little different and we write our own hundreds of questions.

Now, over 4,000 10 – 13 year olds take part in the New Zealand regional Kids’ Lit Quiz™ competitions annually. Last year thirteen teams went on to Nationals and the team from Takapuna Normal Intermediate in Auckland represented NZ in the World Final in Durban placing 2nd. Four New Zealand readers go on to the World Final. For the thousands of others it is all about the journey – a journey that inspires them to become lifelong readers.

The New Zealand singer Lorde, Ella Yelich, has taken the world by storm. She was a Lit Quiz kid from Belmont Intermediate in Auckland. In 2008 her team were runners up in the Nationals and winners in 2009. They went on to place 2nd in the South African World Final. Wayne said at that stage Ella was reading a book a day. Lorde is the song writer reading made!

**The Regional Quiz**

One or two teams of four 10 -13 year olds, representing local schools, participate in a written quiz. This is scored round by round to the mounting excitement of the teams. There are ten rounds of ten questions in a variety of categories, which are unknown prior to the quiz. There is one visual category and teams choose a double points round. Questions can be about any author or illustrator, any book suitable for children, ever written in the English language from myths, legends and the Bible to contemporary fiction. Categories in the 2014 Waikato Quiz included Cannibals, Famous Animals, Colours, Wings, Super Heroes and Time. Some questions are easy to ensure all celebrate success, others are difficult indeed. It was a delight that with 45 teams competing, this year Southwell placed 1st and 2nd. The 14 regional winners compete in the 10 June National, yet to happen as I write this.

Preparation for the regionals requires very wide reading. Along with the popular contemporary fiction (especially dystopian) the students need to be familiar with fables,
classics, myths and legends, folk talks and fairy tales, poetry, comics, authors and illustrators. This wide reading leads to an appreciation of literary reference in books like Chris Riddell’s *Goth Girl and the Ghost of a Mouse* where Ada’s nannies included Jane Ear, Becky Sharp, Hebe Poppins and Nanny Darling. Those familiar with Greek mythology have a better understanding of the characters in books like Rick Riordan’s *Percy Jackson and the Lightning Thief*, Diana Wynne Jones’ *The Game*, Kate O’Hearn’s *Pegasus and the Flame* and *The Goddess Test* by Aimee Carter.

**Gathering Enthusiasts**
Southwell has a non-competitive Lit Club that meets to share a love of reading, has a hand in choosing books for the library, runs the Junior Lit Quiz in Book Week and hosts visiting authors and illustrators.

We put out an “open casting call” for those keen to try out for a place in one of the competitive teams. We have fun with the initial group, playing games and running preliminary quick quizzes endeavouring to grow the knowledge. We then cull the group with a selection quiz, direct learning and have, yet more fun.

We track for the best fit team. In a documentary on the Cambridge University Rowing Team, the coach said “The four best may not be the best four”. A powerful team needs children with a range of strengths. Every mini quiz is recorded on a grid, colour coded for each member of the group. Blocks of colour denote knowledge and an increase in colour density growth. A Chinese child, not raised with European nursery rhymes, initially scored 1/10 then five months later in a similar quiz got 19.5/20. In the earlier quiz no one knew the number of fiddlers Old King Cole had – a leaning opportunity. Students record their reading on a Google Doc and we develop another one, with authors’ biographical information.

**Student Research**
As a homework project, students make posters with the background of a city or country featuring the covers of books set there. Examples to be shown are: Paris with *Madeline* and *The Invention of Hugo Cabret*; Venice with *The Thief Lord* and *City of Masks* and Afghanistan with *Parvana, Parvana’s Journey* and *Shadow*. They also gather stamps in a *Read Your Way Around The World Passport* and read stories from the past and about possible futures, to enter in a *Time Travellers’ Passport*.

**Stations and Games**
As well as meeting weekly at the start of the year, there are two evening sessions that allow us more time to train teams for the May regional. Stations are activities such as identifying a range of comic characters, recognising fables from illustrations and knowing their morals, being able to complete nursery rhyme lines and fill in the gaps of authors, titles, characters and settings on a Classics Sheet. Workshop participants will do these activities and consider what similar tasks would be relevant to the literature of their countries.
We use a Memory game to help students match cards and identify illustrators and creatures of myth and legend. Pictionary is a great hit and the clue cards used with Characters Titles, Nursery Rhymes and Mythical Creatures will be given away. Taboo will be next and we’ll see who can describe a character or title without saying any of the forbidden words! Both of these literary versions were adapted by Julie Huggins.

**National Quiz and World Finals**

This will be the fourth time Southwell has been to the National Quiz. It is a very different style of competition. Each team starts with 10 points. As Wayne reads the questions, the first team to press their buzzer has a chance to answer. Correct and you gain 2 points, wrong and you lose 1. There is a category of first lines and ‘Who is this author/illustrator’. So, we drip feed the team members five first lines and information about three authors or illustrators each night in the time between our regional and the national competition.

In 2009 The Waikato Children’s Literature Association was asked to host the 2001 World Final – or 20th Anniversary International Final, as it was called that year. Southwell kindly gave us use of the buildings (including Boarding House) free of charge. A lot of fund raising was required to cover the week’s expenses, including days of tourism, for the teams from Canada, Britain (two teams), South Africa and the NZ Champions. There was ‘fun raising’ too. Each team had a local ‘buddy school’ who entertained them for a day, cheered for them at the Quiz and came to the Gala Dinner where New Zealand authors, Tessa Duder, David Hill, Brian Falkner and Jenny Hessell talked about their work. Lasting friendships were formed and two of the children, one from South Africa and the other from New Zealand, will meet up again this year.

**Book Week Quizzes**

The Southwell Book Week features a Junior and Senior Inter House Lit Quiz. This year, by request from ex Lit Quiz kids who missed the sport of reading, Julie and I included a High School Quiz. Many of our past pupils participated and there were three in the winning team. This quiz was such a success it will now be an annual event. Some of the students went off with the intention of running one themselves for their school, just as we’d hoped.

Now Julie and I can enjoy even more YA fiction at the upper end! I just finished John Green’s *Paper Towns* which leads readers to S. E. Hinton’s *The Outsiders* and Walt Whitman’s *Leaves of Grass*.

**Lit Quizzes at IASL Schools**

Workshop participants will be asked to think how Lit Quizzes could fit into their reading programmes and their educational community. They will be encouraged to consider quiz writing, making resources and taking the fun home.

**2014 Moscow IASL Lit Quiz**

In the time available at the end of the workshop a Mini Quiz will held with bookmark prizes. Finally, names will be drawn for signed copies of New Zealand children’s books.
References

Biographical note
Gerri Judkins is librarian at Southwell School in Hamilton. A member of SLANZA (School Library Association of NZ Aotearoa), she served on the National Executive, has presented at five SLANZA conferences and is secretary of the Waikato Children’s Literature Association.

In 2012 she received the Storylines Betty Gilderdale Award for services to Children’s Literature (http://www.storylines.org.nz/Awards/Betty+Gilderdale+Award.html) and in 2014, an Independent Schools of NZ Honour Award for Service to Literature and Library (http://www.isnz.org.nz/awards-board).

On the ISLM Committee, she organizes translations of the ISLM theme and the Skype Exchange and presented at IASL conferences in 2009 and 2010.
2015 USBBY Outstanding International Books
Submitted Books
Mona Kerby Nominated Titles


Annotation:

Digger Dog wants his bone, and he won’t stop until he gets a big digger and then a bigger digger and after that, the world's biggest digger, and he gets that bone but completely misses something else even better.

- Large colorful illustrations will be easily seen by a large group.
- Simple, humorous text can be read by beginning readers and also be chanted by listeners at story-time. The last page opens up to display a fold out and surprising end that will be sure to engage young children. (MK)

Dillon, Patrick. *The Story of Buildings: From the Pyramids to the Sydney Opera House and Beyond*. Illus. by Stephen Biesty. Candlewick. (Walker, UK) (Gr 4-12)

Annotation:

With meticulous illustrations and polished writing rich with details, using a two-page spread and enhanced by a flap that unfolds to provide additional information, readers will learn about the world’s most famous buildings.

- The author is an historian and architect and loves stories and buildings and this book proves it. We learn about such buildings as the Notre Dame, the Tah Majal, Saint Petersburg, and the Sydney Opera House.
- The illustrations are outstanding. Incredible detail and lovely—no telling how long it took to complete them. (MK)

Hodgkinson, Leigh. *Troll Swap*. Candlewick/Nosy Crow. (UK)

Previously nominated

- Large, over-sized picture books will entertain a class as they listen to the story of nice, polite, and tidy Timothy Limpet, a troll who does not fit in with his family who
decides to switch places with loud, loopy, and messy Tabitha Lumpit, a little girl who does not fit in with her family. The gentle humor and fine storytelling will reassure young listeners that is okay to be who they are. (MK)

Imai, Ayano. *Puss & Boots*. Tr. by Sayako Uchida. Adapted by Kate Westerlund. Michael Neugebauer/Minedition. (Hong Kong)

Previously nominated

- Large-over-sized picture book was first published in Japan. This tale ends with the shoemaker moving into the monster's castle where they open up a new shop where the townspeople enjoyed looking at the odd collection of shoes, including the ones that were "hardly big enough for a mouse." This version makes a fine addition to a collection of Puss in Boots titles. (MK)


Previously nominated

- Everything you want to know about water—including fun historical tidbits such as public toilets in ancient Rome. Pleasing page layout includes colored photos throughout the book, at least four to a page, along with sidebars with interesting facts. (MK)
- This book will meet school curriculum, and the added plus, is the lively written text. (MK)


Previously nominated

- Engaging interactive text—for visual learners as well as those students who are interested in transportation. Includes over 100 machines, including the Boeing 787 Dreamliner (2009), Sputnik 1 (1957), Hindenburg (1936), and Giffard's Airship (1852). (MK)

Previously nominated

- The sheer delight of this book is that it is designed to be enjoyed by using 3D glasses. Young readers will discover a vibrant, moving world. I don't remember another book like this that has been recently published. (MK)


Previously nominated

- Book can be browsed for hours on end as each page has many illustrations and interesting facts. The table of contents includes sections on caves, animals that live underground, things and people who have been buried, the Paris Underground, the Tokyo Underground, and building tunnels in the modern age. An index is also provided. (MK)


Previously nominated

- The strength of this book is that it depicts a view of family life different than the way that typical Americans live. Using bold colors and simplistic artwork, the setting could be either a Caribbean island or an African village. (MK)

Slegers, Liesbet. *Meow! Katie’s Big Book of Animals*. Clavis. (The Netherlands, first published in Belgium and Holland by Clavis Uitgeverij)

Previously nominated

- Kindergarten curriculum include a unit on animals and this book will meet this need. The illustrations are child-like and simple. The text engages the reader to follow along, to figure out which animal doesn't belong, and to identify animals by their sounds and also by their coats. (MK)
University Preparation Programs for School Librarians: “Learning and Sharing: A Look at How Collaboration and Leadership/Administration Courses Are Taught in Australia, Canada, and the United States”

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Keywords: professors, university preparation programs, leadership

This three-hour workshop provides an opportunity for school librarianship professors to discuss and share with their peers best practices in creating relevant assignments for school librarians in the 21st century on the topics of collaboration and leadership. For each topic, the professors from Australia, Canada, and the United States will share the following on a large screen and with handouts: (a) national standards that guide course preparation, (b) the course description, (c) course objectives, and (d) one sample assignment. Assignments for both topics will include the instructions and also the rubrics. After each topic presentation, participants are encouraged to share how they teach collaboration and leadership, and they will then be divided into small groups to
share additional ideas. A third component of the presentation focuses on a 2013 U.S. grant from the Institute of Museum and Library Studies to deliver four online courses for doctoral candidates from various institutions with an interest in school library doctoral studies. The session will close with the participants brainstorming critical issues and topics for future IASL presentations from school librarianship professors. Before the IASL conference begins, emails will be sent to attendees who are school library professors to encourage them to attend and to bring sample assignments on teaching collaboration and leadership as a way to extend our conversation beyond the Australia, Canada and the United States.

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University Preparation Programs for School Librarians: Using the Power of Technology to Build Collaboration and Leadership Skills by Jennifer Branch-Mueller, PhD.

Overview

This section presents the context of an online Master of Education degree in teacher-librarianship in Canada and explores some ways in which the overall program approach attempts to build collaboration and leadership experience and skills. At the 2014 Moscow IASL conference, the author will provide assignment descriptions and rubrics for initial posts and ongoing small group discussions. Small group discussions are a central part of the socially constructed pedagogy of the courses. She will also include a description of a major paper (eBook chapter) in a leadership course, and assessment grading sheet and rubrics for self and peer evaluation of small working groups for that assignment. Technology offers students wonderful opportunities to meet together, collaborate and share information with others and should be introduced in a program for teacher-librarians. Building expertise in the use of technology can also help teacher-librarians be seen as school leaders.

Introduction

“I don’t find discussions meaningful.”
“I don’t like working in groups.”
“I am not interested in leadership - that is why I want to be a teacher-librarian.”
“I want to read books to kids all day.”
“I want to be a teacher-librarian so I can have the same holidays as my children.”
“I love books, everything about books, and don’t want to have to learn about technology. I think the school library is the place for me.”
Do these quotes sound familiar to you? Do you have a few more you would like to share? These are just some of the comments I have received from students (and prospective students) over the past fifteen years since I began teaching online courses in teacher-librarianship.

How do we, in higher education, provide opportunities for our students to build the knowledge, skills and attitudes required to be an effective teacher-librarian? What will be our priorities? How will we assess our students? And what happens when we throw a completely online program into the mix?

Context

These questions are a central part of the work that I do in the Department of Elementary Education at the University of Alberta in Edmonton, Canada. I am the Coordinator of a small, online Master of Education program called Teacher-Librarianship by Distance Learning (TLDL). It began in 1997 and has grown over the years to the point where we have about 60 students in the program at any one time. The students come from across Canada and from around the world (mostly Canadians working in International contexts) and are practicing teachers and/or “teachers in the library.” We use the term “teacher in the library” to denote those that are working in school libraries but have no further education in teacher-librarianship. In Canada, there are many schools with no teacher-librarian in the school library, many will be staffed only by a library technician, a library assistant, or a parent volunteer. Some jurisdictions in Canada might have “teachers in the library” with one or two courses in school librarianship. There are no provincial, territorial or formal national standards and no certification process for teacher-librarians.

One document, Achieving Information Literacy: Standards for School Library Programs in Canada (The Canadian School Library Association & The Association for Teacher-Librarianship in Canada, 2003), was produced more than ten years ago to guide the evaluation of school libraries but no companion document exists to better understand the roles and responsibilities, qualifications, and core competencies expected of teacher-librarians in Canada. For that, our program looks to the American Association for School Librarians. It is probably important for readers to know that we are the only Master of Education in Teacher-Librarianship in the country (population about 35 million). There are eight ALA-accredited library and information schools in Canada but NONE of the other programs have a tenure or tenure-track faculty member in the area of school libraries. Currently, I hold a 50% joint appointment in the School of Library and Information Studies (SLIS) but do not teach courses in teacher-librarianship as a part of that position (although students from SLIS are able to take courses in teacher-librarianship through the TLDL program). To my knowledge, there are no courses in the area of school libraries or teacher-librarianship offered in any of the Canadian LIS schools. There is a diploma program in teacher-librarianship at the University of British Columbia (ten courses at the senior undergraduate level) through the Faculty of Education.

The ALA/AASL Standards for Initial Preparation of School Librarians (2010) provides standards that can help to guide our development of courses and overarching curriculum in the absence of Canadian standards. In the late 1990s, our Learning Management
System (LMS) was completely text-based. There was no way for students to collaborate in real time (except on the telephone) and so assignments were individual and tended to be traditional written reports, papers and essays. As our online program has evolved over the past fifteen years we have found that new technologies have enabled us to build assignments and create diverse projects and tools that allow us to better develop and assess collaboration and leadership skills.

Examples from Courses

In our presentation at the 2014 Moscow IASL conference, I will present two examples of instructions and rubrics used to grade the online discussions. I will also present the instructions and the rubric for our assignment: The Leadership Role of the Teacher-Librarian. The learning outcomes for this leadership assignment are:

- Consider and discuss current issues and trends in school library leadership.
- Select a topic of interest from their personal or professional experience.
- Research, read, evaluate, and synthesize professional and academic resources related to their topic of interest.
- Write a major paper about their topic (of about 5000 words), which presents a unique summary of the literature and provides practical suggestions, recommendations, and implications for school library leaders in Canada.
- Have opportunities to work in small groups to provide writing support and feedback for the major paper.
- Share their major papers with a wider audience through the publication of a class eBook.

Conclusion

Technological advances make it possible for students working at a distance from their university and each other to work collaboratively. Tools such as Google Hangout, Skype, and Adobe Connect allow students to meet and work together on projects and assignments. Google Docs, Google Sites, WordPress, LiveBinder, and Wikispaces are great tools for students to use to create collaboratively. Sharing their work with and for others (for example, blogs, wikis, Twitter, VoiceThread, YouTube, Prezi, eBooks, and websites) provides them with many leadership experiences as they negotiate their role in the larger educational sphere and create their own positive digital presence. These experiences also helps teacher-librarians be seen as technology leaders in their schools.

(Please see http://www.scribd.com/doc/146938161/Becoming-and-Being-Reflections-on-Teacher-Librarianship to download the eBook that was created by the students in this course.)

Biographical Note
Dr. Jennifer Branch has a joint appointment in the School of Library and Information Studies and the Department of Elementary Education in the Faculty of Education at the University of Alberta. She worked as a junior high teacher and teacher-librarian in Inuvik, Northwest Territories for six years and as a teacher in Northern Ontario and did research in Aberdeen, Scotland. Jennifer's areas of research are information-seeking processes, information literacy education, electronic reference sources, and teacher-librarianship education. Please contact jbranch@ualberta.ca for more information.

University Preparation Programs for School Librarians: Two Examples of Leadership Assignments by Ramona N. Kerby, Ph.D.

Overview

McDaniel College is in Westminster, Maryland, U.S.A. and is located in the Mid-Atlantic region, between New York City and Washington, D.C. The School Librarianship Graduate Program has been reviewed and is nationally recognized by the American Association of School Librarians by adhering to the ALA/AASL Standards for Initial Preparation of School Librarians (2010). (The following link provides an explanation of the AASL standards and their elements: http://www.alan.org/aasl/sites/ala.org.aasl/files/content/aasleducation/schoollibrary/2010_standards_and_items_with_statements_of_scope.pdf.)

At the 2014 Moscow IASL conference, the author will present two assignments taught in the Administration and Leadership course, which is a required course in the Master of Science degree in School Librarianship at McDaniel College. The first assignment focuses on the candidate’s leadership style and their professional development. The second assignment focuses on advocacy. All course instructions include a purpose, the AASL standards met, background information, resources needed, detailed instructions, due dates, and the rubric. All rubrics include wording from the AASL standards and elements so that instructors can measure the effectiveness in meeting these standards.

Context

When the ALA/AASL Standards for Initial Preparation of School Librarians standards were revised in 2010, one of the major changes was a strong emphasis on leadership. Although managing tasks such as weeding, circulation policies, and cataloging are still taught, they no longer have the emphasis they once did. A new standard, Standard 4: Advocacy and Leadership, was added and includes elements that address networking, professional development, leadership, and advocacy.
As a result, McDaniel College revised its entire program to reflect the 2010 standards. Our program is entirely online; the majority of our students are teachers in the state of Maryland. We use the Blackboard platform to teach the courses; they are asynchronous; and candidates receive grades on their quality of participation. Our online graduate courses are eight weeks long; they are composed of four modules, and candidates complete four assignments per course.

In the Administration and Leadership course, we now focus more on the characteristics of leaders and ask candidates to analyze their leadership strengths using several leadership inventories. We expect candidates to prepare a professional development plan that builds leadership qualities. Because the 2010 AASL standards emphasize advocacy, we ask candidates to prepare a school library advocacy plan. The AASL website provides several helpful resources including, the AASL Advocacy Toolkit at http://www.ala.org/aasl/advocacy.

Conclusion

What has been especially beneficial when revising these assignments is that each year at the American Library Association conference, school librarianship professors attend sessions and discuss how best to meet the ALA/AASL Standards for Initial Preparation of School Librarians (2010). Many of the professors also serve on volunteer review teams whereby we review other college and university preparation programs to determine if these programs meet the standards and receive national recognition or if the programs need to be revised.

One of our purposes for our presentation is to provide this same type of dialogue among school library professors at the international level.

Biographical Note

Dr. Mona Kerby is the Professor and Coordinator of the School Librarianship Program at McDaniel College in Maryland, U.S.A. She has been an elementary school teacher and a school librarian. As an expert in Children’s Literature, she also writes books for children. For more information about the McDaniel College program, please see: http://www.mcdaniel.edu/graduate/your-plan/academic-programs/m.s.-in-school-librarianship and http://www.mcdanielschoollibrarianship.com.

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University Preparation Programs for School Librarians: Leading through Collaboration by Kasey L. Garrison, Ph.D.
Overview

At Charles Sturt University in Australia, the Masters of Education- Teacher Librarianship (M.Ed.TL) is a course situated in the School of Information Studies, which is a part of the Faculty of Education. We have the largest group of information students in Australia and they span the globe, taking advantage of our fully online program. Our course is comprised of six core classes and two electives focusing on technology and literature. In Australia

Context

Our courses are accredited by the Australian Library and Information Association (ALIA) and although students enrolled in this course will receive a M.Ed., they are qualified as professional librarians able to work in other areas of the information sector. ALIA’s policy entitled The Library and Information Sector: Core Knowledge, Skills, and Attributes (2012) is an important document guiding our course structure. Recently, we underwent a course review with the Teacher Librarianship team (including myself, Barbara Combes, Roy Crotty, Lyn Hay, and Judy O’Connell) connecting these ALIA standards to the International Society for Technology in Education (ISTE) Standards for Teachers, the Australian Institute for Teaching and School Leadership (AITSL) Professional Standards for Teachers which govern teacher education in Australia, and the Australian Qualifications Framework (AQF) which ensures graduate programs granting professional qualifications are at the appropriate level for their respective degrees.

While not a part of accreditation, the Australian School Library Association (ASLA) also promotes Standards of Professional Excellence for Teachers Librarians (2004) and leadership and collaboration are emphasized throughout these standards. In the first class our students take, they study these standards and begin to develop a stronger understanding of the role of the teacher librarian. Proceeding classes build on this foundational understanding and the idea of the teacher librarian as a leader, which is the title of our leadership subject. This class looks at leadership theory in a broader context outside of the school and then gets to a more personal level encouraging students to examine their own leadership style and attributes.

The first assignment in this subject is a concept map and descriptive narrative of the map where students create a visual structure of their understanding of leadership in schools. The concept map enlists them to identify key concepts and ideas and consider relationships and connections among these. In this class, students consider how teacher librarians lead from the middle in the school and the role collaboration plays in this process.

In the ICT for Innovative Practice elective subject, students create a Web 2.0 Tools Report intended to encourage collaboration with teachers. For this assignment, students identify a tool that would be useful for a specific curriculum area and audience and
present a proposal to using this tool to teachers in that area. The report includes a pre-
planning document to guide the collaboration and lesson or assignment using the tool as
well as support for the teachers’ use of the tool. At the IASL conference, these
assignments will be examined in more depth and shared with participants.

Conclusion

As Jennifer Branch noted in her discussion of the Canadian context, students in our
course are also often surprised at the emphasis on leadership and collaboration in the role
of the teacher librarian. Giving students a foundation early in this idea and then building
on it within each class through practical and reflective assignments offers a concrete way
for them to develop and apply their understandings of the teacher librarian as leader and
collaborator.

For more information about the standards mentioned here, see:

- ALIA’s The Library and Information Sector: Core Knowledge, Skills, and
  Attributes- https://www.alia.org.au/about-alia/policies-standards-and-
guidelines/library-and-information-sector-core-knowledge-skills-and-attributes
- ISTE’s Standards for Teachers- http://www.iste.org/standards/standards-for-
teachers
- AITSL’s Professional Standards for Teachers- http://wwwaitsl.edu.au/australian-
  professional-standards-for-teachers
- AQF- http://www.aqf.edu.au
- ASLA’s Standards of Professional Excellence for Teachers Librarians-

Biographical Note

Kasey Garrison is a lecturer in Teacher Librarianship in the School of Information
Studies at Charles Sturt University in Wagga Wagga, NSW, Australia. Kasey earned a
Ph.D. in Education with a focus on Curriculum and Instruction from Old Dominion
University in Norfolk, Virginia, USA, in August 2012. With a Masters in Education and a
Bachelors of Arts in Spanish, Kasey has experience at the preschool through secondary
levels in the library and also teaching Spanish and students with special needs. Her
research interests are focused on diversity within children’s and young adult literature
and reader responses to such titles.
Students who are enrolled in Master’s degree programs can focus on school librarianship, but at the doctoral level, these type of courses are rare. As a result, doctoral students who are planning to become university professors and teach school librarianship are at a disadvantage. For this reason, four professors wrote and were awarded a national grant. NxtWave, Leaders of the 21st Century is a project funded by the Institute of Museum and Library Services (IMLS) to provide training to doctoral students so that they will be better prepared to take their places as university professors who train school librarians.

**Context**

Over the course of a year, Dr. Gail Dickinson from Old Dominion University, Dr. Becky Pasco from the University of Nebraska at Omaha, Dr. Audrey Church from Longwood University, and Dr. Jody K. Howard from the Palmer School at Long Island University collaborated through two multi-day retreats and a plethora of emails and phone conversations to answer this question: If we could develop a curriculum that would prepare doctoral students in the field of school librarianship, what curriculum would we create?

To answer this question, the professors developed the curriculum for the following four courses.

**Course #1 Concepts and Context of School Libraries**: This course will introduce candidates to the broad landscape of school librarianship and its relationship to the greater library and information profession. A critical examination of benchmarks and key concepts tied to literacies, information science, and technical innovation will provide a body of foundational knowledge in support of the development of the candidates’ personal and professional frameworks. Candidates will use frameworks to optimize their ability to conduct inquiry and provide leadership for 21st century initiatives in school librarianship.

**Course #2 Frameworks for Best Practice in School Libraries**: This course will explore best practice in school libraries using the framework of current national standards for school librarianship preparation programs. Major areas for exploration include but are not limited to teaching for learning, literacy and reading, information and access, advocacy and leadership, and program management and administration. Emphasis will be placed on extensive reading in each area. In preparation for a future article submission, students will conduct a thorough literature review in a specific area of interest.

**Course #3 Strategic Leadership for School Libraries**: This course will focus on the social, economic, and political issues and trends facing school libraries. The broad area of the social realities will include the increasing diversities in society, overcoming the digital divide, and preparing all students to be active and engaged 21st century citizens. Schools are facing harsh economic realities in funding as well as positive signs that resources in different formats may become less expensive and may greatly increase
access. Common Core as well as other state and federal standards initiatives create opportunities on the political front as well.

**Course #4 Inquiry and Research in School Librarianship:** This course will examine current research in the school library field and provide the students with the skills they need to use existing research data for evidence-based practice. The process of conducting action research and traditional research will be reviewed in the context of the school library field. Students will practice interpreting data and applying these interpretations to solving problems for program improvement. A research proposal for an action research project will be prepared.

These four courses will be offered over four semesters, one course per semester. As the professors developed the curriculum, they were mindful of the content and the sequencing of the material being presented. One major goal of each course is to assist the doctoral students in becoming leaders in the school library field, and the assignments are developed with the leadership concept in mind. In addition to the classes, the students have specific assignments that provide leadership opportunities for them including presenting a professional development session for school librarians, presenting a poster session at a national conference, submitting a proposal for a presentation at a national or state conference, and developing an article to be submitted to a national journal.

NxtWave is a collaborative project among Long Island University, the University of Nebraska at Omaha and Old Dominion University. Students are enrolled in the doctoral program at one of the three universities, must have State School Library certification, and will enroll in each of the four classes through their home university. All of the classes are conducted online and are taught by the professors mentioned above. Currently, there are 18 students enrolled through the three universities and have completed the first course.

**Conclusion**

The creators of NxtWave believe passionately that it is imperative that future professors working with school library students have specific training in the area of school librarianship. They also believe that school librarianship is characterized by leadership. The NxtWave cognate of courses support this concept of leadership.

**Biographical Note**

Dr. Jody K. Howard is an Associate Professor and Graduate Program Director for the school library program at Old Dominion University in Norfolk, VA, USA. Dr. Howard is the former director of the Palmer School of Library and Information Science, and has experience as a teacher, school librarian and District Library Director. For more information please contact Dr. Howard at JHoward@odu.edu.
Opening the Journey of Exploring Cultural Geography for Students
----- A Case Study of Librarians and Teachers' Collaborative
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Abstract
In modern society, how to improve students' cognitive abilities is an important challenge facing high schools. The school library as the information center of the school should fully play its role in addressing this challenge. With the help of Evergreen Education Foundation, the library team of Danfeng High School located in a rural county of western China, initiated the collaboration with subject teachers to guide students in learning. After several years of experiments, we found that the inquiry-based learning projects jointly developed by librarians and teachers can help improve students' cognitive abilities. This paper studied an example of these projects, "Cultural Differences and Geographical Environment" project, co-developed by a geography teacher and a librarian. By reviewing the project process and assessing its outcomes, we summarized the design factors contributed to the improvement of the students’ cognitive abilities, and reflected upon what can be done better, to benefit the future development.

Keywords: high school library, inquiry-based learning, librarians and teachers’ collaboration, cognitive education, geography education

1. Background

Danfeng High School is the only high school in Danfeng County, Southeast Shaanxi Province. In the traditional saying, the county is known as a rocky mountain area with “90% mountains, 5% water, and 5% farmland”. In the past, the school library was passive in participating in students’ cognitive education, considering it as simply subject teachers’ responsibility. However, since 2002, the school library has partnered with the Evergreen Education Foundation (EEF) and played a more active role. At first with the help of EEF, the library implemented automated circulation and grew its collection significantly. In 2009, the librarians and subject teachers started to apply for the one-year small projects under EEF, starting with reading programs and later evolving into inquiry-based learning programs. In the past five years, Danfeng High School applied and developed over ten small projects including themed reading and writing, inquiry-based learning in physics and geography, and exploration of local culture. Librarians and teachers collaborated in searching the best solution to assist cognitive education.
After the implementation of the New Curriculum Standard, there are quite a number of independent research topics and materials in the textbooks but all are selective. (Chen & Pu, 2004) In the past, due to the lack of textbooks, teaching hardware and methods, teachers generally did not attempt to try those independent researches. We started such attempts on the platform provided by EEF small projects. In 2013, two authors of this paper (a geography teacher and a librarian) designed a small project titled "Cultural Differences and Geographical Environment", based on the chapter Local Culture and City Development in high school geography textbook No. 2. The project aims to guide students to explore the geographical factors leading to various cultural phenomena, and experience the joy of independent study and accumulate related methods.

2. Methodology

Based on the EEF small project framework, the design, implementation and evaluation of the project adopted the methodology of outcome-based planning and evaluation (IMLS & IUPUI, 2006): first of all, we set clear expected objectives/outcomes in terms of changes of the target population in knowledge, skills, emotions, attitudes, status. According to Bloom’s taxonomy of cognitive educational objectives, objectives in cognitive education can be categorized into remembering, understanding, applying, analyzing, evaluating, and creating. (Krathwohl, 2002) EFF small projects are encouraged to go after cognitive educational objectives at higher levels. Concrete activities are designed and implemented to achieve these objectives. How much the objectives are achieved is assessed by work products of these activities. During this process, we emphasize learning by doing. With the project team experiencing, reflecting, abstracting, applying and back to experiencing, so on and so forth, the project design is under constant improvements.

Below we inspect the impact and design of this project. By reflecting on the project process, and inferring from the assessment results, we find out what design factors have helped achieve the outcomes, what are the defects in our design, and possible improvements, in order to provide a reference for the library-assisted subject and cognitive education in the future.

3. Project Design and Process

First of all, we (the geography teacher and the librarian) selected and purchased related geography books and books on inquiry-based learning methods. The librarian organized old resources and newly purchased ones and put them on special shelves for this project. We organized a kick-off meeting and training for the students, explaining core ideas of geography study, introducing the concept and process of EEF small projects, introducing the planned learning activities and related books in the library, finally assigning the first learning task. Twenty students enrolled in the project.

The learning tasks of this project are so designed that the students can build their cognitive capability from the lower level to the higher level, at the same time...
gradually deepening their understanding of the relationship between the cultural differences and the geographical environment.

Task 1: Students learn by themselves the characteristics of the culture and its relationship with the geographical environment, and write a study report (corresponding levels of cognitive educational objectives: remembering, understanding).

What is culture? What are the characteristics and types of cultural landscape? What is the relationship between culture and geographical environment? Students spent three weeks in studying the questions above by themselves in the library, based on the courseware provided by the geography teacher and guided by the librarian. Students were requested to submit study reports to answer these questions and give examples. However, reports version one were not of good quality, especially some reports were literature works full of viewpoints without any evidence. Therefore, the geography teacher provided comments and suggestions for each report, and divided students into study groups with students who wrote good reports assigned into each group to help others, and the teacher provided office hours. This aimed to develop students' abilities of reflection and collaborative learning. The revised versions were better. However, because we neglected the training of citation rules for the students, all the reports were weak in this respect.

Task 2: Find photos of cultural landscapes with regional characteristics and analyze their geographical backgrounds (corresponding levels of cognitive educational objectives: understanding, applying).

Ask students to spend three weeks taking photos of cultural landscapes. Select some photos and analyze their geographical backgrounds with the students in class.

Task 3: Select cultural phenomena such as architecture, food, costumes, and customs, especially those familiar to students, to analyze how the geographical environment contributed into its formation and write essays (corresponding levels of cognitive educational objectives: applying, analyzing).

In the next eight weeks, students selected research topics, did research in the library and wrote essays. Three major questions raised by the students and helped by the librarian were: 1) how to select the topic: We suggested they study the most familiar and interesting phenomena around them, starting from small things. So a student chose the Mausoleum culture in the ancient capital Xianyang, while another student from Bamboo Grove Pass as known as Little Jiangnan (the south of the lower reaches of the Yangtze River), chose the folk house culture in his hometown; 2) how to search and organize materials: The librarian taught students to come up with a keyword list from the research topic, search keywords online by search engines, classify and organize the materials found, and extract useful viewpoints and evidences for analysis; 3) how to analyze and write essays: make students understand there are many factors influencing culture, such as political, economical and geographical factors. In the essay they need to analyze the geographical factors. As for the structure and flow of the essay, students can go from phenomenon to cause then to conclusion. They could also use new structure and flow if they can control it well. As for the contents, they need to provide details and adequate evidences. The language used should be concise, plain and accurate, avoiding adopting the lyrical style.
Task 2 was a transitional task added after Task 3 had been going on for three weeks. By then we found students had difficulty in handling the research in Task 3, after they just gained basic understanding via Task 1.

Task 4: Students observe and experience the culture of destinations during travel, and analyze the geographical factors contributing to typical cultural phenomena there (corresponding levels of cognitive educational objectives: applying, analyzing).

In June 2013, seven students in our project group were about to go for summer travelling with their families. So we added another activity to our project, asking these young travelers to analyze the influence of the geographical environment on culture in these destinations. Before they went on these trips, The geography teacher tutored them on how to do background research on geography and culture of a region, including referring to books and magazines such as *The History of Chinese Culture --- Regional Cultures, National Geography of China*, and understanding the natural geographical environment in all aspects including location, landforms, climate, water, earth, plants, and understanding the regional culture including architecture, costumes, agriculture and industry, food, folk customs, arts and so on. However, students were not required to write a report. After the fall semester began in September 2013, we organized a meeting for these students to exchange their observations and thoughts. After the meeting, students spent their spare time on research in the library and writing their final research reports.

4. Outcome-based Evaluation and Reflection

4.1 Success Factors

Looking back, we summarized the following success factors of this project.

1) Inquiry-based learning on topics from daily life

This project enabled students to do inquiry-based learning on topics from daily life, and trained them in applying knowledge. Students entered into the research process with interest and questions, and used their knowledge and methods to answer these questions, which is the biggest difference between this project and traditional spoon-feeding teaching methods. They developed both interest in geography and confidence through this project. For example, the student who researched on the folk house culture in his hometown commented, “I will read more, observe more, relate more. Knowledge is actually from life. Knowledge is around us. “. He also said, “It is not always necessary for the teacher to impart knowledge to students, but he/she should let them study independently and experience the process of learning. As a matter of fact, the knowledge acquired by us ourselves leaves a deeper impression on ourselves.” He mentioned that he would like to organize such learning activity by himself in the future.
2) Teachers moving away from the habit of spoon feeding students

From Task 1, the geography teacher abandoned the old teaching style of lectures, by only providing the framework and resources for students to study by themselves. After we discovered that the understandings of the students were far from our expectations through their study reports, we introduced student study groups and added more office hours. We found that these new learning methods, while mobilizing students, helped us discover students’ specific deficiencies and work towards improving them.

3) Setting realistic goals based on students’ current status

Because our students had hardly any research training and experience, it is impossible for them to gain good research ability through one or two projects. Taking this into consideration, in this project, instead of setting a high expectation, and giving them too difficult tasks to handle on one shot, we set up realistic goals and pushed them forward one step at a time, to avoid causing them too much frustration. For most of the students, the gap between their current level and the expectation appeared surmountable so they were motivated to catch up.

4.2 Results of Evaluation

Using rubrics to evaluate how well the expected outcomes are achieved, we can see: How well did Tasks 1 to 3 achieve Outcome 1 “All students demonstrate the understanding of the relationship between cultural differences and geographical environment”? For all 20 students participated in the project, though 65% of the students demonstrated basic understanding based on reading and remembering in Task 1, (by explaining culture and cultural landscape, also giving examples in their study reports), but in Task 2 only 25% students found qualified photos of cultural landscapes with regional geographical characteristics. Worse yet, in Task 3, only 35% delivered a clear and relatively comprehensive analysis of the influence of the geographical environment on cultural phenomena. As we can see, with research and mentoring from the teacher and the librarian, only about half of the students could go from the initial level of remembering to the levels of applying and analyzing. The reason is that even if the research topic is small and familiar to the students, the students need to be equipped with the geographical theory and geographical analysis capability, as well as general research capability in order to accomplish it. However, the status of our students is: 1) their research capability is very weak, shown by their first version study reports. For example, the report titled “Diverse Festival Culture” was a collection of excerpts and listings of cultural phenomena without any analysis. Another report titled “Civilization—the Pearl Created by Geography” was a prose; 2) Lack of knowledge on geographical theories and weak geographical analysis capability. Students have been memorizing the textbook contents without analyzing the phenomena in their daily lives using what they’ve learned, hence their ability of applying and practicing is weak.
How well did Task 4 achieve Outcome 2 “The seven student travelers demonstrate the ability of sensing and then analyzing the relationship between culture and geographical environment”? The seven students showed huge individual differences, with only 29% showing good sensitivity in capturing cultural phenomena with geographical characteristics, and only 14% being able to provide a relatively comprehensive and accurate analysis. The insensitivity is due to both the lack of experience and insufficient preparation. Since working products were not mandated from the background research, some students did it quick and dirty. The bad quality of analysis can be attributed to the lack of knowledge on geographical theories and weak geographical analysis capability, also the general research literacy. The teacher and the librarian also failed to provide in-depth tutoring to these students.

How well did Tasks 1-4 achieve Outcome 3 “All the students demonstrate the improvement of information literacy”? Only 35% of the students selected topics that were clearly expressed and feasible; 55% of the students selected topics that were too big and beyond their research abilities; 10% of the students selected topics that were blurry and not clearly expressed. As for information search, 85% of the students used two types of resources, books and online Wikipedia-like articles; 15% of the students solely relied on the online articles. As for analysis and expression, only 20% of the students could analyze logically and relatively comprehensively centered around the topic in the essay; 70% of the students could only list a bunch of information about the topic without making logical arguments; 10% of the students produced a totally confusing essay. The reasons are as follows: 1) Students were in lack of systematical training on information literacy. For example, in selecting topics, though some students who actively raised questions were given extra tutoring by the librarian, those who did not realize the problems of their topics or were simply too shy missed the opportunity of being corrected at the very beginning. In information search and organization, on one hand, students could only work on the project in their spare time due to the pressure from the exams; on the other hand, due to the lack of systematical training, students had no systematical and effective search strategies, nor were they able to identify the relevance of information well. 2) The lack of systematical training on information literacy reflected the teacher’s and the librarian’s insufficient knowledge on information literacy theories. For example, because the librarian and the geography teacher are themselves weak in information search strategies and citation rules, and they did not train and tutor students in these aspects, or pose related requirements in expected outcomes of this project.

How well did Task 4 achieve Outcome 4 “The several student travelers demonstrate the improvement of communicative ability”? Only 14% of the students were able to make statements and show evidence; 57% of the students could not understand questions or comments from others accurately; 86% of the students had no eye contact with others, which hindered the interaction. The reasons are: 1) the exam-oriented education system has been ignoring the cultivation of oral presentation skills, resulting in students being unable to speak while able to write; 2) the project neglected the design of collaborative learning and did not provide practicing
opportunities to the students; 3) the geography teacher and librarian did not provide adequate tutoring in this aspect. From the above analysis, we derive the aspects that we need to pay attention to or improve next:

1) The geography teacher should facilitate students to accumulate geographical knowledge and theories, and improve geographical analytical ability. Encourage students to read more, think more and exchange more with each other, besides studying the textbook. Students can read quality geography magazines and watch good TV programs on geography to broaden their horizon and awaken their interest. Meanwhile, besides reading they are also encouraged to travel to different places to observe, ask, listen and explore.

2) We need to have a stringent implementation of the outcome-based planning and evaluation. Making rubrics is the key, in which through setting the expected outcomes, accurate and highly operable measuring standards, we derive the learning activities needed, and guide the teachers and students in formative assessment. Moreover, we keep adjusting the rubrics and improving the design based on the results of formative assessment. In current rubrics of this project, the evaluating dimensions for information literacy outcome are incomplete, missing the assessment of information search strategy and citation. This oversight will be corrected in the future.

3) The training and guidance of the outcome-based design and evaluation need to be systematic and comprehensive. Besides teachers, students should also be familiar with the backward design methodology and do self assessment with the rubrics. They can also reflect upon whether each teaching activity has reached its expected objective, to improve their ability of independent learning. The idea of outcome-based planning and evaluation is brand new to students. It is difficult for the teachers to grasp, let alone students. So the training and continuous guidance of the process, methods and principles needs to be stressed.

4) Pay attention to the training of teachers/librarians in research literacy, and help the librarians master the systematic training of research literacy for the students. Librarians and teachers also need to familiarize themselves with pedagogy that allow students to actively construct knowledge: inquiry-based learning, collaborative learning, interdisciplinary research, learning through real work in life, etc.

5) As the facilitators of the inquiry-based learning, the teachers and librarians need to pay attention to refine the design of training and tutoring. On one hand, the systematic training is essential for students, and the teachers and librarians should play different but complementary roles in the training of subject-specific knowledge and methods, and general research literacy. On the other hand, a fine tutoring design is needed to help students successfully apply these methods. In this project, without the training of research methodologies, and insufficient design of intermediary work product and formative tutoring, some students languished at late stage of this project. In addition, used to the spoon
feeding methods, our students expected the teacher to give them the answers directly from time to time. Therefore, teachers/librarians should accumulate skills to help the students move away from this habit.

6) Teachers and librarians pay attention to the design of collaborative learning. The project adopted study group in Task 1, and discussion meeting in Task 4, but the element of collaborative learning was not designed into the project from the very beginning, which was not good for the exchange between the students and team motivation. We intend to use collaborative learning as the basic form of inquiry-based geography learning project, and use detailed intermediary working products, such as the group role assignment, individual group member’s output, and group meeting minutes to observe and guide students’ collaboration. In addition, we will pay attention to organizing discussion and reflection. For example, teachers can facilitate sessions in which student groups assess each other’s work products and progress, answer questions, and do case study.

5. Conclusion

Reflecting upon the process and outcomes of the “Cultural differences and geographical environment” project, we realized two design factors are critical. 1) With topics from daily life, an inquiry-based and collaborative learning process can help the students regain their initiative; 2) The guidance and support from librarians and teachers need to be systematic and specific at the same time. Being systematic entails that the knowledge provided by the teachers and librarians needs to cover both aspects of the methodology and domain knowledge, while the methodology includes not only the subject-specific methodology which is the expertise of the subject teachers, but also the general research methodology, which should be built as the librarian’s expertise. Being specific means that based on the cognitive characteristics of rural high school students, step by step guidance is needed on how to apply the methodology, and illustrative and timely guidance is needed to keep their exploratory spirit high.

Moving forward, we plan to study the relationship between local culture and geographical environment of the Danfeng County. For a long historical period, with Wuguan Pass, a natural barrier and the strategic passage between Qin (roughly Shaanxi province today) and Chu (roughly Hunan and Hubei provinces today) regions, Danfeng has been a military fortress, as well as a port connecting Han River and Qin land, which results in the culture of merchant fleet, horse caravan, celadon trade and salt trade. Starting from the historical relics including guild halls and archives, students can research the history and the changes of social life in this county, study the geographical environment and its changes, finding out the relationship between them.

We think that the primary goal of secondary school education is cognitive education, and that the method and ability of acquiring knowledge is more important than the knowledge itself. After several years’ exploration, we found that by collaborating and guiding students to do inquiry-based learning using the library, librarians and
subject teachers can improve traditional spoon feeding teaching method, and
effectively enhance students’ cognitive ability. Now that the teachers, librarians and
students have savored the sweetness of inquiry-based learning, it is time to start
forming the path of cognitive education development for our school by reflecting
upon the past experience. Moreover, due to the teachers and librarians are still
weak in theories and practices of cognitive education, both parties should
collaborate and share, while actively seeking the intellectual inputs from the outside
world.

6. References

Curriculum Standard (Experimental), Nanjing: Jiangsu Education Press.
IUPUI and IMLS (2006). Shaping Outcomes: Making A Difference in Library and
Museum, Retrieved July 10, 2010, from
http://shapingoutcomes.org/course/overview/a1.htm
into Practice, 41(4), 212-218

Biographical note
Shucheng Liu (first author)
Shucheng Liu, from Danfeng County, Shaanxi Province, is currently a geography teacher
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Qiuru Wu (co-author)
Qiuru Wu, from Neixiang County, Henan Province, is currently the leading librarian of
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She has been actively participating in the Evergreen library program since Spring 2002.
She was the main investigator of four Evergreen small projects including “Growing up with
Reading” in 2009, “Librarians Collaborating with Teachers for Guidance” in 2010,
“Kindergartens’ Family Education” in 2011, and “Women’s Saloon” in 2012, and is currently
participating in “Oral History of Danfeng High School” project in 2013.
Her two papers “Expanding the Library Services and Protecting the Local Culture” and
“Piloting the Collaboration between Librarians and Teachers to Guide Students in Using
Library Resources” were published in the Proceedings of Information Technology in
Education Conference (ITIE) in 2008 and 2010 respectively.
“Bibliobattle”: Creating A New Frontier of Intelligence Among Students

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Abstract
I would like to introduce a new social book review game called “Bibliobattle”, which is now popular in Japan. It was created by Tadahiro Taniguchi, an associate professor of Ritsumeikan University in 2007. The rules are very simple:
1. Students come together with a favorite or interesting book. 2. Students introduce their favorite book for five minutes, one by one. 3. After each presentation, we’ll talk about the book for about three minutes with all the participants. 4. After all the presentations, participants and audience will vote for the best book. The winning book is the “Champion Book of the Day”. We are using Bibliobattle in our Japanese & English classes at middle schools and Library Committee events; moreover, the authorities have organized a Bibliobattle tournament every year since 2010, attracting a lot of observers. Teachers can set a theme for selecting books; therefore, any class in any subject at school can use this game. Students can encounter new books and at the same time learn to share each other's thoughts about these books.

Keywords: Reading Activity, Book Search, Developing Communication Capability, Presentation Skill

Biographical note
After graduating from the Literature Dept. of Waseda University, I have worked for several school libraries, a public library and a children’s center in Tokyo. I am now a teacher librarian at Shibuya Junior & Senior High School, Tokyo. I am a member of the editorial staff and on the book selection committee at SLA Annual Basic Books Catalogue in Japan - this is part of the School Library Association. I am also a member of Japan Association for the Study of Child Literature.
A Case Study of the Exchange Learning Program Established Within Three Elementary Schools Using Video Conferencing Systems

Abstract: Three elementary schools located in remote areas, (Kyoto, Shimane and Fukushima Prefectures) join a common program. Each of the school’s students spend “SogotekinaGakusyu no Jikan” (periods of integrated study), together through the use of the Video Conferencing System. The System enables the students to deliver their presentations and exchange ideas, while taking into account the environment and circumstances of the local community, school, and student. In the process, students will develop the ability to conduct research at the school library. The teachers will gain knowledge of, and acquire skills in this subject, and have the ability to implement these tools in their respective classrooms. In this presentation, the effect and problems of the Exchange Learning Program will be shown.

1. Introduction
In 2013, discussion commenced in an effort to promote an education system that enabled an individual student to effectively use a singular data terminal in a safe and controlled environment. The aim of the discussion was to ‘establish a school education system by the year 2020, suitable for the modernizing world and the 21st century’.

【Background】

Year 2013: ‘Promotion of pioneering Information and Communication Technology (ICT) based education’ was discussed in order to develop students’ abilities to participate in a society that is information orientated. Data terminals were introduced in schools in several cities, but the ICT based education system has not been effectively used in schools.

【Purpose of the interactive learning program in this case study】
The purpose was to develop the interactive learning program in the ‘problem pursuing style.’ In this program, students were actively involved in learning. They effectively applied the information and research gathered, and made comprehensive use of the school libraries. In addition, through the ‘integrated study’ lesson program, three elementary schools across remote areas were able to interact and communicate with each other.

3. Activities
(The following explanations are shown under the pictures).
3-1. Environment:
The students use the school computer to interact and communicate with students in remote places via the Internet.

3-2. Learning method:
Students use electronic whiteboards, tablets, and other applications used in the ICT learning method and develop the skills to enter or accumulate information gathered from different places for use by other students.

3-3. Combination of printed and non-printed material:
In relation to printed material, students accumulate and add new findings to the existing printed material in the library using ‘Pass Finder’. With regards to non-printed material, the students make improvements on existing sound sources, movies, and pictures. Discussion is conducted to ascertain the role of TV conference systems.

*1 Pass Finder: paper files facilitating the information search by passwords.

3-4. Evaluation:
Teachers perform individual evaluations of the student’s ability and motivation to use the ICT program through Rubric. Surveys for both teachers and students are conducted to determine the efficacy and continuation of the program.

*2 Rubric: Evaluation of the skills and information acquired by the students. Teachers assess how aptly students are learning, applying and sharing the information gathered.

4. Observation
In the course of developing and drawing up the Exchange Learning Program, it became apparent, that through these interactions, teachers were learning new ways of using ICT equipment and developing techniques and teaching methods from each other, and applying the knowledge in various settings. Thanks to this experience, individual teacher’s educational programs were improved and as such, their students became advanced in information literacy.

In order to bring out the best of the students in the 21st century, educational systems and surroundings need to be able to work with students’ individual needs and characteristics, whose learning pace differs from each other. This would be a difficult task to tackle for each school. In the Exchange Learning Program, I was involved in coordinating with the three elementary schools, and was supported by fellow staff members from the Learning Commons of Kyoto Sangyo University and students in the teacher librarian training course. In order to establish effective educational styles and teaching materials using the ICT educational method, and to form constructive teacher support systems and networks, assistance from outside individual schools is necessary.

5. Conclusion and future prospects
The Exchange Learning Program program was established in order to develop a curriculum which facilitates the active involvement of its learners. This focuses on the
individual’s needs, rather than the existing mass learning environment. It is our hope that in the future, through the establishment of this curriculum, schools will experience an encouraged exchange with other schools, see an improvement in lessons, and be better able to coordinate with the educational administration. This presentation is another step in the right direction for seeing the Exchange Learning Program introduced across the board in the education system.

Thank you for your time and if you have any questions, feel free to ask.
Finding the Path of Cognitive Education for Remote High School Library in China
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Abstract
In this digital age and the Internet era, can a high school library in the remote West China, burdened with the examination-oriented education, escape the fate of being marginalized, and be able to achieve something in assisting the cognitive education of the students? The answer is "Yes". As a past high school teacher, a past school administrator and a current high school library director, the author looked back on her experience working with the Evergreen Education Foundation in developing the services and capacity of two high school libraries in Southeast Guizhou province, and analyzed possible paths and key factors to achieve this breakthrough. The analysis in this paper provides a useful reference to school libraries in remote West China that set about to explore a path leading to excellence riding the wave of the New Curriculum Reform.
Keywords: high school library, cognitive education, New Curriculum Reform, West China education

1. Background

The libraries in remote western China is more like the “book warehouse”, as the books are quite old and the opening hours cannot be guaranteed. There are no professional workers for the libraries. The librarian, working part-time, are mostly teachers who are about to retire. Teachers and students don’t care about the libraries, having their hands full with teaching and study tasks. Needless to say, school administrations do not pay much attention to the library, either. Libraries are basically marginalized. In the digital age and the Internet era, can these libraries change their fate and make a difference upon students’ cognitive education? I will address this question by reflecting on my experience working with two libraries in Southeast Guizhou Prefecture, Guizhou Province, namely Wende High School Library in Zhenyuan County, and Kaili No. 1 High School Library in Kaili City.

2. Case Study No. 1- Wende High School Library

The Wende High School is a young public high school founded by the government in 2003. There are about 1700 students in the school. Most of the teachers are university graduates, passionate but without working experience. Students are not of good quality, either. In Guizhou Province, when students go from middle schools
in counties to high schools, they can choose from four grades: Of the top grade are several provincial high schools, followed by prefecture-level high schools. Of the 3rd grade are the best high school in the county, e.g. Zhenyuan High School in Zhenyuan County. Other high schools in the county belong to the 4th grade. Therefore, students who go to Wende High Schools are those with bottom test scores. Over 80% of these students are from rural villages. Each year only 5% of the students who attend college entrance exam go to colleges and universities, and 40% go to polytechnic schools. Facing enormous pressure, Wende High School is constantly looking for special model of education to improve the college entrance rate, and build the capacity of young teachers, in order to meet the expectations of the parents and the community.

Since the school library partnered with the Evergreen Education Foundation (EEF) in 2006, I came to realize that this collaboration would be a great opportunity for teachers and students, hence the development of the school, if it was fully leveraged. Looking back on the development of the school library since 2006, I found that teachers and students had indeed gained a lot through this collaboration.

1) Advanced ideas and intellectual inputs from the external entity, and the cultivation of seed teachers (pioneers) at schools by this entity;

During every developmental phase of Wende High School Library, a round of idea inputs from EEF is followed by a round of practices by teachers and librarians, which is in turn followed by a new round of idea inputs, so on and so forth.

Phase 1. Library circulation automation: At the end of 2005, the librarian was trained on the usage of the Integrated Library System. In August 2006, automated circulation was on in the library; The librarian and I learned from the 2006 EEF conference¹ that libraries should serve students and teachers through rich and easily accessible book and information resources.

Phase 2. Library service improvement: Various activities are needed to attract students and teachers to the library. In 2009, EEF started to select, fund and guide one-year small projects which are proposed, designed and executed by local teachers and librarians to help partner libraries improve their services and build capacity for their team. Through workshops on project management in 2009 and 2011, and practices in the small projects, the teachers and librarians have formed understanding of the following two key methods: 1) outcome-based project design and evaluation, and project outcomes should break out of the set pattern of “emphasizing knowledge and neglecting abilities”, and strive for higher level cognitive educational objectives including analysis, evaluation and creation; (Krathwohl, 2002) 2) experiential study, which focuses on reflection, extraction and application.

¹ Since 2003, every other year in the even years, EEF hosts an international conference called Information Technology in Education (ITIE). The conference invites library professionals and researchers including staff of rural libraries, educators, NGO staff from various countries and regions. Every other year in the odd years EEF organizes a workshop on rural library development for in-depth training and exchange.
As for me, then a vice-principal in charge of teaching, because the ideas brought by EEF showed me a path from library to information center, then to capacity building of teachers and students, which addressed my concern about how to improve teaching, I became a seed in Wende planted by EEF and a path finder for teachers and students. After attending each EEF workshop and conference, I shared what I learned with the school administrations, the fellow teachers and students. In 2009 when the EEF small projects started, I not only organized the history teaching group to apply, but also encouraged core teachers of other subjects to apply and participate in experiments. For example, Yongdeng Wu, a Chinese teacher, and the Director of the Teaching Research Office, developed a project on reading and writing of ancient poem and prose, and another one surveying the living conditions of the disabled in the community. The active participation of vice-principal in charge of teaching and the Director of the Teaching Research Office encouraged more teachers to participate in 2010.

2) Experiments of library cognitive education service via inquiry-based learning projects, as well as nurturing the collaboration of teachers and librarians for long-term development;

From 2009 to 2011, through EEF small projects, the school library promoted the inquiry-based learning in humanity and science subjects, such as the two projects described below.

“Zhenyuan Local History” project: In collaboration with the librarian, six teachers from history teaching group led students to collect and sort information and materials on local history, and then compiled a local history textbook. In the process of information collection, teachers and students realized the lack of resources in school library and local public library, and learned how to find books, and how to search information on the internet by search engines. This project incurred a number of first-time trials. For the first time, students participated in the making of a textbook, with their analysis and communication abilities improved. For more than half of these students, it was their first visit to local historical and cultural sites including the museum. For the first time, students studied and visited one of the most important enterprises in the historical Westernization Movement— Green Creek Iron Works. It was also my first time to use my family photos, portraits of three siblings on the local hanging bridge over the years to tell a story of changes of my family and my town. For the first time, students realized that history is around us, and the thousands of connections in our lives are the history happening and evolving.

The Study of peach flower Jellyfish in Wuyang river: Wuyang river is Guizhou’s scenic spot, where peach flower jellyfish, a type of freshwater jellyfish reputed as “living fossil” live. Students were very interested in finding out what kind of environment can produce peach flower jellyfish. They searched information in the library and on the Internet, also did field study. Although the students lacked professional equipments to accurately measure the conditions of the waters where the peach flower jellyfish live, they collected jellyfish samples and water samples, studied the morphological characteristics of the jellyfish, measured the basic water environmental indicators, and provided the analysis report.
However, there were two elements missing in the development of Wende High School Library, leaving a hidden danger for the sustainable development of the library:

1) EEF and the pioneer in the school (I, the vice principal) failed to gain the support from the top management (the principal) regarding the basic idea of library development from early on. The principal only gave tacit permission to the developmental work of the pioneer and the teachers/librarians, without determination to make a difference in the library development.

2) The library team failed to advance the team building and environment building (and to gain enough support for this advancement); Corresponding to the principal’s attitude of "do nothing, invest nothing", the library team building did not make any progress. The team was all along one librarian plus a few student volunteers. Though many students asked for open-shelf access to facilitate book browsing and selection, the library team was afraid of the possible book loss and the occurring management difficulty and never advanced in that direction. Accordingly, no fundamental changes were made to the library environment taking the opportunity of the library automation and service experiments based on small projects.

After I left the school in 2011, the momentum of and the support for the EEF small projects were no longer there. In 2012, there was no small project application from Wende High School. The library went back into stagnation.

3. Case Study No. 2- Kaili No. 1 High School Library

Kaili No. 1 High School is a Class I model public high school in Guizhou Province, belonging to the aforementioned second grade. In 2011, its new campus was completed, with over 5400 students in the school, and undergraduate enrollment rate above 85%. In Guizhou it can be viewed as a high school with quality teachers, excellent students, and first-class campus. As a model high school, it often has visitors from other schools, so the school management imposes a high standard on works of all aspects. Due to this environment, combined with an open-minded principal, library development has gained strong support from the school management. In Fall semester, 2011, I transferred to this school. The initial plan was that I would become a history teacher. But incidentally, the preparation for the new campus library began, and I was providing consultation on library service. I realized connecting with the EEF platform may bring big opportunity to this library, since it already had good hardware in place, but troubled with the lack of management and service. So I decided to apply for the position of librarian director, hoping to turn this opportunity into a reality.

1) A pioneer connects the library with external entities to gain new ideas and knowledge, meanwhile seeking recognition and support from the top school management.

From my experience in Wende School, I learned that paradigm shift starts with change of the mind, and the foremost mind to change is that of the top management,
in high schools in China the principal. The best way to gain support for an idea is to let people see the vision of this idea in real.
In September 2011 when we began the preparation for the new library, the school did not realize the importance of the library, and just casually assigned two idlers to do the preparatory work. As a result, many basic services did not start well. May 2012, EEF organized a Taiwan library tour for a group of selected teachers and librarians from partner schools. I was selected due to my past small project performance. EEF and I also coincided with each other on inviting my principal to join at the school’s own expense. This tour turned out to be an eye-opener for us by showing us the library concept and the rich, open, and humanized services of the secondary school libraries, university libraries, and community libraries. My principal realized the importance of the school library for the overall development of the school, and decided to partner with EEF. This is a critical turning point.
2) Team building, environment building and service development shall proceed concurrently in order to strengthen the support from the school management by the library’s performance.

**Team Building**
More often than not, the library staff consists of people who joined the library in order to get ready for retirement. How to motivate them and build their capacity is an imminent problem. My approach is: 1) taking the opportunity of the New Curriculum Reform to input ideas. For example, since the new curriculum emphasizes independent learning, inquiry-based learning, and collaborative learning, we proposed the library as an important venue for the new learning method. In turn to serve this new need, we proposed the concepts of "Reader first, service first" and "Proactive service instead of passively waiting for the readers". 2) striving for support from the school polices, such as quantifying work load and raising wages, in order to inspire a sense of accomplishment in librarians; 3) providing a variety of learning opportunities for librarians, such as a) organizing study group which collects and studies domestic or international information on school library management; b) creating a blog and a QQ (an online messaging tool) group to connect the librarians, teachers and volunteers, to facilitate the exchange of advanced library management, educational philosophy and methods; c) seizing opportunities to send the librarians and teachers out for training broaden their horizons and improve their skills. For example, in April 2012, recommended by EEF, my school sent several teachers to participate in a reading training in Dafang County, Guizhou Province held by Smiling Library, an NGO based in Shanghai. These teachers submitted a proposal of classroom book corner which was implemented in 2013. 4) Assigning work wisely. Use people’s strength in order to give them confidence and turn the past inertia into a passion to show their talents. For example , Teacher Liu Chunxuan specializes in compute operation so he is responsible for the operation of library management software; Teacher Mei Long (another Mei Long in our library) is good at communicating with students so she is in charge of managing the book corners; Teacher Xiufen Yang is meticulous and patient, so she is responsible for book classification, display and other routine work. Volunteer building is also an important part of team building. After we provided open-shelf access, we were short of hands. So we recruited many student volunteers
for helping out. At the beginning of each semester we recruit volunteers from K10 students, train and examine them, select qualified ones to formally appoint. We also exchange with the volunteers and share our knowledge and experience through the blog and QQ group. For the student volunteers, they gain from this working experience more than the librarianship skills. One volunteer described what he gained in his final report, "... Some people say volunteering is a waste of time, but I do not think so ... here I know which books are most popular.... I also developed my communication and teamwork ability. From being clueless initially to getting into my stride now, I have harvested the ability of doing real work in the society as well as more reading... I love reading, and love this job... ". Each semester we have more than 120 student volunteers taking shifts from Monday to Sunday, to meet the peak demand of around 1500 circulation requests during the one and half hours of extracurricular activity time.

**Environment Building**
During the visit of the library of Sun Yat-sen High School for Girls, the Jianguo High School library, the Private Xingrong Library & Xiulan Cultural Center in Taiwan, what impressed us most was that proactive service mentality of these libraries, the humanized environment in every detail, and the open and equal access of library resources. Thus I think, we may not have the money to build a website, but we can create a blog; we cannot offer online reservation, but we can provide notification by e-mail and text messaging; we do not have luxurious tables and chairs, but we can make simple environment clean and cozy; we do not have a big number of books, but we can help each book find its readers ... All these are entirely feasible. After we merged the book-storing room and the reading room to provide open-shelf access, some students said, "Now I can read by the shelves and feel like swimming in a sea of books. It is so much different than before". After the blog and the e-mail and text messaging service were rolled out, the teachers and students commented, "Now it is much more convenient to borrow books. It saved us a lot of time, and we can now borrow books at home". After we extended our circulation service to parents and community residents, they told us, "The school library is now open to us. It never happened before. The collection and service of the school library is better than the public library, and it is more convenient." Parents also said, "We come to the school library to borrow books, and visit our kids by the way. We in effect also teach our kids by example this way. It is a good thing. "We realize that as long as we put readers first and try our best to satisfy their needs, the future of the library is full of hope.

**Service Development**
Collection Development – We purchase books based on suggestions and feedbacks from our teachers and students. Since 2013, the school has allocated 100,000 Yuan annually to purchase books, and the book list has been jointly decided by the teachers and students. In the first week of the Spring semester, 2014, with new books coming into the library, in order to borrow a new book right after it arrived, some teachers and students often paid a visit to the library or called to check, which never happened before. So good books that meet the needs of the teachers and students are the basis to attract more readers to the library. Meanwhile, books
There is a stereotype about our library. Some teachers and students have not been overwhelmed by teaching and study and lack the spare time to go to the library; students were:

1) Searching information on the Internet is more efficient;
2) They teachers have not been to the library. The reasons given by the teachers and students were: 1) Searching information on the Internet is more efficient; 2) They are overwhelmed by teaching and study and lack the spare time to go to the library; 3) There is a stereotype about our library. Some teachers and students have not been to the new library, but they assume that the books were out of date and prefer visiting the bookstore. To address these issues, in 2013, we launched the academic reading program, having the subject teachers to request or recommend reading lists based on their teaching needs so that the students can understand the role the library plays in their learning. For example, a history teacher asked his students to read the "Global History", "The Rise of Great Nations", "The Collapse of the Heavenly Kindom" and other books often referred to by the document-based questions in the college entrance exam, then conduct reading exchanges.

Inquiry-based learning – In the past three years, librarians and teachers in our school did a number of EEF small projects, on local cultural study such as "Tianzhu County Ancestral Temple Cultural Studies", "Southeast Guizhou Folk House Cultural Studies", "Oral History on Tin Embroidery", "Collecting Dong Ethnicity Folk Tale in Southeast Guizhou", on natural sciences such as "Plant Identification and Description Plaque Making". Through these projects our teachers, librarians and students saw the role of the inquiry-based learning in enhancing students' research ability, teamwork, communication skills, and IT skills. These practices also allowed teachers and librarians to accumulate experience in cognitive education, and nurtured the ever-extending collaboration between teachers and librarians.

Our library team proved the role of the library in teaching and learning via ever-increasing circulation rate, number of library visits, and outcomes of small projects, achieved by our actions. The vice principal who oversees the library also changed from passively listening to the briefs, to actively asking what he can further do to help - - This shift enabled further development of the library. Therefore, once the development of the library is on track, the team building, environment building and the service development need to steadily advance together, to strengthen the support of the school management via the library’s performance.
4. Leveraging Policies and External Entities

Though Wende High School and Kaili No. 1 High School had different fates depending on whether they had won the recognition from the school management timely, both had rapid development within a few years. Although this development is inseparable from teachers’ and librarians’ own needs and efforts, the stimulus from external NGO and policies is an important catalyst. The inputs from NGO in ideas and funding, combined with the competitive demands of the school under local and national education policy, promote the development of the library. Several big opportunities seized by Wende High School Library are: 1) In 2006 with funding from the Evergreen Education Foundation, it realized automated library management; 2) In 2009 along with the New Curriculum Reform in Guizhou province, it guided teachers to develop school-based curriculum leveraging EEF small projects, thus enabling further development of the library; 3) In 2010 the results of the small projects were used for National Youth Science Competition and School-based Curriculum Contest. The honors and awards won by the students and teachers, together with the policies such as the winning students of National Youth Science Competition can get bonus points in college entrance exam, and the winning teachers of this competition can get bonus points in professional title appraisal, further mobilize students and teachers.

Owing to several opportunities seized, Kaili No. 1 High School Library has become a local model library in recent years. 1) To compete for the title of provincial model high school, the school secured the funding and support to build a new campus including a new library building. Together with the idea of "Scholarly Campus" as characteristic education, the library not only had its overall facility and hardware greatly improved, but also became the core of characteristic education, with support from all departments of the school; 2) The New Curriculum Reform at the national level, and the resulting library developmental policies at the local level, both improved the status of the library in secondary education; 3) The library leveraged external NGOs such as EEF, including the EEF small project platform for service experiments and EEF conferences and workshops for capacity building. Till this day, the number of full-time librarians in the library has grown from the initial one to three people in 2013 to five in 2014, and the school was committed to building a dedicated training room and network information classroom in 2014. This series of changes gradually pave the way for the library to becoming an information and cultural center for teachers and students.

5. Trial and Error – The Key is to Start Action

High school libraries in remote areas are still in the early stages of development. They are facing great challenges in changing attitudes, gaining policy support, getting funding and full-time staff quota. Only with an open school environment, visionary school leaders, and real efforts of librarians to accumulate experience, can the libraries gradually develop. Encouraged by the idea of EEF small projects "failure is ok, as long as lessons can be learned", we keep advancing by trial and error. These trials and errors can be at a micro scale, such as various management
and service design details, and at a macro scale, such as strategic lessons learned and put into use later. For instance, in developing Kaili No. 1 High School Library, we were able to avoid the strategic pitfalls in which Wende High School Library was caught, by winning over the principal in the first place, and concurrent building of library staff and library environment.

6. Conclusions

In the digital age and the Internet era, how can a high school library in the remote West China burdened with the examination-oriented education grasp the opportunity of the new round of educational reform and build the school library as a strong facilitator of cognitive education and an information center for teachers and students, to meet the emerging educational demand? Such a question is worth thinking over and revisiting during the development of school library. Looking back upon my experience with Wende High School and Kaili No. 1 High School in Guizhou province, I derived the following key success factors: 1) Advanced ideas and intellectual inputs from the external entity/NGO, the cultivation of seed teachers (pioneers) at schools, and winning over top management of the school from early on; 2) Concurrent building of library staff, library environment, and library service, 3) Experiments of library cognitive education service via inquiry-based learning projects, as well as nurturing the collaboration of teachers and librarians for long-term development; 4) Leveraging policies and external entities (e.g. NGO) 5) Continuous trial and error with the key being to start action.

We can see that a school library in an underdeveloped area can only survive and grow by seizing opportunities provided by policies, at the same time introducing advanced management and service concepts, and carrying out activities to meet the actual needs of teachers and students, in a word, take the initiative, start action, and constantly accumulate experience via practice. I hope the analysis in this paper can serve as a reference for high school libraries in remote areas of western China to find a path towards excellence leveraging the tide of New Curriculum Reform.

7. References


Biographical note

Mei Long has been the Director of the Kaili No. 1 High School Library since 2012. After graduating from the History Department, Guizhou Institute of Ethnic Minorities, she became a history teacher in 1992. From 2008 to 2011 she served as Vice Principal in Wende High School, Zhenyuan County, Guizhou.

She has been participating in the Evergreen library program since 2006 when she led the library automation of Wende High School. She was also the main investigator of several Evergreen small projects in Wende High School and Kaili No.1 High School.
Information Literacy Teaching and Collaboration with the School Library: What Teachers Think and Do

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Abstract
What do school librarians and teachers know about each other? When two individuals with different professional backgrounds and expectations work together, knowledge of the other is required. The study that is presented in this paper contributed to librarians’ discovery of the world of teachers. A qualitative case study approach allowed to gain an in-depth understanding about teachers’ conceptions of student information literacy learning as well as teachers’ practices of information literacy teaching and collaboration with the school library in an entire faculty in a US independent high school. The study revealed that information literacy teaching in formal education is a highly complex endeavor. A major implication for practice is that school librarians need to take into account this complexity and agree with teachers on common understandings of information literacy and negotiate opportunities, objectives, and responsibilities with them for providing pedagogical interventions about information literacy.

Keywords: Information literacy, collaboration, conceptions, practices, case study

Introduction
School librarians are expected to take the lead in activities for enhancing student information literacy development, especially in a constantly changing information technology environment; moreover, librarians are expected to opt for an integrated approach and to work closely with classroom teachers (American Association of School Librarians, 2009; Todd, 2008; Umlauf, 2005). There is plenty of evidence that such collaboration has positive impacts on student learning (Lance, Rodney, & Hamilton-Pennell, 2000a; Lance & Schwarz, 2012; Smith, 2006b; Todd & Kuhlthau, 2004; Todd, 2012). However, LIS professionals around the world report low numbers and/or low levels of collaboration with teachers (Loertscher, Koechlin, & Zwaan, 2005; Smith & Hepworth, 2007; Kuhlthau, Heinström, & Todd, 2008; Todd & Heinström, 2008; Todd, Gordon, & Lu, 2010; Williams & Wavell, 2006).

There are considerable gaps in knowledge about teachers’ conceptions and practices of information literacy teaching and collaboration. The necessity for undertaking more investigations about teachers as potential partners for information literacy teaching has been expressed by numerous researchers around the world (Gapski & Tekster, 2009; Herring, 2010; Liquete, 2001; Probert, 2009; Todd & Heinström, 2008). Therefore, the purpose of the present study, which was undertaken in the context of a doctoral thesis at the Berlin School of Library and Information Science and supervised by Professor Dr Konrad Umlauf from Humboldt University and Dr Ross J. Todd, Associate Professor at
Rutgers University, was gaining an in-depth understanding and developing a theory about the process of information literacy teaching in a whole high school faculty. The process was investigated through the following research questions:

1) What are teachers’ conceptions of student information literacy learning and learners?
2) What information literacy competencies, if any, are encompassed in the research tasks that teachers assign?
3) Which pedagogical interventions, if any, do teachers use when they teach information literacy?
4) How do teachers work with the school library and school librarians, if at all, when they teach information literacy?

**Literature**

**Information literacy theories, models, definitions, and beliefs**

This section of the paper discusses theories, models, definitions, and beliefs about practice regarding information literacy, information literacy learning, information literacy teaching, and collaboration between school librarians and teachers for information literacy teaching.

**Defining information literacy**

The literature abounds with definitions of information literacy, a concept that emerged almost 50 years ago (Bruce, 1997). Widely acknowledged on an international level (Balceris, 2011; Chevillotte, 2009; Probert, 2008) is the ALA definition according to which “to be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (American Library Association/Presidential Committee on Information Literacy, 1989). While numerous writers have highlighted the diversity in information literacy definitions and the complexity of the concept (Chevillotte, 2009; Herring, 2010; Ingold, 2005; Kapitzke, 2003a; Todd, 2000), others have identified similarities, arguing that the vast majority of them include the elements outlined in the aforementioned ALA definition (Owusu-Ansah, 2003, 2005; Williams & Wavell, 2007).

Information literacy is defined partly through standards and models. As far as the latter are concerned, based on Wilson (2009), a major distinction can be made between models that are empirically-based, for instance, Kuhlthau’s (2004) Information Search Process and Bruce’s (1997) Seven Faces of Information Literacy, and those that are descriptions (of ideal paths), such as Eisenberg and Berkowitz’ (2000) Big6 Skills, Herring’s (1996) PLUS model, the model in Dannenberg’s (2000, 2012) Information Literacy Learning System, and Homann’s (2003) Dynamic Model of Information Literacy. An important shortcoming of the second group is the neglect or minimization of the early phases in research processes. Other differences between the models are a disparity in the categorization of information skills and conceptions, the underlying learning theories or the degree of adherence to them and, as a consequence, their approaches to information literacy teaching.

**Information literacy learning**

Three learning theories are frequently discussed in the LIS literature: behaviorist, constructivist, and relational theories. The understanding of information literacy learning varies considerably depending on the underlying learning theory. Behaviorist information literacy learning is the acquisition of skills and attributes related to information literacy (for example, Doyle, 1992; Eisenberg & Berkowitz, 2000), constructivist information
literacy learning refers to a context-dependent individual and social process of building knowledge from a variety of sources that requires critical reflection about the concept of information literacy itself (for example, Kuhlthau, 2004; Todd, 2006; Kapitzke, 2003b; Limberg, Alexandersson, Lantz-Andersson, & Folkesson, 2008; Lloyd, 2006), and relational theories understand information literacy learning as developing and expanding conceptions of information literacy, making experiences with information literacy, and knowing which conception(s) and experience(s) to use in a particular (new) situation (Bruce, 1997).

Information literacy teaching
The initiation of information literacy learning as described in each of these theories requires the use of specific teaching methods, also called pedagogical strategies (Crook, 2008). Education scientists emphasize that each teacher should be familiar with a variety of pedagogical strategies, underpinned by different theories, and be able to apply them in a pedagogically justified, competent, and flexible but not arbitrary way (Helmke, 2007; O’Neill, 2008). They require teachers to find a sound balance between strategies that foster teacher-directed and independent student learning (Helmke, 2007).

The majority of information literacy definitions, models, and standards begin with the identification of an information need, that is, “a recognition that your knowledge is inadequate to satisfy a goal that you have” (Case, 2012, p. 5). From observation about the origins of user queries in public and school libraries, Gross (2005) distinguishes between self-generated and imposed questions. In the school context, teachers typically impose questions or create information needs through the assignment of more or less encompassing and more or less formal research tasks.

Collaboration of school librarians and teachers
Various types of quantitative and qualitative studies have shown that information literacy teaching integrated with subject content has a positive impact on student learning (Achterman, 2008; Lance, Rodney, & Hamilton-Pennell, 2000b; Smith, 2006b; Todd, 1995; Todd & Kuhlthau, 2004; Todd & Heinström, 2006b). There is also largely unanimity in the literature about the role of the school librarian in the context of information literacy teaching: He is seen as a resource for students and teachers, as an important support in the planning phase, and, especially, as a teacher and a leader of information literacy development. Numerous studies have found these roles to have an impact on student achievement (Lance et al., 2000a; Lance & Schwarz, 2012; Smith, 2006c; Todd, Gordon, & Lu, 2011; Todd, 2012).

There is less unanimity about the role of the teacher. He is commonly seen as a facilitator of information literacy teaching in the sense that he opens his classroom for integrated information literacy units (Eisenberg & Berkowitz, 2000; Kuhlthau, 2010) and as the subject expert (Herring, 1996; Kuhlthau, Maniotes, & Caspari, 2007). However, less clarity exists regarding his role as a teacher of information literacy. For Kuhlthau et al. (2007), the whole pedagogical team (which includes at least one subject teacher in addition to the school librarian), is responsible for providing interventions based on the model of the Information Search Process but the school librarian is the only team member who provides instruction and interventions about information literacy. Eisenberg and Berkowitz’ (2000) Big6 Skills are more oriented towards teachers and the two authors suggest that classroom teachers use the Big6 as a framework in their everyday teaching.
This part of the literature review revealed considerable gaps in knowledge: Texts about information literacy have predominantly been published by the LIS profession, literature from and about education professionals is scarce. The present study helped to close this gap by investigating how teachers perceive of student information literacy learning. The role of the school librarian in information literacy teaching is well-defined in the literature, whereas there is less clarity regarding the role of the teacher. The present study made a contribution to closing this gap by investigating how, if at all, teachers teach information literacy, either alone or in collaboration with the school library and librarian.

**Research about teachers**

As far as teachers and information literacy as a topic of empirical research is concerned, the literature review showed that studies dealing exclusively with teachers and information literacy are scarce. The focus of research has predominantly been on issues related to the school library, the school librarian, and student learning rather than on teachers, who, if they were included, tended to be used as observers and reporters (Lance, Rodney, & Russell, 2007; Lance, Rodney, & Schwarz, 2010; Lance & Schwarz, 2012; Todd & Kuhlthau, 2005; Todd & Heinström, 2006b). If it was addressed at all, teachers’ own perspective on student information literacy learning, information literacy teaching, and collaboration with the library was of minor interest, and regularly teachers’ perspective was investigated together with that of other staff members, especially school librarians as well as administrators, and not reported separately (Kuhlthau, 1993; Montiel-Overall, 2008; Todd & Kuhlthau, 2005; Todd & Heinström, 2006a; Williamson, Archibald, & McGregor, 2010). Regardless of the method, a tendency has been to concentrate on best practice examples, such as best practice school libraries and high-end librarian-teacher interactions (Montiel-Overall, 2008; Smith, 2006c; Todd & Kuhlthau, 2005; Todd & Heinström, 2006a; Todd et al., 2011). As a consequence, there is no clear picture of how “the entirety” of teachers in a school faculty perceives of and acts regarding information literacy teaching and collaboration.

The present study helped to fill these thematic gaps through an investigation of the conceptions regarding student information literacy learning as well as the practices of information literacy teaching and collaboration with the library in a whole teacher faculty. In terms of methods this study was innovative and reduced a gap in the sense that qualitative case studies with entire teacher faculties about information literacy or collaboration are scarce. Also, instead of using teachers as observers of, and reporters about, school libraries and librarians, this study collected data from the school librarians, administrators, and students in order to understand teachers better. The next section explains the details about the choices regarding the research design.

**A qualitative case study design**

The study described in this paper opted for a qualitative, inductive approach because it is particularly suited when there is a lack of theory (Merriam, 2009), which was the case for teachers’ conceptions and practices of information literacy teaching, which have not been addressed in many studies so far (Gapski & Tekster, 2009; Montiel-Overall, 2010; Probert, 2008). A qualitative approach allowed to make discoveries and to gain a deep understanding and deep knowledge by investigating the world from the perspectives of participants (Corbin & Strauss, 2008).

A case study design was chosen because one of its major features is doing an in-depth investigation of a bounded system, which can be a group of people (Yin, 2009), for example, a teacher faculty. Studying information literacy teaching in an entire teacher
faculty was important as teachers’ perspective on information literacy (teaching), if it had been studied at all, was typically addressed as part of collaboration with school librarians (Montiel-Overall, 2010; Todd & Heinström, 2008) and in the context of best-practice examples (Donham, Bishop, Kuhlthau, & Oberg, 2001; Montiel-Overall, 2008; Todd et al., 2011). The aim of the present research was to gain a comprehensive picture of teachers’ information literacy teaching practices and to include teachers who teach information literacy on their own, without the school librarian, or who do not teach it at all.

The single-case design allowed to reach a deeper level of understanding (Simons, 2009) and to “catch the complexity” of that particular case (Stake, 1995, p. xi). It used an embedded design (Yin, 2009) so that the whole faculty was regarded as the larger unit of analysis, individual teachers as internal subunits, and students, the school librarian, as well as administrators as subunits external to the case.

**The case**
Both the case and within-case samples were selected purposefully (Patton, 2002). The case was the faculty of a small independent high school in the US, in the central part of the Mid-Atlantic States. The school had a well-equipped library run by a certified and highly motivated head librarian who, supported by an engaged team, was particularly active in the area of information literacy teaching.

**Data collection**
Triangulation of sources and data collection techniques helped to enhance the trustworthiness of the study (Pickard, 2007). Data were collected about teachers in four semi-structured individual interviews with administrators, including the head school librarian, and a focus group discussion with six students (external perspective), and from teachers in a questionnaire with mainly open-ended questions in which 26 teachers participated (almost 90% of faculty) and eleven semi-structured individual interviews (internal perspective).

**Data Analysis**
For data analysis, predominantly procedures from grounded theory according to Corbin and Strauss (2008) were employed. As far as information literacy is concerned, the study used Bruce’s (1997) model The Seven Faces of Information Literacy as a sensitizing frame (Corbin & Strauss, 2008). The theory was presented in the form of claims and sub-claims.

**Limitations and trustworthiness**
On the one hand, the use of a single-case design could be regarded as a limitation, on the other hand, it permitted to achieve a greater depth and richness (Simons, 2009). The disadvantage that the claims could not be tested, as it would have been possible with a multiple-case design, was compensated by thick descriptions of the context, which allow readers to judge about the transferability of findings to other settings.

A major concern about qualitative research, including case study research, is that it lacks rigor (Yin, 2009). In order to enhance the trustworthiness of the present study, that is, the partly overlapping issues of confirmability, dependability, credibility, and transferability (Guba, 1981; Miles & Huberman, 1994), several strategies were employed:
For ensuring
• Data confirmability, for example, a detailed audit trail (Mertes, 2014), triangulation (including a comparison of the internal perspective and the external perspective), alternating between shorter onsite and longer offsite periods during data collection, developing clear rules (for transcriptions, anonymization, and data entry in matrices), and taking into account competing conclusions;
• Dependability, for example, using maximum variation as a major sampling strategy, triangulation, testing and refining instruments in a pilot study, using written interview guides, high-quality recordings, and clear transcription rules;
• Credibility, for example, rich descriptions of context, triangulation, supporting claims and sub-claims with evidence from the data (numbers, quotes, paraphrases), as well as a deliberate search for rival explanations and negative evidence;
• Transferability, for example, using purposeful sampling and especially maximum variation, detailed descriptions of context and participants, rich descriptions of findings, and making suggestions for the transfer of findings to other settings.

Key Findings
This paper provides an overview of major findings. As far as the notion of information literacy is concerned, based on the data but enhanced by the literature and especially Bruce’s (1997) information literacy model, the following seven categories emerged during the analysis:
• Completion of a process,
• Use of information technology,
• Information finding,
• Information control,
• Knowledge building,
• Ethical use of information, and
• Information presentation.

They were used for exploring and describing Malotha teachers’ conceptions of student information literacy learning and their practices of information literacy teaching. First key findings about teachers’ conceptions are presented, then those about their practices.

Conceptions
Teachers’ conceptions of students as information literacy learners (Research Question 1)
In questionnaires, teachers’ conceptions of student information literacy learning were gained through their descriptions of an information literate student. Teachers think that an information literate student is able to
1) Evaluate information,
2) Find information in a variety of sources and analyze information (both to the same degree), and
3) Make use of information technology for information location.

For example, as far as information finding is concerned, 15 out of the 26 teachers referred to the variety of formats. They wrote, for instance, that a student who is a good locator of information knows “all the possible ways one can access information or ideas” (QT2, par. 3) and “how to use all the resources available to him/her” (QT16, par. 3). Less often mentioned were the abilities to present information, to use information in ethical ways, to control information, and to execute an information process.
In interviews, teachers described their students’ difficulties when they undertake research tasks. Teachers found that their students encounter problems especially with information analysis as well as the ethical use of information. Problems with the process as such and with presenting and controlling information occurred to be of lesser importance. The use of information technology, on the other hand, was only referred to as being easy for students, although only by a minority of teachers. One of them noted in his interview:

The ones that are good are so good that I don’t know what they’re doing. They just seem to not even have to read the screen. Their hands almost seem to fly and they just- Their maneuvers, it’s like they’re driving through a race course and they just seem to have the senses they need to make the right turn. (Teacher G, par. 40)

There was no unanimity between participants as far as students’ abilities to find and to evaluate information are concerned, for both each time a majority noted that students had difficulties but there were also teachers who reported about students being good at them.

Practices

Information literacy competencies in the research tasks teachers assign (Research Question 2)

The research tasks that teachers assign encompass a variety of information literacy competencies. The strongest support was found from teachers in questionnaires and interviews (internal perspective) as well as from administrators and students (external perspective) for the following four:

- The use of information technology for locating information and to a lesser extent also for presenting information;
- The location of information in a variety of formats, the most cited formats being school library sources followed by web sources;
- Knowledge building, that is, first, analyzing information in order to develop a personal perspective and, second, evaluating information;
- Presenting information, for which the most mentioned formats were, first, written and, second, oral format.

For example, Teacher J explained in his interview that he encourages his students to build new knowledge and to develop a personal perspective from the information they collected in a variety of formats:

I think that what’s really important is to have students look at a variety of sources, read a variety of articles or primary source documents ... And have them read multiple different types. And then kind of take all of those eclectic sources and gain their own perspective and opinion and view based on that. (Teacher J, par. 16)

For process and control being included in research tasks there was evidence from teachers only, however, the former was better supported (by questionnaires and interviews) than the latter (in interviews only). For the ethical use of information in research projects evidence was contradictory.
Teachers’ pedagogical interventions to information literacy teaching (Research Question 3)
The majority of the Malotha faculty was found to teach information literacy, predominantly through the assignment of research tasks, and to employ, in this context, a vast array of strategies for whole-class teaching (for example, presenting analogies, having discussions, giving examples, doing exercises, giving written handouts, doing lectures, modeling, using prior skills, making decisions for students, summative assessment) or individual student assistance (for example, answering questions, asking questions, reading, making suggestions, making decision for students, formative assessment) or both.

Teachers provide whole-class teaching about information literacy concepts and competencies especially for
1) Information presentation,
2) Knowledge building, and
3) Information finding.
For example, three teachers in interviews and two in questionnaires noted that they do lectures about information finding. One of the interview participants reported that he not only talks about different types of sources but also shows them to students and explains how they can be accessed:

I talk about information coming from a variety of sources, the library being one of them, the computer being another, individuals another, film another. I guess, formally, I do it by actually ... demonstrating where this information is located, how to acquire this information. (Teacher A, par. 15)

Only a minority of participants reported about teachers teaching whole classes about the ethical use of information, the use of information technology, and information control. No unanimity existed regarding educators teaching their classes to go through an extended research project as a process composed of a sequence of steps; some teach it themselves whereas others leave it to the school librarian.

Through strategies of individual assistance, which they provide less often than whole-class teaching, teachers address especially knowledge building. For example, in his questionnaire Teacher 3 described how he evaluates sources for individual students, writing: “I use the knowledge I have to help them determine the validity of the information for their projects - I check it myself if I am not sure” (QT3, par. 11). Teachers offering individual assistance for all other information literacy facets was either not mentioned at all (for information technology), weakly supported (for information presentation and control) or contradictory (for process, information location, and the ethical use of information).

Teachers’ collaboration with the school library for information literacy teaching (Research Question 4)
About three-fourths of Malotha teachers had already collaborated with the school library in one way or other. More than half of the collaborating faculty had already worked with school librarians either in the planning phase or in the actual teaching and more than one-third of the collaborating teachers had already used the library as a space in the context of research projects. When librarians get involved in teaching, they provide whole-class teaching or individual student assistance or both. Study participants did not
provide descriptions of the strategies librarians used in the same detail as they did for teachers.

School librarians provide whole-class teaching about information literacy concepts and competencies especially for

1) Information finding,
2) Information presentation, and
3) Knowledge building.

For example, each time three teachers in questionnaires and interviews stated that librarians instructed their classes on how to find information in a variety of sources when they undertook research projects. For example, a questionnaire participant wrote: “Librarians introduce students to info. outlets - Reference volumes, databases ... and do an excellent [underlined] job of it here. Very organized. Excellent handouts and resources” (QT4, par. 13). Only a minority of participants, and only teachers, reported about librarians teaching classes about the execution of a process, the ethical use of information, and information control. No study participant mentioned that Malotha librarians teach students about the use of information technology.

School librarians were found to assist students individually especially with information finding, and then, and both to the same extent, with aspects related to knowledge building and information presentation. Only a minority of participants stated that school librarians help students on an individual level with ethical use of information and the process as such. As far as the latter is concerned, Teacher I explained that the individual help that the librarians provide is crucial to make students go successfully through the research process in his project, noting:

Librarians they do a real nice job for the kids that don't get it. First Name XY [School Librarian] yanks them out and says, “Go work with so-and-so [i.e., one of the librarians in the team]." And it's through that individualized instruction kids do get it. (Teacher I, par. 96)

No study participant reported about librarians providing individual assistance on the use of information technology and on information control.

**Intervening conditions**

The process of information literacy teaching at Malotha is partly shaped by the scope of research tasks and knowledge domains.

**Scope of research tasks**

Malotha faculty uses research tasks as the primary mechanisms of information literacy teaching. Study participants distinguished between two types: small-scale research tasks and extended research tasks. The difference referred to the time students need for completion and the size of end products so that the following definitions were developed: Extended projects take a month or more to accomplish and result in at least an eight- to ten-page paper, a four-page website, or a 30-minute presentation. All other projects were qualified as small-scale. Findings from interviews with administrators and students as well as teacher questionnaires and interviews indicated that the scope of research tasks shapes information literacy teaching in various ways.

The scope of research tasks shapes the information literacy competencies covered in the research tasks that teachers assign, for example, ethical use of information is
required especially in extended research projects and school library sources, including
databases, are the predominant sources in extended projects whereas web sources are
the prevalent sources in small-scale projects. The scope of research tasks influences
teachers’ pedagogical interventions, for example, teachers provide individual assistance
in extended tasks predominantly for knowledge building and they do more whole-class
teaching on information location in the context of small-scale research tasks. The scope
of research tasks also shapes teachers’ practices of collaboration with the school library
and school librarians. For example, librarians provide whole-class teaching especially in
the context of extended projects and they cover six information literacy categories (all
except the use of information technology) when teaching classes in the context of
extended projects.

Knowledge domains
Knowledge domains also shape teachers’ practices of information literacy teaching. This
study took place in a small school and in order to protect the anonymity of participants,
only three groups of subjects were distinguished: history, languages, as well as math
and science.

The information literacy competencies covered in the research tasks that teachers
assign are partly shaped by knowledge domains. For example, information presentation
in visual, electronic, and creative formats tends to be part of research tasks assigned by
history and science teachers rather than those assigned by language teachers, and
small projects assigned by language teachers are more likely to encompass ethical use
of information. Teachers’ pedagogical approaches also depend partly on knowledge
domains. For example, language teachers are more likely than their colleagues to
provide whole-class teaching about the process as such when students undertake
extended projects, and math and science teachers are less likely to help students
individually with information finding in extended research tasks. The way in which
teachers work with the school library and librarians is also partly shaped by knowledge
domains. For example, history teachers are more likely to collaborate with the library
than their colleagues and language teachers tend to provide pedagogical interventions
about information literacy on their own so that librarians do less whole-class teaching
and individual guidance for them.

Interpretation, Discussion, and Conclusions
This section of the paper offers an interpretation of key findings, discusses them based
on the literature, makes suggestions for practice and future research, and reflects on the
overall significance of the study.

Risk of imbalance
The findings showed several dichotomies: On the one hand, teachers repeatedly stated
that students risk to suffer from information overload in the present information age, on
the other hand, student ability to control information was among the least mentioned in
all areas, including whole-class teaching and individual assistance provided by
themselves or by school librarians. Also, although Malotha School had adopted a strong
plagiarism policy, and although it was one of the most mentioned in their descriptions of
student difficulties, the ethical use of information did not seem to be part of the teaching
priorities of Malotha teachers. It would be an oversimplification to conclude that ethical
use of information is not important to Malotha teachers at all. Rather, it seems to be of
great importance to a limited number of them, especially language teachers, and maybe
the other subject teachers tend to rely on their colleagues from the language department for the teaching of this information literacy competency.

Malotha educators have the opportunity and responsibility to design the curricula for their subjects on their own, in the context of their departments. As there is no formal school-wide information literacy policy or curriculum at Malotha, there is a risk that students are provided numerous opportunities to develop particular information literacy concepts and competencies (especially the use of information technology, information finding, evaluation, analysis, and presentation, as well as completion of extended projects as processes composed of various steps) repeatedly and in great detail, whereas others may be neglected, such as information control and the ethical use of information.

**Expanding the literature**

As far as teachers’ conceptions are concerned, similar to other studies (Probert, 2009; Williams & Wavell, 2007) the present investigation found that information literacy is important to teachers. The prevalence of information evaluation at the expense of information finding in teachers’ conceptions has not been systematically reported by other researchers. Several studies (Moore, 1999; Probert, 2009; Herring, 2010) found that teachers held a conception of information literacy as being related to information location in the first place, whereas this study together with Purcell et al. (2013) found that evaluation is regarded by teachers as more important than information finding. However, it should be noted that these two studies took part in schools with predominantly high-performing students.

There has been no unanimity in the literature about the question whether teachers do actually teach information literacy to their classes or not. There are reports about teachers who teach information literacy (Lance et al., 2007; Lance et al., 2010; Latham & Gross, 2008; Purcell et al., 2012). Other researchers found that educators do not teach information literacy at all, not explicitly, or that students were not satisfied with the assistance they had received from their teachers with research tasks (Ladbrook & Probert, 2011; Merchant & Hepworth, 2002; Moore, 1999; Smith & Hepworth, 2007). In questionnaires at Malotha School, 81% of teachers reported that they had already addressed information literacy with their students. However, for the qualitative part it was not possible to find any teacher who belonged to the remaining 19%. Those who were identified by the key informants or other interview participants as being included in this group and considered themselves as being part of it, were found, during their interviews, to teach information literacy in some way or other. A major conclusion is that educators teach students more about information literacy than they are aware of; they do not necessarily do it deliberately or explicitly but they may play a more important role for enhancing student information literacy than they have so far been entitled to play by the LIS profession. On the other hand, the high level of information literacy teaching within the Malotha faculty may also be, at least partly, related to the presence of a well-equipped library run by a well-trained and highly motivated librarian from whom teachers may have learned how to teach information literacy on their own.

The three impact studies in Ohio (Todd & Kuhlthau, 2005), Delaware (Todd & Heinström, 2006b), and Wisconsin (Smith, 2006a) showed that faculty considered the library as most helpful for students with finding information and using information technology and as least helpful, among others, with the development of subject knowledge. In concordance with these studies, the present study found that Malotha
librarians teach classes in the first place about information finding. But different from these studies, the present investigation showed that Malotha librarians are also actively involved in the teaching of aspects related to student knowledge building.

Other researchers reported the intervening nature of knowledge domains on information literacy teaching (Arenz, Huth, & Pfisterer, 2011; Purcell, Heaps, Buchanan, & Friedrich, 2013; Williams, Coles, Wilson, Richardson, & Tuson, 2000) and collaboration (Todd & Kuhlthau, 2005; Todd et al., 2010; Todd, 2012). Both were confirmed at Malotha where, however, the respective roles of subjects were not necessarily the same as those reported by these other researchers. Hence, it may be concluded that any differences in information literacy teaching and collaboration between departments within a particular school do not necessarily have to be related to the knowledge domain as such. Discrepancies in teaching about information technology, for example, could also be related to personal interests of individual teachers or the presence of an information technology leader in one department. More research is needed for exploring this issue in greater depth.

**More research on teachers and information literacy needed**

This study was among the first to investigate the process of information literacy teaching in an entire faculty; more research about teachers should follow. For gaining an in-depth understanding and addressing the complexity inherent in information literacy teaching in a faculty, the present study opted for a qualitative approach and was undertaken in a single school. The development of a theory about teachers’ information literacy teaching has begun, it needs to be tested and refined in other settings, ideally with other faculties as a whole but also with individual teachers and in different types of schools (for example, independent and public) and in different grade levels (for example, elementary, middle, and high schools). At first, more investigations using a qualitative approach should be undertaken; afterwards, the theory should be tested in quantitative approaches with large, randomly selected samples.

**Implications for practice in schools and school libraries**

The majority of teachers offered students opportunities for developing concepts and competencies of information literacy and provided pedagogical interventions about them. A major implication of these findings for practice is that librarians do not need to consider themselves as being the only ones responsible for information literacy teaching in formal education, teachers are helping. For establishing a strong information literacy pedagogy in a school, the two professional groups should - based on the seven information literacy categories found in this study - ideally at institutional level and supported by the principal:

1. Agree on common understandings of information literacy,
2. Make an inventory of information literacy teaching activities that currently exist at their school, and
3. Develop a school-wide integrated information literacy curriculum.

**Overall significance of the study**

The present investigation was among the first to study information literacy teaching as practiced by teachers and their interaction with the school library and librarian in this context not only with frequent collaborators but an entire faculty. It clearly showed that information literacy teaching in formal education is a highly complex endeavor. If
librarians want to play a major and maybe even leading role in information literacy teaching in a constantly changing world, they need to take into account this complexity.

References


Biographical note
Nathalie Mertes worked 10 years as a classroom teacher and another 10 years in the development of school libraries in Belgium. She has recently earned her doctoral degree at the Berlin School of Library and Information Science (Humboldt University). Her major research interests are teachers and their perspectives on and practices of information literacy learning, information literacy teaching, and collaboration with the school library. She is the Director of the International Academy for Information Literacy (Berlin), which provides pre-service and in-service training programs (face-to-face and online) for teachers and school librarians and offers consultancy and research services for schools and school libraries with a focus on information literacy and collaboration.
Developing Online Master’s Programs for Teacher-Librarians:  
A Brief History of School Library Education at a Distance

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Abstract
Over the past four decades, in Australia, Canada and the USA, school library education at a distance has been delivered though three primary modes: (1) correspondence study; (2) two-way or interactive television and videoconferencing; and (3) Web-based online learning management systems. The theoretical foundations of distance education emphasize that the particular technology or mode of distance education is not as important as the pedagogy employed. Major pedagogical approaches evident in school library education at a distance are: behaviourist/cognitivist; constructivist; and connectivist. This brief history of school library education at a distance focuses on efforts to free school library education from the bounds set by the traditional location and scheduling of library education--on-campus, in universities in cities, with regularly scheduled face-to-face meetings, most amenable to fulltime students. Today’s school library education at a distance is primarily an anytime/anyplace endeavour that is attractive to part time students who are employed full time.

Keywords: school library education, distance education, online education, learning management systems, pedagogy

Distance Education Basics
Basic to a theoretical understanding of distance education is the concept of
distance as separation between teacher and learner. Distance education involves
教学 at a distance and learning at a distance. Distance education is best
defined not by any particular medium but by four general elements or conditions:
1) the separation of teacher and learner during at least the majority of the
 instructional process; 2) the influence of an educational organization, including
 the provision of student evaluation; 3) the use of an educational media to unite
 teacher and student and to carry course content; and 4) the provision of two-way
 communication between the learner and teacher, tutor, or educational agency
 (Verduin & Clarke, 1991).

This definition excludes many educational activities often discussed as
distance education, such as courses taught face-to-face at off-campus locations
by travelling faculty. Also outside the scope of this paper are distance education
programs developed for para-professional library workers and continuing
education programs offered to fully-qualified librarians already working in the
field. My focus is on programs leading to a post-baccalaureate diploma or
degree, that is, programs that are designed to prepare professional school
librarians who will have dual qualifications in teaching and in librarianship. These
specialist programs for entry into practice as school librarians are offered in
universities, by library schools offering library and information programs and by
faculties of education offering advanced teacher education in a variety of
specializations.

When did distance education begin? Most writers discussing the history of
distance education suggest that distance education, as we know it, had its roots
in correspondence study courses in the early part of the 1800s, made possible by
a reliable postal system (Rickman & Wiedmaier, 2011). Many of the earliest
correspondence study courses in Europe, Canada and the United States were
offered as private enterprise ventures to teach vocational skills or self-
 improvement skills (e.g., Pitman Shorthand courses, management courses for
homemakers, or safety courses for factory workers). When some colleges and
universities in the 1800s began to offer correspondence study courses, their
focus was often on extension courses in practical areas such as agricultural techniques or writing improvement; a few universities also used independent self-study courses as a way to recruit students for their on-campus degree programs or, in Canada, to allow teachers to continue to study for their degrees during the winter months when travel to the campus became impossible because of weather (Haughey, 2012).

When did school library education begin? The School of Library Economy established in 1887 in New York City at Columbia College (now Columbia University) by the college librarian, Melvil Dewey, the “Father of Modern Librarianship.” Although the earliest library educators, including Dewey, saw the need for distance education, library education by distance came much later, as did library specializations such school librarianship. Some of the earliest school library education courses were organized, not by library schools, but by state and provincial departments of education and by teacher-training institutions.

**Modes of School Library Education at a Distance**

Dirr (1999) identified four generations of distance education in the United States: the first generation began with correspondence education in the 1800s; the second, with the introduction of television as an educational medium in the 1950s and continuing on into the 1980s and early 1990s; the third, with experimentation with online courses in the late 1980s and early 1990s; and the fourth generation, beginning in the late 1990s, with the introduction of complete virtual programs of study. In Canada and Australia, a similar pattern of development has been evident, but with less emphasis on the third generation; all kinds of television-based distance education are expensive to produce, and two-way or interactive television systems require that students be able to meet in a specific place at a specific time. The scattered populations of Canada and Australia meant that television-based education generally was not economically viable.

**Correspondence Study**
This first generation of distance education has had a very long history, but even by the 1980s, 90% of distance education programs worldwide were delivered using print materials, supplemented with audiovisual materials (Curran, 1989). In Australia, correspondence study programs were developed before World War I for K-12 education and for teacher education and, by the 1980s, for school library education. The early development of correspondence study was due, in large part, to Australia’s scattered population and large geographic area. In Canada, with similar challenges of population and geography, correspondence study programs were developed for K-12 education, beginning in 1921, but unlike Australia, school library education was never offered by correspondence study.

Australia was an early leader in school library education by a distance: by the 1980s, of the ten school library education programs available across Australia, only two were delivered solely in face-to-face mode while five were solely distance and two were offered in dual mode (both distance and face-to-face options). The first solely distance program in school library education was established in 1982 at Charles Sturt University in Wagga Wagga, Australia, and its format was typical for the times: for each course or subject, an instructor worked with an instructional design team to produce a carefully designed print package, 300-500 pages in length, that included a course outline, a study guide and readings. The print packages, sometimes supplemented by commercial or locally produced audiovisual materials, were sent to the students by mail; students submitted their assignments by mail, and instructors sent feedback to the students by mail. By the early 1990s in Australia, computer technologies were being used to streamline document production and to automate student registration and assignment tracking (Oberg & Freeman, 1996).

Correspondence study, though widely available in Canada and the United States for adult learning and for K-12 schooling, does not appear to have been used for school library education.

Two-Way or Interactive Television and Videoconferencing
In the United States, school library education at a distance benefited from investments in educational television, especially two-way or interactive television, made by both state governments and higher education institutions and systems, beginning in the 1960s. This mode of distance education requires large investments in equipment in more than one location, and it also requires having groups of students congregated near or within commuting distance of an off-campus location. However, two-way television is easy to use for teachers and students. Classes are synchronous or real time, so that teachers and students can interact easily, and many features of an on-campus classroom environment can be maintained (or “mimicked”).

Some universities have maintained and enhanced their investments in two-way television or videoconferencing. For example, library education at the University of Hawai‘i is delivered to four islands via HITS (the Hawaii Interactive Television System), funded by the state legislature. Unlike many television or video-based systems which now provide connections across ISDN lines, the HITS is a microwave system. Because it is a line-of-sight technology, the HITS implementation process involved getting land clearances, building towers, and mounting the antennas. The first classes started being delivered in two-way video format across the state in 1990. The initial investment for the system was approximately $4 million, but investment has to continue to maintain the equipment, to provide professional development to faculty members to ensure that faculty members can use features such as graphics effectively in their instruction, and to provide technical assistance to ensure that instructional sessions run smoothly.

Most two-way television and videoconferencing systems are capable of simultaneously connecting more than two sites. Multi-point conferencing can be effective although the scheduling, technical, and logistical dimensions of MCU (Multipoint Control Unit) conferences can be imposing as can the cost of phone line usage. Interactive television/video can be effective because it allows real-time visual contact between students and the instructor and among students at different sites, it supports the use of diverse media, and it enables connections with experts in other geographical locations. As with any technology, interactive television/video has its limitations: the initial cost of the equipment and leasing the lines to transmit conferences; communication between different brand-name systems often compromises resolution and quality; and the
technology requires instructor effort to provide high quality visuals and to engage students in the instruction.

**Web-based Online Learning Management Systems**

Although Australia had an early start in school library education at a distance, its move to Web-based technologies was slowed somewhat by limited Internet access in Australian schools. However, in the late 1990s, instructors started moving toward creating virtual interactive classroom environments (often referred to as “immersive environments”). One early development was the use of the World Wide Web to post the materials that had previously been sent by mail and providing bulletin boards/listservs and email buddy systems (Wilson, 1998). Another was the development of AussieMOO, an online classroom environment created using multi-object-oriented programming language to incorporate graphics, audio and text (Hay, 1998) into synchronous interactive classroom environments. Today, 3D modeling tools and simplified programming language, such as *Second Life*, are being used to create “immersive environments” which are simulations that students can use to discuss and to role-play activities related to real-life professional challenges (Hay & Pymm, 2010/2011).

In Canada and the United States, many school library education programs moved directly from face-to-face on-campus delivery to online delivery. This posed challenges to faculty members who had to re-invent themselves as distance educators, but they had the advantages of not needing to dismantle older technology and not having to unlearn previous approaches to distance education. In Canada, distance education still is rarely offered by library schools, and only one of eight Canadian library schools offers its master’s program totally at a distance at this time, and in some cases library school students are allowed to take no more than one distance course per term. Only one institution in Canada, the University of Alberta, offers a school library education master’s program at a distance, the Teacher-librarianship by Distance Learning; this program has been available fully online since 2000 (see, Oberg, 2011c, for a description of this program).
In the United States, school library education at a distance is offered by many institutions, through both library schools and faculties of education, although the literature on the latter is scanty. Some programs are offered totally at a distance while others are offered in blended education (some distance combined with some face-to-face). In the United States, as in Australia, some school library education programs are offered in dual mode, with distance courses and face-to-face courses being offered in a wide range of schedules. Often, this is the result of special funding being made available for online programs. Another option for enriching and expanding school library education at a distance is WISE, Web-based Information Science Education (http://www.wiseeducation.org/), a consortium of library schools in the United States (and a few in Australia and Canada), which allows students in consortium member schools to access online distance education courses, normally courses in special topics and electives.

**Different Routes to Online School Library Education**

The online school library education master’s programs in Australia, Canada and the United States are remarkably similar in content, in pedagogy, and in mode of delivery, but the routes by which they became fully online distance programs are somewhat different (Oberg, 2011b).

**Route 1: Replacing a technology-enhanced distance education program with an online only program**

Route 1 is a route typical of institutions that have a very long history of serving students through distance education, such as Charles Sturt University in Australia. The Charles Sturt program began in the 1980s with print and audiovisual materials being mailed to students; later, computer tracking was added for assignments and grading and for dealing with student queries. Through a systematic process of course-by-course revision and development, the program was transformed to a blended print-online approach in the 1990s and to an online approach in the early 2000s. The process of transformation was supported by a well-established infrastructure for distance education and by university-wide initiatives such as the provision of a web forum for all distance education courses in 1998. The move to online delivery was deliberate and gradual, a long term
goal of the unit, sometimes lead by one or two pioneering faculty members and sometimes responding to opportunities or adopting new structures as the University made them available. The obstacles that seem to have slowed the move to online included: varied levels of interest and commitment to online technologies among the faculty; a highly structured system of course revision that lacked flexibility and restricted faculty autonomy to innovate; and the need to rationalize three streams of school library education into one master’s degree program. The forces that supported the development of the online program included: a core of faculty with high expertise and commitment to online delivery; access to theory and research related to distance education; and experience with several different distance education delivery models.

**Route 2: Replacing a face-to-face program with an online only program**

Route 2 usually was taken in response to a challenge to survival—the need to keep a small and/or shrinking program viable, such as was the case at the University of Alberta in Canada. The motivation for beginning the online program there was the reduction in student enrolment, mainly due to an economic downturn in the mid 1990s that reduced the number of positions for teacher-librarians in the local K-12 school system. Reaching out to students “at a distance” was seen both as a way to increase student numbers and also to protect the program from the vagaries of local school funding. The obstacles that hindered the development of the program included: cutbacks to the post-secondary system; scarcity and inexperience of personnel for online course and program development; priorities within the university focussed on research instead of teaching; and lack of infrastructure and lack of interest in distance education within the institution. The forces that supported the development of the online program included: instructors who were willing re-invent themselves as online educators; access to theory and research related to distance education; one-time government incentive funding; and on-going program evaluation.

**Route 3: Adding an online program option to a face-to-face program**

Route 3, as was the case at Rutgers, The State University of New Jersey, involved providing a new and additional alternative for students in school library
education; the university has retained its commitment to a large face-to-face school library education program. The challenges of the current program are those of school library education generally: ensuring that both the face-to-face and online programs meet the government’s changing certification requirements and responding to the vagaries of educational funding in the local school districts (which has an impact on student applications for advanced study in school librarianship). At Rutgers, the motivation for beginning the online school library education program was meeting some of the high demand for school library education, especially for students living within the local community but beyond commuting distance to the university. The major obstacle to the development of an online program was the lack of infrastructure and lack of interest in distance education within the institution: the prevailing view within the unit offering library education, as well, was that there was “no need” to develop an online program. The forces that supported that development of the online program included: access to a professional studies unit that had a history and commitment to innovation in continuing education and professional development; a unit director who saw the potential of online learning for an emerging specialization in digital libraries and for meeting an ongoing excess demand for school library education; availability of two-year grants from a foundation to support online library education; instructors who were willing re-invent themselves as online educators; and a university policy that provides additional funding to units who provide online courses. Obtaining a major external grant changed faculty perception of the need for online education and ensured that the supports would be there for developing a quality program. The online program was developed over a two-year period, supported by course release for instructors and access to an instructional designer. The professional studies unit expanded its role to include managing online learning courses and orienting and advising online students.

**Changing Concerns in Online School Library Education**

The concerns of school library educators and researchers related to distance education have shifted since the 1990s. Much of the research then, for library
education generally, examined the questions of equivalencies between face-to-face and distance education. Overall, this research showed positive results for distance education in terms of student learning outcomes and of satisfaction with the learning experience (Oberg, 1996). Student success and student satisfaction were linked to carefully designed content and to high levels of contact between and among instructors and students, rather than by particular delivery technologies.

The first decade of the 21st century was a time of great change in distance education, when the available technologies finally had the power to meet the challenges of rapidly changing content and of expectations for high levels of communication and interaction. Distance education was moving from independent to interdependent learning (Garrison & Anderson, 2003) and from behaviorist/cognitivist/constructivist pedagogies to more connectivist pedagogies (Siemens, 2004; 2005).

The distance education research of the 21st century has turned to issues related to the planning and development of quality programs (see, for example, Huffman, Albritton, Rickman & Wilmes, 2011; Pribesh, Dickinson, & Bucher, 2006). Also, questions are emerging about the shifts that need to be made in curriculum content and pedagogy in order to meet the needs of digital age learners. Increasingly, school library educators are experimenting with online pedagogies in ways that show a shift in thinking about the learning theories that need to guide learning and teaching in a digital age—moving from constructivism to connectivism (Siemens, 2004; 2005; 2010). Connectivism challenges the foundational assumptions of constructivist pedagogies that underpinned early online programs in school library education.

The use of Web 2.0 supports students’ creation of personal learning environments—environments where learning is about the creation of content and the interaction of students and teachers. Online programs in school library education are moving closer to the self-directed learning experience (“networked social learning”) that is becoming more the norm in students’ lives outside of traditional face-to-face and distance education classes. The development of curriculum and pedagogy for teaching and learning about Web 2.0 (and the technologies that will follow Web 2.0) is likely to have an impact on the
way school library educators conceptualize appropriate education for the teacher-librarians of the 21st century (see, for example, Branch & de Groot, 2009; 2011). The questions on the minds of future school library educators are likely to be, not which pedagogy or technology but which of many pedagogies and/or technologies is most appropriate for creating a learning environment for achieving this particular outcome, working in collaboration with this particular student or students. What will be left for “the sage on the stage” in this new learning environment?

References


**Biographical note**
Dr. Dianne Oberg is a Professor Emerita in school library education in the Faculty of Education at the University of Alberta in Canada. Her research focuses on the implementation and evaluation of school library programs. She also was part of an international team studying the role of principals in developing information literate school communities. Dianne was the first editor of the international peer-reviewed journal, *School Libraries Worldwide*, and is an active member of school library associations at local, national, and international levels. She co-edited, with Luisa Marquardt, *Global Perspectives in School Librarianship: Projects and Practices* (IFLA Publication No. 148, 2011).
Developing Online Master’s Programs for Teacher-Librarians: A Focus on 21st Century Digital Learning Environments

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Abstract

A multi-disciplinary degree program in education and information studies can uniquely facilitate educators to develop or enhance their capacity to be responsive to the demands of a digitally connected world. Charles Sturt University’s new Master of Education (Knowledge Networks and Digital Innovation) aims to develop agile leaders in new cultures of digital formal and informal learning, with expertise in navigating diverse information pathways, creative learning environments, and socially connected global networks. By examining key features and influences of global connectedness, information organization, communication and participatory cultures of learning, students are provided with the opportunity to reflect on their professional practice in a networked learning community, to improve learning and teaching in digital environments.
Expanding the influence of the information professions

The leadership challenge placed before teacher librarians in rich multi-modal environments is both exciting and challenging, encompassing as it does all aspects of literacy, information literacy, technology, and professional development in collaborative partnerships with students and teachers (Fontichiaro, 2010; Howard, 2010; Killeen, 2009). In the Australian context, the scope of this challenge was highlighted in the Australian Government Standing Committee on Education and Employment inquiry into school libraries and teacher librarians in Australian schools, published in the report entitled School libraries and teacher librarians in 21st century Australia (2011).

This inquiry provided educators in Australia with a substantial review that indicated the vital need to continue the conversation about what a teacher librarian is, does, and can do into the future. (Inquiry Report, 6.17). This conversation (i.e. research activities and professional development opportunities) provided a framework for moving forward into the future, for individuals, groups and organizations to be better placed to continue advocacy on behalf of the profession.

For practitioners working in and involved with teacher librarianship, this report has been of significant importance in highlighting the evolving context and changing needs encompassed in providing quality library and information services in our schools. Through this report, practitioners have also been challenged to look further into the field of school libraries and school librarianship, and the factors influencing the post graduate professional needs of teacher librarianship in that context.

The report highlighted the vital role that information professionals in the field of teacher librarianship play in the preparation of our children and youth in 21st century learning contexts. Students use technology to research online, anytime, anywhere, and because of this students in primary and secondary schools need...
to be nurtured in ways to learn how to learn from the multiplicity of resources at their disposal, using the best information organization and critical thinking strategies that that we can show them. We need to build a strong digital culture of enquiry at the heart of each of our schools (O’Connell, 2012).

As Gordon, (2010, p. 79) explains, a culture of inquiry emerges as teachers become learners, and learners are self- and peer-taught, and everyone becomes a researcher. We know that the development of critical thinking is a key learning objective in education, as it entails the ability to make reasoned evaluative judgements when making sense of information sources that contain different and/or conflicting findings, perspectives and interpretations of a given topic of phenomenon. (Ford, 2008 p. 59). The use of critical thinking has become particularly important in the digital age as relatively quick access to a wide range of information means that the user needs the ability to critically evaluate the validity and value of information accessed. Being taught to think critically and evaluate processes and emerging ideas are important if students are to actively participate in a digitally enhanced world rather than being limited to being consumers of knowledge (Starkey, 2011).

The evidence is that technologies and social media platforms are driving an unprecedented reorganisation of the learning environment in and beyond schools and tertiary environments. These disruptive shifts are already reshaping the workforce landscape and the skills required (Davies et al, 2011), establishing lifelong and life-wide learning as the central paradigm for the future (Redecker et al, p.10). Our work as educators has to centre on helping to meet future learning needs by creating a sustainable learning ecology that is shaped by the ubiquity of information, globally responsive pedagogical practices, and driven by collaboration and informal learning in multiple access points and through multiple mediums.

Teacher librarians can be leaders and agents of change in the new information ecology within which library and information services are positioned within a school.

Students in the Master of Education (Teacher Librarianship) program at Charles Sturt University soon discover the breadth of these leadership opportunities, particularly new forms of online information curation, digital citizenship, social media, Web 3.0, tools such as QR codes, and the power of personal learning networks. However, a program/course review undertaken in 2012 provided the impetus to review the current and future needs of current students, past graduates, and the potential areas to introduce information science and education informatics into the broader professional post-graduate landscape within the education sector.

As part of the industry-wide consultation process with key stakeholders (principals, teacher librarians, librarians, system leaders, teachers, and education...
consultants) a strongly emerging theme was the need for a **new credentialed advanced degree program for previous graduates of teacher librarianship courses, as well as for other graduates of education programs**. Such a degree program was seen as a positive response to the clearly identified professional development priorities related to 21st century school environments. For instance, of 300 survey respondents, 78% indicated a clear preference in undertaking such an advanced degree program, as opposed to professional development through non-academic non-credentialed options.

More importantly, a **new multi-disciplinary degree program in education and information studies could also provide advanced learning options for other education practitioners** who are seeking a **substantial post-graduate foundation in connecting information knowledge networks and digital innovation in the P-12 education**, and tertiary environments, where the information discipline aspect is foundational to improved education pedagogical practices in digital environments. This could provide a unique opportunity for the School of Information Studies to utilize information science expertise to influence the post-graduate formation of practitioners interested in knowledge networks, e-learning, and digital innovation.

**Knowledge Networks and Digital Innovation**

Students need guidance from teachers with expertise in navigating diverse information pathways within their personal and creative learning environments, socially connected networks, and globally enriched contexts. The range of literature and information options from books to all manner of media objects, sources and devices means that students need to know how to juxtapose quality text, sound, media and social connections appropriately and in real time; and how to filter, then mix and match what they see, hear and exchange in order to build personal knowledge and understanding of the curriculum.

Educators are challenged by this 21st century participatory culture and information ecology. There is a need to provide a substantial postgraduate advanced program of study in the information discipline knowledge fields that are being impacted by these interactive media-rich environments encompassing:

- Literature and literacy experiences in digital environments, including children’s and young adult literature, e-book systems, management and development
- Information organisation in digital environments, including new media tools and content curation with the aid of mobile devices, online platforms and cloud based storage services
- Digital information environments, information retrieval concepts and advanced search strategies
- Concepts and practices for curriculum integration of social media tools, services and platforms
• Comprehensive knowledge of local and international developments in relevant areas of information media practices, with an emphasis on information fluency, guided inquiry, critical inquiry and analysis, as well as design thinking
• Digital citizenship essentials in an evolving digital culture, including legal and ethical behaviour and open learning approaches
• ICT integration and innovation, demonstrating a technology infusion with mobile learning, tablets and devices for information rich learning experiences
• Big Data and information flow, including Web 3.0 and the concepts of the semantic web
• Creative and intellectual leadership in global environment.

Educators who adapt to the literature, information and digital needs of their students not only continue to build a reading culture in the school, but provide the divergence and convergence in media needed to provide the materials and opportunities for motivation, curriculum differentiation, collaboration and the connections necessary to enhance 21st century learning.

Thus a new degree program commenced in 2014, and is delivered fully online by distance education, lead by the Courses Director and Teacher Librarian discipline team in the School of Information Studies, drawing on specialist adjunct staff associated with the School. The degree program Master of Education (Knowledge Networks and Digital Innovation) http://www.csu.edu.au/digital requires completion of sixty-four (64) points comprising two (2) core subjects and six (6) elective subjects. The program is grounded in cross-disciplinary studies in information science and education, allowing students to gain an advanced and integrated understanding of a body of knowledge in the emerging developments in digital innovation in the information science discipline, and the online knowledge networks, processes and interactions for innovative education practice.

The learning framework for the program is established in the keystone subject Concepts and Practices in a Digital Age, where a body of knowledge is introduced that includes a review of recent developments which are influencing learning and teaching in an increasingly digitally-connected world. Through questioning, review and reconstruction of understanding, the subject frames the challenges of learning in digital environments and sets the context for innovation and change in professional practice. The subject is designed to encourage professional learning through authentic tasks and activities; opportunities for collaboration with peers; readings that are thought-provoking; study suggestions which encourage inquiry, reflection and analysis; and engagement with a curriculum unit/strategy to demonstrate application of new knowledge and understanding for learning and teaching practice.

This foundation subject establishes connected learning within new information environments created by the social and technological changes of the digital age. By focusing on connectivity, communication, collaboration and convergence, the subject addresses the challenges, opportunities and emerging possibilities for learning and teaching in information-rich participatory environments. Trends in
knowledge construction, participation and social networks are explored, including information futures and digital convergence. The subject introduces education informatics and the scholarship of digital teaching, and models connected learning through group discourse and collaborative inquiry in digital environments, including the reflective and participatory experiences employed throughout the course.

A comprehensive examination of ideas about digital literacy is undertaken, providing a strong examination of the interconnections between various terms that are in vogue. Drawing from the information science discipline, Bawden (2008) provides the key facets of digital literacy upon which the program is built:

- “knowledge assembly,” building a “reliable information hoard” from diverse sources
- retrieval skills, plus “critical thinking” for making informed judgements about retrieved information, with wariness about the validity and completeness of internet sources
- reading and understanding non-sequential and dynamic material
- awareness of the value of traditional tools in conjunction with networked media
- awareness of “people networks” as sources of advice and help
- using filters and agents to manage incoming information
- being comfortable with publishing and communicating information as well as accessing it

Bawden and Robinson (2012) is also used to introduce the factors involved in information behaviour, and how they relate to one another, to depict the stages and processes of information seeking and use, and sometimes to illustrate a person’s thought processes and changing cognitive state as they deal with information. Information behaviour cannot be considered in isolation; we need to explicitly understand the wider context.

Within the context of connected learning, students also engage with the critical fields of research that can inform the work of educators. Connected learning encompasses information behaviour and processes with technology and digital environments; is explained and facilitated through a range of theories and/or models; includes evolving taxonomies of learning outcomes; and is fired by critical and computational thinking.

The complexities of knowledge networks in digital environments has highlighted the importance of the emerging sub-discipline of education known as education informatics - the application of technology to discovering and communicating education information. Information technology is key to knowledge diffusion, but understanding and developing human interaction, human behaviour, and information use and exchange are also essential. Definitions of informatics usually encompass the crossing of disciplines, thus education informatics is basically a combination of the disciplines of education, technology, and information science. Just how these domains intersect and interrelate is still
cause of much debate across the disciplines, however the work of Nigel Ford (2008) underpins the focus throughout the degree program.

The first cohort of students have been drawn from Australian and international educators, who are currently Principals and Vice Principals in schools; teachers and teacher librarians; e-learning leaders in schools and higher education; educational designers in higher education; program leaders in education organizations; and technology integrators in schools higher education.

The degree program is delivered through a purposed-designed participatory platform http://digital.csu.edu.au that connects to the university learning management system. It also makes use of online tools within and beyond the program, as part of the participatory learning experiences for knowledge networking and digital innovation. In addition, the program has embedded within each subject a reflective and reflexive journaling process undertaken at the newly established CSU Thinkspace http://thinkspace.csu.edu.au. A reflective journal is an opportunity for students to demonstrate functioning knowledge in the context of the intended learning outcomes for the subject or program.

“In professional programmes in particular, it is useful if students keep a reflective journal, in which they record any incidents or thoughts that help them reflect on the content of the course or programme. Such reflection is basic to proper professional functioning. The reflective journal is especially useful for assessing ILOs (intended learning outcomes) in relating to the application of content knowledge, professional judgment and reflection on past decisions and problem solving with a view to improving them.” (Biggs and Tang, 2011)

Rationale

The cliché for our education era is that ‘there’s an app for that’, yet this slogan belies the intricacies and complexities of human communication and the learning and teaching environments in which we engage with our students – the global citizens of our future world. Literacy and information fluency in digital environments is our contemporary challenge, and the ‘app generation’ is an expression of the power of networks, and the pertinence of technology in the knowledge interactions of learning and teaching.

Most educators understand that digital convergence has begun to have a significant influence on teaching, learning and literacy, resulting in a need for all teachers to revisit and revitalize their understanding of the core influences that shape the pedagogical interactions in classrooms and beyond.

This is where information literacy models come into their own as mechanisms to scaffold information as a knowledge flow, nurturing information fluency and the
capacity for critical thinking and cognitive engagement with old and new media. Computer and mobile device technology environments, social media, and ready forms of online communication drive our newly emerging knowledge ecosystems – and these have been significantly changing in the last 10 years! When Skype was first released in 2003, the global face-to-face contact transformed the opportunity to communicate and collaborate in ‘real time’. Now Apple’s Face-time, Skype in the Classroom, and Google Hangouts (to name just a few tools) guarantee synchronous engagement, alongside collaborative text platforms such as Google docs.

In other words, the mechanisms for the acquisition of new knowledge has become a deeper process of individual and collaborative learning activities, problem solving and artefact development – through an integration of face-to-face and online interactions within a community, involving absorption, integration and systemisation of the information received by the receiver in their own pre-existing cognitive structure, which are the result of personal experience, and earlier knowledge transactions (Trentin, 2011 p. 159).

For teachers and teacher librarians, domain knowledge involves information and also:

- knowledge of information resources such as publications, databases, search tools, web resources, etc.
- understanding of the community of learners, enthusiasts and professionals in that area
- tools needed to browse, explore and discover needed information
- methods for storing, managing, retrieving and sharing
- creating artefacts that demonstrate understanding of concepts and material

We have, without a doubt, had an extraordinary decade of change. In our fast-paced world, the priority of any educator is to fast-track professional learning about, and understanding of, knowledge networks and digital innovation. Our school students have not known a world without technology, and our newest students have always been in a world with hand-held and mobile devices. But as any educator knows, having a device, and communicating with a device is not ‘the be all and end all’ of learning. So the role of educators today is to extend their professional capabilities of discipline or domain expertise by embracing knowledge flow within the power of their personal and professional networks – thus developing the capacity to be agile learners themselves ready to nurture the emergent needs of the students in their care.

In the Master of Education (Knowledge Networks and Digital Innovation) we have undertaken to meet the challenges of learning in a connected world, and helping our post-graduate students (who will in fact already be outstanding
teaching practitioners) develop the capacity to be responsive to the challenges that this connected world brings.

In examining the concepts and practices for a digital age, we are engaged with as many of the recent developments that are influencing learning and teaching in an increasingly digitally connected world. By examining key features and influences of global connectedness, information organization, communication and participatory cultures of learning, students are provided with the opportunity to reflect on their professional practice in a networked learning community, and engage in robust dialogue to develop an authentic understanding of concepts and practices for learning and teaching in digital environments.

But more than simply learning about online tools, spaces and activities in a participatory culture, learning about knowledge networking requires an examination of what ways the new online tools and techniques for handling information significantly change knowledge; how different knowledge interactions transform learning; and why these transformed activities are meaningfully different and justly describe as ‘better’ than those they displace. This goes beyond the use of technology to the use of information and knowledge in networked environments to articulate the real transformative potential of connected learning. The changing character of information and the social, participatory nature of knowledge construction in connected environments has created a new participatory culture and information ecology that we cannot ignore.

Thomas and Seely Brown (2011), who explored this new culture of learning in our world of constant change, explained how much the Internet has changed the way we think about both technology and information. In this new culture of learning, the Internet has become a participatory medium, giving rise to an environment that is constantly being changed and reshaped by the participation, changing the flow of news, effecting tacit as well as explicit knowledge, and embedding a new culture of learning. They argue that traditional approaches to learning are no longer capable of coping with this constantly changing world. Teachers no longer need to scramble to provide the latest up-to-date information to students because the students themselves are able to take an active role in helping to create and mould it, particularly in areas of social information.

To support and nurture learning in these evolving environments is a challenge, and why using digital mediums to communicate, collaborate, and curate in the management and dissemination of information is important. Academic and professional development programs should be designed to enhance personal professional networks and personal learning conversations.

**Identifying New Horizons**
Three of our other exciting new subjects for the Master of Education (Knowledge Networks & Digital Innovation) demonstrate how the degree program aims to encompass the most important areas of understanding in knowledge network needs and digital innovation:

**Literature in Digital Environments:**

Opportunities for creative learning with, and co-creation of, literature and literacy experiences in digital environments is a foundational element of innovation in learning. By exploring digital creation modalities, and the media tools such as e-readers, tablet devices, interactive programs and information specific applications for fiction and information sources, it is possible to build new learning pathways and craft new knowledge interactions. The focus on creative environments, such as rich interactive information and story engagement through iPad applications; flexible environments of online graphic interfaces; and digital storytelling or interactive multimedia stories; provides unique and rich challenges in pedagogy, and complex issues in organisation and management in designing learning experiences that are responsive to diverse learner needs.

Knowing how to build these interactive learning pathways is an emerging and essential component of digital innovation in connected learning environments.

**Designing Spaces for Learning:**

Numerous changes are occurring in the teaching and learning process, including rapid changes in technology and digital learning strategies. Effective practices are emerging around these very new technologies and digital environments, resulting in discussions of how “space” design and utilisation can adapt and drive quality learning and teaching environments and experiences. Ideally, design principles should include a description of the learning activities in which students and teachers will participate. However, designing a vibrant learning space can be a daunting proposition. Design principles require a close understanding of the relationships between learning principles and design principles to shape the use of space. Institutions can create learning spaces that will transform their ability to teach current and future students by identifying the institutional context; specifying learning principles meaningful to the context; defining the learning activities that support these principles; and building the design principles founded on a critical reading of the literature and evidence-based practices that inform potential developments.

Knowledge and understanding of the principles and processes of designing spaces for learning has become an essential component in determining how best to build, update, and modify learning spaces to meet the rapidly changing needs in education.

**Information Flow and Advanced Search:**
While the digital revolution is impacting everyone that works with information, the very nature of that abundance and accessibility requires a knowledge of the information structures and information seeking strategies that impact on efficient information discovery. By providing an overview of the most important developments taking place in the production, distribution, storage and consumption of information students will be able to critically evaluate the information flow that is becoming embedded in work and social lives. Now more than ever, working in education requires a deeper knowledge and understanding of the information environment, the developments in Web 3.0 and the semantic web, and the capacities of big data to provide opportunities for data mining and information analysis. This continual evolution of the internet as a vehicle for information flow requires searchers, and researchers, who are able to respond to the nuances of information environments, and deploy advanced cognitive and technical skills for managing and searching for information.

With this knowledge educators will be able to improve research skills, examine new and emerging theoretical and practical developments, and make informed decisions that will improve professional practice and the design of learning and teaching activities for ongoing digital innovation.

The Future

Learning in a digital age requires practitioners who understand education imperatives in local and global settings, and who can demonstrate an agile response to novel technologies that may catalyze learning. Both technical and pedagogical innovation should be hallmarks of the best learning environments we can create, and which incorporate a wide variety of pedagogical approaches, learning tools, methods and practices to support students’ diverse learning modes.

The information profession, and the expertise of teacher librarianship provides insight and unique opportunities through educational informatics to provide post-graduate professional learners the opportunities they need for curriculum knowledge and development within a global, digital commons. The participants in the new degree program have the opportunity to work, network and learn together, in order to learn from leaders in the field, and become thought leaders in the professional practices of teaching and teacher librarianship in visible and connected ways.

Comments after 14 weeks study in the new degree program

“If nothing else, INF530 has convinced me even more of the need for all teachers to become digitally literate, connected educators”.

“While accessing the subject knowledge networks, I have experienced the participatory culture that is at the foundation of 21st century learning. My views and understandings of an educational professional in digital environments have been matured by these studies and the social interactions that have taken place around this learning journey.”

“As a new leader, in a new position, I have found this subject to be incredibly beneficial and so pertinent to teachers and students in today are changing educational landscape.”

“I have loved connecting with the cohort, it’s been amazing. People have said to me “isn’t online study very impersonal and isolating” but I couldn’t disagree more. I feel infinitely more connected with my classmates than I ever did while studying in the traditional way over twenty years ago.”

“Thank you Judy, and thank you to all the other students. What a fabulous beginning, I’m very excited about what is to come”.

Visit the degree profile at <http://www.csu.edu.au/digital>

Keep up-to-date with news and developments at the Facebook page <https://www.facebook.com/KnowledgeNetworksDigitalInnovation>

References


**Biographical note**

Judy O’Connell is Courses Director for the LIS programs in the School of Information Studies, Charles Sturt University, Australia. From 2008-2010 she was Head of Library and Information Services at St Joseph’s College, Hunters Hill, Sydney. In 2006-2007 she was an Education Consultant in Library and Web 2.0 developments for 80 primary and secondary schools in the Western Region of Sydney. Her professional leadership experience spans primary school, secondary school and tertiary education, with a focus on libraries, social media, digital innovation, learning frameworks, and new directions for knowledge networks in digitally-enriched environments. Judy writes online at [http://judoconnell.com](http://judoconnell.com).
Using the image drawing method to examine student perceptions of school libraries

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Abstract
This study examine changes in the pictures university students drew of their school library over time while taking a course focusing on explaining the importance of school libraries. The results revealed an increase in the tendency of pictures to depict librarians; However, even so, librarians featured in only 12 of the 32 pictures drawn by the students. Since the importance of librarians was a focus of the course, there appears to be a need to improve the curriculum

Keywords: perception of school libraries, image drawing method, teacher training

1. Aim
A course on “The Planning of a School Library” was held at the researcher’s university in 2013–2014, led by the researcher, in order to help change the perceptions of teachers (excluding school librarians) regarding the future of libraries in teaching (table 1).

<table>
<thead>
<tr>
<th>Time</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Guidance / What is the school library?</td>
</tr>
<tr>
<td>2</td>
<td>What is a school library lesson?</td>
</tr>
<tr>
<td>3</td>
<td>Elementary school library lessons 1</td>
</tr>
<tr>
<td>4</td>
<td>Elementary school library lessons 2</td>
</tr>
<tr>
<td>5</td>
<td>Junior high school library lessons</td>
</tr>
<tr>
<td>6</td>
<td>Senior high school library lessons</td>
</tr>
<tr>
<td>7</td>
<td>Special school library lessons</td>
</tr>
<tr>
<td>8</td>
<td>How to determine learning objectives</td>
</tr>
<tr>
<td>9</td>
<td>Tour of the school library</td>
</tr>
<tr>
<td>10</td>
<td>Privacy in the school library</td>
</tr>
<tr>
<td>11</td>
<td>Book selection in the school library</td>
</tr>
<tr>
<td>12</td>
<td>Guest speaker: school librarian</td>
</tr>
<tr>
<td>13</td>
<td>How to make a lesson plan</td>
</tr>
</tbody>
</table>
The objective of this course was to foster “effective teaching in the school library as a class teacher.” This course was an introductory course, and in its syllabus it was said, “There is no problem if you have no interest in school libraries now.” This was for students who become a teacher to know the school library as much as possible, school library education is not currently popular in Japan.

In Japan, there are two types of librarian in schools: the “school librarian” and the “teacher librarian.” Qualified teacher librarians are found in 98% of the schools in Japan. Most of them are class teachers as well as librarians. Therefore, school librarians are also provided for in some cases, but schools are not required to have a school librarian, and these people work as non-regular employees in many cases. For most Japanese (excluding librarians, but including most of the students in my course at first), the difference between the two types is not clear. Therefore, in this paper, the term “librarian” covers both types.

In the course, general learning objectives (across sessions) included “teaching methods in the school library,” “how to team teach with the librarian,” and, in particular, “the importance of the librarian.” In 2005, the students in the course had been in elementary school; in Japan in this year, about 30% of elementary and junior high school libraries did not have librarians (Japanese Ministry of Education, Culture, Sports, Science, and Technology [MEXT], 2006). Therefore, the students did not have much experience of education in the school library. In 2012, this percentage is increased to 50% (MEXT, 2013). Therefore, there is in an urgent need to improve teaching methods in school library lessons.

Making a lesson plan for use in the school library was the final assignment of the course. However, this assignment is insufficient to accurately measure students’ understanding of the school library’s purpose and function. Thus, in this study, I tried to examine the degree to which students understood the use of the school library and the importance of the librarian, in other words, to determine whether the course was a success or a failure, by another method, namely, the image drawing method (IDM). The purpose was not the evaluation of performance of individual students but of the instruction.

2. Method
2.1 Previous research
IDM was proposed by Tsukamoto, Kosaka, and Akahori (2006) to gather feedback on their lectures on information technology education. In their study, students were asked at the beginning and in the middle of the semester to draw pictures representing their attitudes toward computers. These pictures, which were classified into three categories, provided valuable feedback to the researchers on how they could improve their lectures.
Sunaga (2006) advocated that students be asked to write onomatopoeic impressions of school libraries at the beginning of the semester. (Japanese has an exceptionally large onomatopoeic (sound symbolic or mimetic words) lexicon expressing many concepts in an emotionally resonant and visceral way (Hamano, 2006).) The goal was to share students’ impressions of school libraries and to encourage their interest in the school library.

2.1 IDM in this study

2.2.1 Questionnaire

The questionnaire used by the present study to gain IDM feedback was composed of three questions written on A4-size paper (Figure 1):

1. Please draw a picture of your image of the school library. (2 minutes)
2. Please explain in writing why you drew the picture above. (2 minutes)
3. Please write an onomatopoeia of your image of the school library. (2 minutes)

Question 2 was used only when it was difficult to determine, for example, whether a person in the picture was a student or librarian (The determinate method is described in 2.2.4). Question 3 was not used in this study. This questionnaire was non-anonymous, to facilitate examination of individual changes.
2.2.2 Method of analysis of images
The pictures produced by the students reflected the following seven themes:
- Bookshelves
- Desks for users
- PC(s)
- Student(s)
- Librarian (or “adult,” to reflect the possibility that class teachers were represented; see 2.2.3)
- Sofas
- Class in session

Probably, it is considered that students who understood the importance of the librarian did not always draw a librarian. Furthermore, it was also possible that students would draw negative impressions of the present condition of their school library, because they were not directed to draw an ideal situation. It was thought that if the objective of the lectures were achieved, the number of students drawing a librarian would increase compared with previous drawings.

PC(s) and sofas may be required for school libraries, but they were not considered in the lectures. Therefore, it was expected that changes in representations of them would be smaller than in representations of the librarian, so they were used as a baseline.

2.2.3 Method of differentiation of librarians and students
It was not easy to determine whether a given human figure in a picture was an adult (librarian) or a student. Therefore, criteria were set as follows—a librarian was:
- drawn larger than other figures
- designated “librarian” in writing
- given features of a stereotypical librarian in Japan, for example an apron

The pictures were evaluated by the researcher and three graduate students in psychology; when they reached different conclusions, they conferred and reached consensus. The concordance rate was 94%.

Most “adults” were represented inside a counter, showing that they were librarians, not class teachers. However, as we have noted, class teachers may also teach in the library; the matter ultimately cannot be settled within our methodology. Therefore, the exact status of “adult” figures was not determined, and it was assumed that they were librarians.

However, it was necessary to determine whether a figure was a librarian or a student on the library committee. When there is no school librarian in a Japanese school library, the students of the library committee are responsible for lending books. Therefore, they may be represented in the same way as librarians; people who are inside the counter may not be librarians. When it is difficult to determine this point, the student was asked individually.
2.2.4 Testing
A pretest was held on October 3, 2013, at the time of the initial lecture, and a posttest was held on February 23, 2014, at the time of the final lecture. All lectures were conducted as scheduled; throughout all, the role of the librarian was emphasized and no special descriptions of sofas or PCs were included.

3. Results
The material for analysis was 64 drawings produced by 32 students.

3.1 Examples of the pictures
Examples of the pictures are presented in Figure 2.

Figure 2: Example pictures

The other examples of the pictures which didn’t contain the seven themes were an abstract painting and the closed door of the school library.
3.2 Results of the analysis
The study focused on increases in representations of student(s) and a librarian. McNemar’s test was conducted to analyze increases in both, yielding p-values between 5% and 10%, indicating no significant difference in PC(s) and Sofas.

Table 2: The frequency of appearance of a theme \((N = 32)\)

<table>
<thead>
<tr>
<th>Theme</th>
<th>pre-test</th>
<th>post-test</th>
<th>applicable (\rightarrow) not</th>
<th>not applicable (\rightarrow) applicable</th>
<th>(\chi^2)</th>
<th>McNemar’s test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bookshelves</td>
<td>29</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>NaN</td>
<td>n.s.</td>
</tr>
<tr>
<td>Desks for users</td>
<td>24</td>
<td>24</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>n.s.</td>
</tr>
<tr>
<td>PCs</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0.2</td>
<td>n.s.</td>
</tr>
<tr>
<td>Student(s)</td>
<td>10</td>
<td>16</td>
<td>2</td>
<td>8</td>
<td>3.6</td>
<td>(p = 0.0578)</td>
</tr>
<tr>
<td>Librarian</td>
<td>6</td>
<td>12</td>
<td>2</td>
<td>8</td>
<td>3.6</td>
<td>(p = 0.0578)</td>
</tr>
<tr>
<td>Sofas</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>n.s.</td>
</tr>
<tr>
<td>Class in session</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>(p = 0.0833)</td>
</tr>
</tbody>
</table>

("applicable \(\rightarrow\) not": pretest is applicable and posttest is not applicable; "not \(\rightarrow\) applicable": pretest is not applicable and posttest is applicable)

In addition, a statistical relationship was found between desks, sofas, and the student's performance graded by researcher (Table 3).

Table 3: The number of the theme by the performance \((N = 32)\)

<table>
<thead>
<tr>
<th>Theme</th>
<th>the score of performance</th>
<th>Spearman’s rank correlation coefficient between performances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70-79.9 ((n=3))</td>
<td>80-89.9 ((n=15))</td>
</tr>
<tr>
<td>Bookshelves</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Desks for users</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>PCs</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Students</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Librarian</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Sofas</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Class in session</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

\((^*p<.05, \ ^{*}*p<.01)\)

4. Conclusion
Based on the drawings, it seems that 12 out of the 32 students recognized the importance of the librarian. Impressionistically, this value seems low (but see the next section), and statistically, it did not show an increase; since there was a focus in educating the students on the role of the librarian, this seems to indicate a need for improvement of the course curriculum.
There was no statistical relationship between the representation of a librarian and the students' performance; thus, it is a possibility that IDM is another barometer. In order that it was improved as a better barometer and verified, their themes and ideas need to be discussed.

5. Future directions

5.1 Is 12 out of 32 high or low?
In order to know whether 12 out of 32 high or low, there is needed to investigate the rate of librarian in the picture drawn by the students teacher librarian major and school librarians in the field. In Japan, in the 2014 spring semester, a trial similar to the one presented here was implemented in other universities by collaborating researchers. However, a larger sample still is needed for better statistical validity and to identify regional differences.

5.2 Will IDM be a barometer of school libraries?
In addition, the scope of the study is to be expanded to include both teachers and librarians' training. If there is the trial for elementary and junior high school students, it may be one of the barometers of libraries.

We need collaborators; please get in touch if you are interested in the trial.

5.3 How do we improve curriculum based on the findings of this study?
If 12 out of 32 is low, there is needed to improve the curriculum. But IDM does not tell much improvement points about lectures.

5.4 Is IDM able to be used with Sunaga’s method at the same time?
Maybe, if another purpose is added to IDM, it is considered to be effective to share students’ pictures with each other, as in Sunaga’s method, whose goal is to share students’ impressions of school libraries and to encourage their interest in the school library. However, there is a possibility of bias in the pretest due to sharing. In the posttest, in contrast, there are no bias problem, but it is too late that the students are interested in the school library at the time of the final lecture.

Acknowledgment
The researcher thanks the students who drew the pictures and gave permission for them to be used, as well as the graduate students who helped analyze the pictures.

References

Ministry of Education, Culture, Sports, Science and Technology (Elementary and Secondary Education Bureau, Student Affairs Division). (2006).” Results of


Biographical note
Mr. Daisuke Okada is an Assistant Professor at Wakayama University Library, Japan. From 2007–2010, he served as a teacher librarian at private junior high school. He currently offers “learning support” at the university library reference desk. He lectures on information literacy classes in the liberal arts. He is currently working on team teaching at the university library.
His research interests include the educational effect of the (school or university) library, lesson planning in the library, and training in inquiry-based learning for schoolteachers. He is the author of Ask essential questions : handbook for inquiry-based learning beginners (in Japanese).
Panel Presentation
Professional Education for School Librarianship: The Rutgers University experience

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Abstract
This paper addresses the processes in place to help Master of Library and Information Science (MLIS) students at Rutgers University meet the education requirements for being a school librarian in New Jersey. It outlines both curriculum and certification structures and processes, and identifies a range of support initiatives in place at Rutgers to enable the journey from student to professional.

Keywords: Rutgers University, New Jersey department of Education, Support Services, School Librarianship Education.

Country Context
This paper addresses the processes in place to help Master of Library and Information Science (MLIS) students at Rutgers University meet the education requirements for being a school librarian in New Jersey. In the USA, library and information science education takes place at the Masters degree level, and most are accredited by the American Library Association (ALA). Typically such degrees are labelled Master of Library & Information Science (MLIS), and school librarianship education is a specialization or track within the MLIS. Currently there are 63 accredited MLIS programs across the USA (http://www.ala.org/accreditedprograms/directory), and 48 of these provide school librarianship education. Rutgers University is the only provider of the MLIS degree in New Jersey. Also in the USA, a career as a school librarian may be obtained through an educational unit accredited by the National Council for the Accreditation of Teacher Education (NCATE) and recognized by the American Association of School Librarians (AASL). Essentially this means a designated school library track in a master of education degree provided through a faculty of education. In New Jersey, William Patterson University and Rowan University provide this formal education. The advantage of the accredited MLIS degree is that school librarians are also accredited to work in other type of libraries and information agencies, particularly in children and youth services of public libraries, academic libraries, as well as meet state education licensing requirements.

Professional education for school librarians in the USA is also a credentialing and licensing process governed by various state Departments of Education. There are no
consistent standards, and certification processes vary considerably from state to state: http://www.schoollibrarymonthly.com/cert/index.html. At the same time, there is an Interstate Agreement in place by the National Association of State Directors of Teacher Education and Certification (NASDTEC) which makes it possible for a school librarian who has completed an approved program and/or who holds a certificate or license in one jurisdiction to earn a certificate or license in another state or jurisdiction. Receiving states may impose certain special requirements which must be met in a reasonable period of time.

**Background to school library education at Rutgers University**

The School of Communication & Information was created in 1982 with the merger of the Graduate School of Library and Information Studies, the School of Communication Studies, and the Department of Urban Journalism. The journalism and library science programs each had roots in programs established in the 1920s at Rutgers, and the communication program was established during the 1970s. The school is one of the founding members of the iSchool consortium (http://ischools.org).

The MLIS at Rutgers prepares graduates to work in all kinds of libraries and information agencies, and each student works with an academic advisor to determine their individual suite of courses to meet their career and professional aspirations. School librarianship (SL) is one of several articulated specializations within the MLIS degree, together with Digital Libraries, Knowledge Management and Social Media. With these specializations, there is typically a prescribed set of courses, together with optional electives for students to build their coherent specialization.

One of the key leaders in the early years of the school was Professor Mary Gaver, who pioneered both professional education for school librarianship in New Jersey and who undertook some of the earliest state-wide studies of the impact of school libraries on student learning. She concluded: “With the school library literally the heart of the educational program, the students of the school have their best chance to become capable and enthusiastic readers, informed about the world around them, and alive to the limitless possibilities of tomorrow” (Gaver, 1958). In 1983, Professor Carol Kuhlthau joined the school faculty, and began her 30 year research journey developing the “Information Search Process” model which has formed the research foundation for Guided Inquiry”. One of Library & Information Science’s most distinguished scholars, Professor Emerita Carol Kuhlthau has played a leading role in the development of the school library program at Rutgers, a program which consistently been ranked #1 or #2 in the country, based on national university program rankings provided by the US News and World Report.

The knowledge and skills foundation of the school library specialization is determined by the New Jersey Department of Education, and articulated through its license and credential code for all educators and support personnel who work in NJ public schools: (http://www.state.nj.us/education/educators/license/). For employment as a school librarian in New Jersey, the Department of Education requires that a candidate must hold a master’s degree from a regionally accredited college or university and complete a graduate program approved by the Department. The Department of Education specifies the following for school librarianship education in the state of New Jersey:
• Organization and coordination of school library media programs, resources and instruction to provide a sequential course of study for students;
• Application of learning theory to reading, listening and viewing library media resources;
• Access, evaluation, selection and utilization of library media resources;
• Design and development of multi-media materials;
• Design, development and integration of information literacy skills and the library media program throughout the school curriculum;
• Integration of educational resources and technology throughout the school curriculum;
• Children’s literature or young adult literature;
• Development and implementation of policies and procedures for effective and efficient acquisition, cataloging, processing, circulation, and maintaining equipment and resources to ensure equitable access;
• Development, implementation and evaluation of library media programs to meet educational goals including management of library personnel, resources and facilities;
• Utilization of current and emergent technologies in all phases of school library media programs; and
• Field experience that includes instruction and management. This experience must be completed in a school library media center.

Graduate programs that provide school librarianship education are free to articulate how these requirements are translated into a coherent set of courses. Graduate providers submit detailed documentation on how their programs meet these requirements, and receive approval from the Department of Education to operate a formal program. This approval ensures that on completion of the program, graduates have automatic endorsement by the Department of Education, and Rutgers submits the required documentation on behalf of graduating students.

At Rutgers University, the requirements outlined in the New Jersey Department of Education code are articulated through the following courses shown in Table 1, which have been approved as meeting the state requirements.

Table 1: School Library Specialization in the MLIS, Rutgers University

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Description and Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Information Behavior</td>
<td>This course examines theories of information behaviors and the study of the information behaviors of people in diverse contexts, based on existing research-based literature. SL students can specialize in education context, and tailor study to specialized groups such as teachers, elementary school students, urban teens, special needs students.</td>
</tr>
<tr>
<td>Learning Theory, Media &amp; Curriculum</td>
<td>This course focuses on the structure and design of school library programs by examining constructivist learning theories, research that that informs instruction, inquiry-based pedagogy, curriculum standards, as well as current trends in information technology, outcomes based education and evidence-based practice. The focus is Guided Inquiry and the design of team-based instruction integrating NJ curriculum standards,</td>
</tr>
<tr>
<td>Course</td>
<td>Description</td>
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<td>--------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Principles of Searching</strong></td>
<td>This course focuses on the study the human-human and human-computer interaction as relevant to effective searching of contemporary information resources on behalf of users seeking information. The course enables SL students to design...</td>
</tr>
<tr>
<td><strong>Cataloguing and Classification</strong></td>
<td>This course focuses on the theories, systems, and practices of cataloging and classification. This includes: AACR2R, MARC21 format, Dublin Core Metadata Set, Dewey Decimal and Library of Congress Classifications, and Library of Congress Subject Headings.</td>
</tr>
<tr>
<td><strong>Reference Sources &amp; Services</strong></td>
<td>This course focuses on the full range of information resources studied and used in applied contexts, placing emphasis on access to information through reference tools and the use of information by learners. Emphasis placed on research tools, databases, information services, policy development, digital curation and resource evaluation.</td>
</tr>
<tr>
<td><strong>Materials for Children</strong></td>
<td>This course focuses on the examination and evaluation of both print and digital materials for children, birth to age twelve. Emphasis is on literary and artistic interpretations of picture books and other visual media, including the World Wide Web.</td>
</tr>
<tr>
<td><strong>Materials for Young Adults</strong></td>
<td>This course focuses on the evaluation and selection of materials based on literary criteria and the biological, sociocultural, psychological, and developmental characteristics of young adults. Emphasis is placed on gender-fair and multicultural materials and the attitudes, interests, problems, and opportunities of young adults in contemporary society.</td>
</tr>
<tr>
<td><strong>Information Technology for Libraries and Information Agencies</strong></td>
<td>This course introduces students to key concepts in Web Technologies (xHTML, CSS), Web Programming (JavaScript, PHP, Python) and Data Management (XML, MySQL). Students also learn how to use and evaluate Web Services, Social Software and Open Source Software tools. Students develop applications targeted to their area of professional practice, particularly developing school libraries as digital libraries.</td>
</tr>
<tr>
<td><strong>Managing School Library Programs</strong></td>
<td>This course examines the management of school library programs, including instruction, collection development and access, staffing, facilities, and budgeting and advocacy, using a case study approach to strategic planning and needs assessment. The theoretical strand provides background in management theory as it relates to school libraries.</td>
</tr>
<tr>
<td><strong>Field Experience for School Libraries</strong></td>
<td>This course requires a minimum of 150 hours of supervised professional work in a school library. Students are expected to design, implement and evaluate a Guided Inquiry instructional unit as part of their experience.</td>
</tr>
<tr>
<td><strong>Multimedia Production</strong></td>
<td>This course focuses on the design and production of integrated media resources for libraries, media centers, and information systems and other informational applications. It examines and critiques current uses of new media and provides skills in user-centered multimedia design, and developing of libraries as vibrant digital repositories.</td>
</tr>
</tbody>
</table>

**Elective Courses**
Students can choose one or more elective courses made available to all MLIS students

- Designing User-Centered Services
- Understanding, Designing, and Building Social Media
- Children's and Youth Services
- Planning Outreach Services
- Social History of Children's Literature
- Gender and Culture in Children's Picture Books
- Reading Interests of Adults
- Information Visualization and Presentation
- Research Methods
- Digital Libraries
- Collection Development

All school library certification courses are delivered in both on-campus and online modes. The courses “Learning Theory, Media and Curriculum”, and “Managing School Library Programs” are the only courses directly targeted to SL students. In all other courses, SL students are integrated with other library specializations, and assessment tasks are tailored to enable students to situate their learning within the specialized context, such as school libraries. At the same time, SL students situate their specialized context within the broader spectrum of library and information agencies, building stronger networks and interconnections with a range of information services which can support their roles.

While the majority of our students come into the School Librarianship program with NJ teacher certification, prospective school librarians who do not have teacher certification are expected to also complete a minimum of 3 formal semester courses in educational theory, curriculum design and integration, teaching methodology, student/learning development, and behavior management. Following completion of their certification as school librarians, once in the workplace, school librarians must also complete a year-long school-based residency program in a school library, under the supervision of a school administrator, principal or district school library supervisor. This supervised residency includes professional experiences in the delivery of instruction in information literacy skills and the development and coordination of school library media programs and resources. In addition, the residency includes the delivery of instruction in the evaluation, selection, organization, distribution, creation, and utilization of school library media. Upon completion of the year-long residency period, the supervisor completes a comprehensive evaluation report on the candidate’s performance based on the candidate’s ability to complete the job duties pursuant to the code, and recommends issuance of a standard educational services certificate with a SLMS endorsement; or, failing that, addresses a path forward for meeting full certification requirements.

Support services
A number of processes are also in place at Rutgers University to support our school library students during their MLIS studies and to prepare them for professional work as school librarians, and to ensure their employability as dynamic school librarians. These are outlined below.

(1) Responsive curriculum design: We recognize that the educational and technological landscapes are rapidly changing, and there is need to be proactive in course design so
that graduate are on the leading edge of instructional initiatives. For example, the adoption of the Common Core State Standards (CCSS) Initiative in New Jersey opens a core role of school librarians. The CCSS places considerable emphasis on evaluation and engagement with information texts across multiple media, engaging with strong and thorough textual evidence to support analysis, analyzing and synthesizing multiple interpretations, writing arguments to support claims with clear reasons and relevant evidence, using technology tools to produce and publish writing and other forms of idea representation and showing how themes interact and build on one another to produce a complex account. Within months of the NJ department of Education announcing its involvement in CCSS, we were able to mount an elective course titled: “Nonfiction for the Common Core” to develop SL capabilities in engaging with the Common Core initiative, and to situate the role of the school librarian as an integral part of the CCSS rollout.

(2) Connecting professional education to practice: Through a series of professional Colloquiums lead by leading practitioners, students engage in lectures, presentations and discussions that highlight current and recurring issues. Over the last couple of years, these have included themes such as digital citizenship, building social capital, digital curation, publishing trends, copyright, and information policy. These are typically held on campus, with digital conferencing for online students to actively participate.

(3) RASL: Rutgers Association of School Librarians. This student-led association has monthly meetings bringing in leading school librarians to provide hands-on advice, for example, negotiating the job market, interviewing in schools, managing the first 6 months on the job; building community networks; developing leadership capacity, dealing with district policies and procedures, building and maintaining collections, and the like.

(4) Student Advising: all students are assigned an individual academic adviser; dedicated administrative staff in the school track their program progress and file certification requirements with the New Jersey Department of Education.

(5) Online help support 24/7 via phone or web: Students in the online program have 24/7 technical support when they encounter technical problems such as access to course shells, dropboxes, certain areas of courses not viewable.

(6) Scholarship support: A series of scholarships and endowments are available exclusively to school library students to provide financial support for their studies. Depending on the donor specifications, these are based on both financial need and academic progress.

(7) Field experience: As part of their state certification requirement, all SL students must undertake 150 hours of professional field experience in a school, under the direct supervision of a certified school librarian. A dedicated Field Experience Coordinator works individually with all SL students to guide their choice of placement, negotiate district policies, facilitate the required government background checks, and evaluate student progress with the field experience.

(8) CiSSL: The Center for International Scholarship in School Libraries provides financial support for some SL students to work as administrative assistants to CiSSL
scholars. CiSSL also runs events for the professional community, and students play a role in the organization and operation of these events.

(9) NJASL: New Jersey Association of School Librarianship provides highly discounted annual memberships for the association to Rutgers SL students ($25 per year), and awards an annual scholarship award to support conference attendance and to work as trainee conference leaders.

(10) Portfolio Development: All MLIS students complete an ePortfolio Capstone, and SL students, working with their academic advisor, develop an ePortfolio showcasing their academic accomplishments as well as build a professional ePortfolio focusing on career goals and objectives using a range of digital tools, with examples and evidences of initiatives and competencies.

(11) Career Fair. The School of Communication & Information hosts an annual Careers Fair, involving teams of leading professionals from all of the LIS sectors. These teams review individual students’ resumes and ePortfolios and provide panel discussions on engaging with the job market.

(12) Careers Portal: Schools and districts across New Jersey recognized Rutgers a leader in the provision of SL education, and over the years, employment opportunities are fed into the Rutgers Careers Portal and positions and other opportunities are directly advertised to students from the MLIS listerv.

(13) Program Associates: This is a formal advisory group that meets twice-yearly to provide insights, advice and feedback on the MLIS program. The President of the New Jersey Association of School Librarians is a member of this committee.

In summary, the processes in place to help Master of Library and Information Science (MLIS) students at Rutgers University meet the education requirements for being a school librarian in New Jersey are a coordinated and interconnected set of program, system and professional dynamics. These involve the New Jersey Department of Education which sets the knowledge and skills requirements for state certification as a school librarian, the program specialization at Rutgers University and its ongoing revision and development to be abreast of key educational developments and initiatives, the support services provided in multiple ways to ensure timely completion of the MLIS and to track students’ progress; and professional services provided to enable a strong transition for masters student to leading school library professional.

References
Gaver, M. (1958). Every child needs a school library. Chicago, ALA.

Biographical note
Dr Ross Todd is associate professor in the School of Communication and Information at Rutgers University. He has responsibility for the school library specialization in the school’s MLIS program. He is Director of the Center for International Scholarship in School Libraries (CiSSL), at Rutgers University. His scholarly work primarily focuses on understanding how children learn and build new knowledge from information; how school librarians and classroom teachers can more effectively empower student learning; and how the development of information and critical literacies through guided
inquiry and constructivist learning approaches lead to deep knowledge and deep understanding.
An Exploration of Video Game Construction and Student Learning

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Abstract

Video game construction in school environments is an emerging field of study. The National Media Consortium (NMC) suggests that playing and designing video games will become an important use of technology for kindergarten to grade twelve environments in the next two to three years. Researchers are beginning to suggest that constructing video games has the potential to transform the learner (Kafai, Ching & Marshall, 1997; Kafai & Ching, 2001; Peppler & Kafai, 2007; Salen, 2007; Squire, 2006), through higher-level thinking (Salen, 2007), analytic and conceptual thinking (Clark & Sheridan, 2010), reflection and evaluation (Dickey, 2006) and a context to learn about and with technology (Kafai, Ching & Marshall, 1997). This literature review will further illuminate the research surrounding video game construction and some of the potential roadblocks that might exist for educators looking to integrate these technologies into the school environment.

Keywords: Video game construction, constructionism, technology integration, maker movement, 21st century learning

The Changing Winds of Technology Integration

Today is a windy day. The aspens in my backyard sway to and fro as the winds pound their leaves and shake their branches. It is an alluring sight to watch these trees tremble from the chilly winds that traverse through their leaves, leaving an identifiable difference on their majestic presence. In watching these gusting winds and awaiting the forthcoming storm that only the wind can beckon, I wonder about the changing winds that are metaphorically situated in our own lives. Change seems to be a rampant entity in how we comprise our lives in the 21st century. Although there are many gusting winds that traverse this change, digital technologies seem to be one of more forceful entities that have altered the very fabric of our lives. Although some may question the origin of this force, whether it is bred from the very existence of digital technology or directly correlated with the demand of the user, the force of this change is unequivocal.

In digging deeper into the rampant change associated with digital technologies, there is no question that school environments have weathered an insurmountable amount of change. In fact, some have identified technology integration into school environments as a wicked problem (Koehler & Mishra, 2008). Rittel and Webber (1973) identify a wicked problem as one that is potentially impossible to solve, incredibly complex and if a solution is found, it is likely that it will lead to other problems. The historical narratives that echo throughout the halls of many schools would further illuminate this wicked
problem, whereas technologies such as B.F. Skinners teaching machine introduced in the late 1950s or the newly introduced interactive whiteboard have struggled to become transformative entities in the classroom.

The National Media Consortium (NMC) also reaffirms the difficulties associated with digital technologies in both K-12 and higher education settings. The NMC publishes a yearly report entitled, the Horizon Report, which identifies and explores the key trends, challenges and important developments that are likely to transpire over the next five years regarding technology integration. Interestingly, the 2014 edition of the K-12 report identifies the continued relevancy of formal education as one particular wicked problem. This report suggests that “stakeholders and administrators might seriously consider what schools can provide that cannot be replicated by other sources” (NMC, 2014, p. 30).

The NMC suggests that soft skills, such as work ethic, a sense of grit, and social skills need to become a more recognized and pivotal component of formal education. As a wicked problem, the complexity associated with maintaining the relevancy of formal education is staggering, but the Horizon Report also illuminates technologies that might support this transition.

The NMC identifies video games and gamification as one important development that will likely impact the K-12 learning environment in the next two to three years. In fact, there is affirmative research that suggests both playing and constructing video games can facilitate a transformative learning experience for students, in which they achieve higher-level thinking (Salen, 2007), analytic and conceptual thinking (Clark & Sheridan, 2010), reflection and evaluation (Dickey, 2006) and a context to learn about and with technology (Kafai, Ching & Marshall, 1997). When considering that for over 80% of students, video games play an integral role in their everyday lives (Beavis, Apperley, Bradford, O’Mara & Walsh, 2009), it seems imperative that students have the opportunity to play and construct video games at school, notwithstanding that these video games also might respond to the wicked problem associated with maintaining the relevancy of formal education.

The purpose of this paper is situated in the NMC’s outwardly perspective regarding the potential role video game construction offers to the 21st century learner. This paper will explore the research that has emerged regarding video game construction and the potential merit it serves to the learner and the school environment.

The Origins of Video Game Construction

The maker movement or maker spaces have become an emerging trend in schools and libraries as a viable and promising application of digital technologies. Certainly video game construction is situated within this maker movement, which can be closely attributed to the work of Seymour Papert (1980) and his seminal research surrounding LOGO programming and constructionism. Papert came to understand that children think a great deal about their thinking, and “we can provide them materials to help them do it better” (Papert, 1980, p. 145). Papert (1980) understood that the computer allows, or “obliges the child to externalize intuitive expectations” and “computational ideas can be taken up as materials for the work of modeling intuitive knowledge” (p. 145).

In applying these maker technologies, children come to use them in ways that can differ from more behaviorist technologies, such as recent applications of the iPad or the interactive whiteboard. In fact, these constructionist technologies facilitate a tinkering or
bricolage experience, where the object plays a central role for the bricoleur, as “they are constantly musing over objects, engaged precisely with what is not themselves, in order to see what possibilities the objects have to offer” (Crotty, 1998, p. 50). For students immersed in video game construction, bricolage enables gamers to isolate and correct the bugs that keep the game from working, and consequently level up in the video game through this, “use what you got, improvise, and make do” (Papert, 1993, p. 144) philosophy.

The maker movement and the application of a constructionist learning paradigm begins to respond to some of the issues the NMC identifies in the Horizon Report. Providing students with a hands-on, learning by doing approach not only allows them to further formulate their ideas through authentic and rigorous learning experiences, but it also facilitates the application of their soft skills. While children are constructing a video game, it seems apparent that they would need to collaborate with others, organize their ideas and put forth a considerable amount of effort to create a successful game. Jenkins (2006) connects with the maker movement, suggesting digital learners demand a more participatory experience that allows them to share, modify and construct new perceptions of the world through the use of varying technologies.

A participatory culture has relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one’s creations, and some type of informal mentorship whereby what is known by the most experienced is passed along to novices. A participatory culture is also one in which members believe their contributions matter, and feel some degree of social connection with another. (Jenkins, 2006, p. 3)

**Constructionism in the Participatory Culture**

The Computer Clubhouse (Kafai et al., 2009) is an excellent, living example of students immersed in video game construction. This clubhouse is an after school program that facilitates game construction experiences for thousands of adolescents around the world, while meeting the creative interests of adolescents. The Computer Clubhouse not only demonstrates the interest adolescents have regarding video game construction, but also the potential merit game construction has for the educational community. In fact, Kafai and Ching (2001), Peppler and Kafai (2007), Prensky (2007), Salen (2007) and Squire (2006) question if the play experience derived from playing video games is enough to meet the participatory needs of 21st century learners. Peppler and Kafai (2007) suggest the old “sender-receiver model” (p. 151) does not support the production and design demands of students.

Creative production, or learning-by-doing, is in many regards at the epicenter of the participatory culture. Peppler and Kafai (2007) present three key arguments for creative production in school environments.

1. Creative production can be seen as a new emphasis on critical writing of texts, broadly defined as written texts, software programs, media images, oral discussion or other media objects.
2. Youth need to move beyond participation via blogging and game playing to create their own video games, media art or graphical user interfaces.
3. Having an audience motivates youth to produce creative work. (pp. 151-152)
Modern, digital technologies such as playing video games offer a wide range of possibilities for learners; however learners must also be equipped with experiences that facilitate some level of production and modification. Squire (2008) would attest, “the focus should be less on content and more on designing experiences to simulate new ways of thinking, acting and being in the world” (pp. 14-15). Student-based video game construction is one potential response to meeting the needs of the participatory culture.

The Potential of Video Game Construction

Although Papert (1980) began his work with LOGO programming well over a half a century ago, his philosophy of constructionism has only begun to be fully recognized in education and research. Salen (2007) found game making to be well suited to encouraging “meta-level reflection on the skills and processes that designer-players use in building such systems, be the games or communities of practice” (p. 319). She also found that programs such as Scratch teach “procedural thinking, problem solving and logic by learning to program” (Salen, 2007, p. 303). Clark and Sheridan (2010) further explore the cognitive benefits of game construction, “as designing games involves analytic and conceptual thinking and problem solving in addition to the traditional skills involved” (p. 127). Furthermore, Kafai and Ching (2001) found student-based designed software “fosters student experiences of science questions and ideas in a concrete computational artifact” (p. 324).

Gaydos and Squire (2012) suggest that in most school activities “one is not encouraged to express difficulty, in game-based learning spaces, acknowledging challenges can be a sign of expertise” (p. 836). Gee (2007) further identifies that good games are in fact pleasantly frustrating, “which is at the outer edge but within their ‘regime of competence.’ That these challenges feel hard, but doable” (p. 36).

Beyond the cognitive benefits of student-based game construction, Salen (2007) found that student designed games facilitate a greater degree of risk taking and learning in low risk settings. Robertson and Good (2005) write about the positive impact student-based game design has on written literacy, “creating stories in a non-textual medium can act as a bridge to written literacy” (p. 44). Dickey (2006) further highlights the benefits of game design, as it facilitates a positive narrative writing experience that supports reflection, evaluation, illustration, exemplification and inquiry. This non-traditional narrative experience not only provides “insight into how and why carrying the narrative through an activity might enhance learning” but also “how narrative may be interwoven to provide motivation and cognitive scaffolding” (Dickey, 2006, p. 257). Dickey (2006) further elaborates that game design is one promising model that demonstrates how to develop an interactive learning environment.

Kafai et al., (1997) illustrate the significance of student-based game design through “a context to learn about and with technology” (p. 122). Notably, student-based game design has the potential to offer a more dynamic epistemic frame/projective stance, or an island of expertise (Shaffer, 2006) as the student is not only playing a game but also developing an expertise of the content, experiencing the role of game designer, and developing an understanding of the technology. Apperley and Beavis (2011) found the process of game design “allows the student to experience the negotiation between their desired performance for the game and the technical affordances available to them” (p. 138). This negotiation allows students to understand diegetic actions (performed by the
hardware and software) and non-diegetic actions (outside the game world), in which what they have control over, and what is a controlled entity in the game world. Research surrounding student-based game design has emerged in a relatively positive light, however some are hesitant regarding the complexity and purpose it serves to the student learner.

Prensky (2008) notes that game design is a difficult undertaking. He cites Will Wright, the creator of *The Sims* and *Spore* who notes, “creating a good game is hard enough; creating one based on educational content is even harder” (p. 1009). Lim (2008) further suggests the varying issues that can arise from incorporating game design into the classroom.

For example, due to a lack of time, inflexible time-table, and a highly structured, discipline-specific curriculum of the school, a computer game may be introduced for an hour on Monday, students may be allowed to explore the features of the game for an hour on Wednesday, they may get to play the game for an hour on Friday, and they are expected to reflect and discuss about the game the following Monday. (Lim, 2008, p. 1002)

Although Lim (2008) questions if it is indeed possible for students to construct a video game, the research community is fairly certain that technology and student ability are well versed in game construction (Baytak & Land, 2011; Kafai et al., 1997; Kafai & Ching, 2001; Papert, 1980, 1991; Peppler & Kafai, 2007; Salen, 2007; Squire, 2006).

**Potential Roadblocks for Video Game Construction**

The NMC clearly notes that digital technologies are exceptionally difficult to integrate into the classroom, as both the teacher and student are characterized by different experiences and perceptions. Interpreting and understanding how these digital technologies can be used in the classroom can place a number of demands on the teacher (Borko, Whitcomb & Liston, 2009; Doering, Scharber & Veletsianos, 2009; Koehler & Mishra, 2008, 2009). Part of these demands resides in the different goals, objectives and beliefs held by teachers (Koehler & Mishra, 2008). Certainly, constructionism and maker technologies present a distinct division of perspective, as many teachers are framed through a more behavioristic learning tradition, while digital learners expect a more open-ended, participatory experience. For Papert (1993) he suggests that in a traditional learning environment, the teacher is the only active subject in the classroom, “as the teacher is in control and is therefore the one who needs skill; the learner simply has to obey instructions” (p. 83).

Niess et al. (2009) suggest the “major limitations of computer use in the coming decade are likely to be less a result of technological limitation than a result of limited human imagination and the constraints of old habits and social structure” (p. 6). Functional fixedness (German & Barrett, 2005) represents one explanation regarding the restraints digital technologies and the perceived purpose they serve. Niess et al. (2009) emphasize this point through the interactions a group of math teachers experienced with a graphing calculator. They found their fixed, preconceived knowledge strongly regulated the use of the graphing calculator, as they primarily used it for “demonstration, verification and drill and practice techniques” (p. 6). Although the graphing calculator offers far greater potential to the learner beyond drill and practice experiences, as do most digital technologies, it is often used in ways that reflect the basic constructs of traditional technologies.
Kynigos (2004) would further attest to the division of understanding through the introduction of black box, white box technology. Black box represents a prefabricated closed system artifact while white box represents a transparent, modifiable artifact. Niess et al. (2007) research surrounding the graphing calculator creates a strong correlation to a black box learning system, whereas digital learners generally demand a white box learning experience. Rice (2007) identifies that the release of classroom control and classroom structure is one of the main factors that restrict teachers from integrating white box technologies into the classroom.

Cuban, Kirkpatrick and Peck (2001) identify a high access, low use paradigm as one potential response to the problem of digital technology integration. Cuban et al. (2001) discuss a wide range of factors, including the rigid time structure found in the classroom, the defects associated with technology use, and the slow revolution that is often associated with educational technology implementation. Although each factor explains the stagnant development of digital technologies, the explanation surrounding the slow revolution seems to be the most poignant.

This explanation is anchored in the notion of lag time between the invention of a new technology and the adoption of innovations, and the slow spread of its virtues through the general population. Individuals and companies need decades to learn how to use and manage the new technology. (Cuban et al., 2001, p. 826)

This slow revolution provides two important indicators. First, black box learning systems establish a more congruent match between educators and their pedagogy. And second, educators are beginning to transition their practice from instructionist/behaviorist to constructionist, which means digital technologies have the potential to be a more congruent representation of classroom practice. As white box learning and a more aligned presence of digital technologies seems to be an imminent possibility in the near future, there is no question that video games “offers an enormous potential for their learning, both as children and as adults. (Prensky, 2007, p. 16)

Forthcoming Research

Video game construction programs continue to evolve into more accessible artifacts. In fact for some young gamers, they are able to program a video game before they can decode traditional text. Disney has identified the popularity of game construction and has consequently developed a relatively new program that allows young gamers to actively play and construct games with relative ease. The video game is called, Infinity, and it hosts a toy box component in which the gamers have the opportunity to use “landscapes, buildings, vehicles, characters and other objects from the Disney universe” (Schmidt, 2013). In essence, young gamers can reconstruct the Disney worlds they so aptly understand, while building and sharing with their virtual friends.

The Infinity game program has become a popular artifact for many young gamers, whereas it has sold over 3 million copies in less than a year (Handrahan, 2014). In commulating the popularity of this program and the little research that has explored the experiences of young gamers in designing and programming video games, it is my intent to further research the experiences of young gamers interacting with the Infinity game program.
This forthcoming research project will be framed through the following questions: How do young gamers experience the *Infinity* video game program? How do they collaborate with each other? What forms of video games do they construct? How do they level-up and have an epic win in their own game world? How do these experiences inform school library programs and the role of the teacher-librarian? How can these game construction programs be integrated into school library programs?

This research project will begin to identity how these programs can be integrated into school library spaces, particularly for the elementary students. Integrating video game construction into the school library or classroom may further support teachers as they respond to the wicked problem of technology integration. Video game construction seems to respond to the digital needs of students while effectively integrating the use technology into learning spaces.

References


**Biographical Note**

Kandise Salerno is a PhD student at the University of Alberta, exploring the potential role video game construction programs have in school environments. She is also a technology coach with Edmonton Catholic Schools and collaborates with group of schools in Norway in exploring project based learning and educational technologies. She initiated one particular project, Oppfinnermesse i Nes which continues to play an important role in the community.
Leveling-Up Your Pedagogy: Understanding Video Game Construction in the School Library

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Abstract
As a teacher and technology coach I have experienced firsthand the wonder of students playing and constructing video games, as games facilitate incredibly good learning experiences (Egenfeldt-Nielsen, Smith, & Tosca, 2012; Papert, 1980; Salen, 2007; Shaffer, 2006; Squire, 2006, 2011). Student based game construction has the potential to transform the learner and further meet the participatory demands of 21st century learning. This paper will provide teacher-librarians with a detailed account of my own experiences with video game construction in school environments. As a guiding framework, both Miller, Shell, Khandaker and Soh’s (2010) input-process-outcome game cycle and Koehler and Mishra’s (2008; 2009) Technological, Pedagogical and Content Knowledge (TPACK) framework will be applied to support this video game construction exploration.

Keywords: Video games, technology, technology integration, pedagogy, maker movement

Gaming in the Classroom
As an educator and technology coach concerned about the potential of digital technologies in learning environments, video game construction represents the most immersive and meaningful use of technology that I have ever experienced. The potential of video game construction is further enhanced when compared to the present offering of video games located in today’s classrooms. In fact, most educational video games, such as Math Blaster or BrainPOP continue to facilitate a relatively poor learning experience (Chee & Tan, 2012; Egenfeldt-Nielsen, 2007; Egenfeldt-Nielsen et al., 2012; Foster, 2008; Gaydos & Squire, 2012; Gee 2005, 2007a; Rice, 2007). The problem lies with perception, whereas educational video games continue to be perceived as teaching machines, devices that produce a drill and practice or more aptly identified as a drill and kill experience.

Video game construction represents a contextually different kind of experience, whereas students learn and build through a constructionist (Papert, 1980), learning by doing experience. This gaming experience generally produces higher-level thinking (Salen, 2007), analytic and conceptual thinking (Clark & Sheridan, 2010), reflection and evaluation (Dickey, 2006) and a context to learn about and with technology (Kafai, Ching & Marshall, 1997). Most educational video games such as Math Blaster struggle to move beyond a behavioristic
experience that is framed through simply shooting down numbers to solve simple algorithms. In fact, for many children they become disengaged when playing educational video games, because they are vastly different from the games they play at home or at the arcade. In fact, most of the games located at the local video game store produce better learning experiences as compared to the games that are located at school (Gee, 2005, 2007a; Egenfeldt-Nielsen, Smith, Tosca, 2012; McGonigal, 2011; Papert, 1980; Prensky, 2007; Salen & Zimmerman, 2004; Shaffer, 2006; Squire, 2011).

By identifying the potential deficiencies that are situated in educational video games, it seems imperative that educators become orientated with video game construction programs to facilitate a shift in focus. This paper will present one perspective regarding video game construction and how it was integrated into a school environment. Resources and pedagogical application will be identified throughout.

A Teacher Immersed in Video Game Construction
My first introduction with video game construction was through a collaborative project with the Center for Mathematics, Science and Technology Education (CMASTE) and a local junior high school. In working with three grade seven teachers and their classes we developed a video game construction project centered on the Canadian fur trade (grade seven social studies curricular outcome). Certainly this project presented some challenges, as it was different from the more traditional pedagogical approaches often used to teach the Canadian fur trade. The students, however, were not only highly motivated and engaged in the design project, they also achieved a comprehensive understanding of the topic through the multiple narratives they constructed in the game. Through this project, we came to understand that game construction presents multiple paths of understanding that allows students to understand the curricular topic through multiple lenses, while also understanding the geography and time period of the Canadian fur trade.

Although we provided about eight hours to complete this student-based game construction project, many of the students spent over 100 hours of their own time, building and adding to their video game. In essence they were immersed in the curricular topic over many hours, which means their experiences reciprocally established an in-depth and authentic understanding of the topic. Interestingly, once the teachers introduced game construction as a viable tool to use for learning, many of the students felt confident to apply game construction to other topics and projects outside the realm of social studies. Some students constructed a video game for a book review language arts project, others created a roller coaster video game in response to a math project and others recreated a particular ecosystem for a science project. These video games and the act of participating in game construction became an immersive part of the school culture.

Additionally, the Faculty of Education at the University of Alberta intuitively developed an undergraduate level course that explores game construction as a pedagogical application for learning. As a guest lecturer for this course, I discuss my own experiences with game construction in middle school environments. To
support this analysis I apply Miller, Shell, Khandaker and Soh’s (2010) input-process-outcome game cycle (figure one), which clarifies the overarching process that is experienced for both the teacher and the student while immersed in game construction. The following represents some of my personal narratives that transpire during game construction.

![Figure 1: Input-Process-Outcome Game Cycle (Miller et al., 2010)](image)

**Input: Instructional Content**
This is perhaps the most difficult stage for those planning to implement video game construction into the school environment, particularly as there is a tight balance between providing a learning by doing experience, while still meeting the content demands of the school curricula. To develop a sense of clarity regarding the integration of video game construction into the learning environment, I utilize TPACK (Koehler & Mishra, 2008; 2009), a technology framework that suggests a balance between technology, pedagogy and content knowledge. As seen in figure two, each of the three knowledge forms is in balance with each other, suggesting they must work together when designing a 21st century lesson. Often digital technologies represent the driving force behind the choices made in the classroom, whereas the pedagogical and content applications become secondary elements. However, TPACK realigns the importance and balance of all three knowledge forms, and by doing so, the integration of the technology will be more purposeful and more aligned with the required content.
Figure 2: Technological Pedagogical Content Knowledge (TPACK) Framework

In applying TPACK to video game construction, generally the first choice is to select the video game construction software. Over the past few years a variety of choices have been made available, and as an educator my two favorite choices are Scratch and Kodu. Scratch (figure three) is a simple game authoring tool that introduces students to the basics of computer language, whereas they are provided building blocks in a drag and drop format that builds a game through a cause and effect relationship. Kodu (figure four) is a relatively new, real-time 3D gaming environment, which was formally known as Boku. The game program can run on either a Windows operating system or an Xbox console. MacLaurin (2011) suggests that Kodu “seeks to lower the barrier of entry for new programmers by presenting a radically simplified programming model which nevertheless has significant expressive power” (p. 241). The program uses a graphics-based coding selection, in which gamers select certain images from the wheel to perform certain tasks in the game. Both programs are relatively easy to use, easily accessible and an excellent tool to introduce game construction into the classroom.
In considering the second knowledge form of TPACK, it is wise to identify an outcome that has the flexibility to extend into other content areas and lends well to project based learning. In working with a group of grade seven social studies teachers, we purposely choose the Canadian fur trade as the content area, particularly as the children would have the freedom to construct a narrative about their interpretation of the topic. We also realized that their game could potentially continue into subsequent levels, by retelling other historical aspects of Canadian history. Not only did this choice of curricula allow the students to level-up in their game, but it also allowed for a cross collaboration between subject areas. We were able to have the Language Arts teacher become involved as the narratives that were located in the student's game were powerful indicators of a non-linear writing format.
The remaining knowledge form of TPACK, pedagogy is perhaps the most difficult to conceptualize, particularly if video game construction is a relatively foreign entity. Table one represents some guiding questions and potential responses that might help form the pedagogy of the video game construction unit.

Table 1: Questions and Responses for Instructional Content

<table>
<thead>
<tr>
<th>Question</th>
<th>Potential Response</th>
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<tr>
<td>What teaching takes place before, during and after the game construction project?</td>
<td>I have done this both through front loading the content, with the continued suggestion to the students that they would be designing a video game at the end of the unit. I have also gradually released the information to the students, where I taught a little, and they designed a little.</td>
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<tr>
<td>What is your time frame?</td>
<td>This depends on how you will integrate game construction for the students. I have done gaming days, where the students are provided the entire day to build their video game. So after about six weeks of learning the content, we provided one or two gaming days to complete their entire game. Alternatively, the students would be provided two hours at a time to continue to build their game throughout the unit. Providing less than an hour or two at a time is difficult, as it doesn’t allow the students think deeply about their game.</td>
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<tr>
<td>Where is the game construction going to take place?</td>
<td>I also like an expansive place for the students to build, where there is a place for the students to spread out their planning materials such as maps, characters descriptions, stories, and research. Often this space is in the computer lab or the school library.</td>
</tr>
<tr>
<td>How will you communicate this project to parents and the community, particularly those who are concerned?</td>
<td>Depending on the school community, a letter describing the project could go home, or a parent night that describes the project to the parent community.</td>
</tr>
<tr>
<td>How do you plan on grouping the students?</td>
<td>I always like to group the students, usually no less than two but no more than three. Creating groups with more than three students generally makes one of the students become disengaged from the process, as it is</td>
</tr>
</tbody>
</table>
difficult to fit more than three students around a computer. In addition, depending upon the school community and students, it is good to have a gamer in each group, as they understand the overarching narrative located in a game and will be able to help the rest of the group in the construction process.

In applying TPACK to the initial input stage of video game construction, it becomes clear some of the essential components that need to be considered. Please see appendix one to view an outline of a game construction unit.

**Input: Game Characteristics**

Video game construction demands a different kind of narrative experience for students to consider, particularly as it is a non-linear representation of a story. For some students who play games on a regular basis, they will often have an internalized understanding of the rules and characteristics of a video game. But, for other students, video games might be a foreign artifact. Consider how difficult it might be for a student if they were given an assignment to write a comic, but had never seen or read a comic before. The same is true for a student who has never seen or played a video game. Table two represents some questions and responses that might clarify the game characteristics to both teachers and students.

<table>
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<th>Question</th>
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<tr>
<td>What about non-gamers? How will you orientate them to ensure they understand the narrative and mechanics of a video game?</td>
<td>I like to show and play some mini-games to the students, as they are short representations of a video game. We then discuss some of the essential elements that are located in the mini-game. I also provide an exploratory day for the students to become orientated with the game construction program. This way they feel more confident with the program, and also with the basic capabilities located in the game. For example, Kodu has a limited number of characters, which allows students a conceptual understanding of what they are working with when planning the game.</td>
</tr>
<tr>
<td>What is the challenge of the game?</td>
<td>When students are planning the characteristics of their game, they can often forget that there should be some end point to their game. Certainly there</td>
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</table>
are plenty of infinite video games on the market, consider Tetris, a game that continues until you can no longer stack the blocks quick enough. However I think it is important for students to design a finite game, an end point where the gamer knows they have succeeded in the game. As the students are designing their game, you want to provide strategies of how a game can be won, including collecting enough points, getting to a certain point, achieving a certain status, etc.

How will the students prepare for the game experience? Will they need to create a map, Write a narrative? Chart out their ideas?

Although this preparation depends upon how the game construction unit is going to be implemented, such as gaming throughout the unit or gaming at the end of the unit. Regardless, it is helpful for the students to have completed some preliminary work prior to jumping into game construction. I find the most helpful tool is providing a large piece of paper to the students and ask them to create a preliminary map of their game. Here the students will design the overarching flow of their game, the cause and effect relationships that will transpire and the potential rationale for conquering the game. When the students have completed their map, I ask them to walk me through the game. This verbal dialogue often provides the opportunity for the students to debug any initial issues they may have in the game. In addition to the map, I also ask the students to further develop their characters, the relationships that transpire between them, and the potential scenarios that will occur amongst the characters and the world they have constructed.

Please see appendix two to view a planning document of how students might design their video game.

*Process: Game Cycle*
At this point, you have successfully planned a game construction unit. The second phase of Miller et al. (2010) game cycle identifies the act of constructing a video game as the students are generally situated in front of a computer programming and debugging their games. This is perhaps the most exciting phase for both the students and the teacher, as the student’s ideas move from an abstract concept to a concrete representation. As noted earlier, it is best to have a large open space for the students to program, often a computer lab or the school library. When we enter the computer space, we also rebrand it as our arcade, which changes the perception of the students. I also encourage the students to collaborate with each other, ask each other questions and play each other’s games. Although the amount of time that can be used to program varies depending on how complex you would like the game to be, a minimum of six to seven hours is required. Table three represents some questions and responses that might clarify the game cycle.

<table>
<thead>
<tr>
<th>Question</th>
<th>Potential Response</th>
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<tr>
<td>What kind of feedback will be given to the student(s)? (Immediate and brief, delayed brief, immediate elaborative, delayed elaborative).</td>
<td>The only kind of feedback I provide to the students is situated in the content of the game. Does the game make sense? Is there enough description in the game so I can travel from one point to the next? Is there content in the game? Often students become wrapped up in very minute details that have no consequence to the game, such as designing an elaborate castle that has no purpose in the game. As a teacher my role is to reinforce the details of their game, and to play their games throughout the process. However, as for the programming I let the students work through any debugging issues. Generally in most classes there will be a few very knowledgeable students that understand how to program video games and are eager to demonstrate their gaming capabilities. As a class we recognize them as our gaming ninjas and the students request their help when needed. This presents an excellent opportunity for the students to support each other in a very collaborative experience.</td>
</tr>
<tr>
<td>What will be the role of the teacher while the students are building their</td>
<td>Throughout a gaming period, whether it is for an hour or for an entire day, I...</td>
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<tr>
<td>Question</td>
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<tr>
<td>games?</td>
<td>always provide check points for the students. “By the end of our class today you should have your landscape designed.” During the gaming period, I also ask the students to sign up for at least one gaming consultation session. This consultation is a time that I will sit down with the group and discuss their game. I will likely play the game and the students will provide a running a narrative of pieces of information that might be missing or not working. The students appreciate a planned consultation period, because they can get ready for their consultation and have an understanding of what they are going to showcase. During the game construction unit, I also implement play moments where the students will have the opportunity to play each other’s games. After playing the game, I ask the students to provide some constructive feedback about areas of success and areas to work on. These play moments are crucial to ensure the games have purpose and meaning and generally students provide excellent constructive feedback.</td>
</tr>
<tr>
<td>What will you do if the students become off task and/or disengaged?</td>
<td>As in any classroom experience, not all students will enjoy and be motivated to participate in the game construction unit. Although, most students are incredibly engaged and motivated to participate, some find the experience counterintuitive to the more traditional learning experiences they have come to expect. I ask all the students to give gaming a chance, and at times putting a more hesitant student with an enthusiastic gamer helps motivate the process. However, if the student still does not respond to the game construction experience, they can choose to participate in an alternate activity in future gaming units.</td>
</tr>
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</table>
**Outcome: Learning and Assessment**

At this point in the game construction unit, the students have completed their video games or they will continue to work on them outside the context of school. For many students they will find game development to be a revolving process, as they may never feel completely satisfied with their game. Certainly a video game is contextually different from a book report, a math exam or a written narrative, which makes the overall assessment of a video game complex. Table four represents some questions and responses that might clarify this last stage of the game construction cycle.

Table 4: Questions and Responses for Learning and Assessment

<table>
<thead>
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<th>Question</th>
<th>Potential Response</th>
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<tr>
<td>How do you plan on assessing the video game? What will you assess? What would you consider a benchmark of an exceptional game? How will you assign a mark? What is the weight of the mark?</td>
<td>For most teachers, some form of assessment needs to be provided for projects and assignments completed at school. In appendix three you will find a rubric that was created for a game construction unit. You will notice that the content is weighted the most, as this was the overarching goal of the project. It is also important to consider if you want to assess the student’s game construction skills. Certainly if the game is filed with bugs, it might be difficult to assess the game, or simply play the game, but is this a skill that is relevant to the unit? Perhaps a separate ICT outcome that identifies their ability to program might be appropriate.  When I assess the video games, I always ask the students to play the games for me first. The students generally provide a running narrative throughout the game, which is helpful especially is something is not working in the game. I will also play the games independently.</td>
</tr>
<tr>
<td>How will you evaluate the game construction project?</td>
<td>The biggest question once the game construction unit has completed is, did my student learn the content? Certainly, my personal experience would attest to the strong learning experiences derived from game construction, however this will need to be a personal reflection. Student evaluations are an additional feature to further understand what the students...</td>
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enjoyed about the process and what they would change in the future.

| What will you do with the games once they are complete? | Student constructed video games can provide an excellent repository for forthcoming years. Students enjoy playing other students video games, and by doing so they might further understand the content and the basic mechanics of a video game. In addition, there are some excellent game sites where your student’s games can be shared. Kodu has a game lab, where student games can be shared and uploaded for others to play. In addition, if students have to write a final exam, I always encourage them to play each other’s games before the exam to review the material. |

**Conclusion**

As video game construction continues to be introduced into learning spaces, it is important to consider the pedagogy and purpose of the gaming experience. For many students, they have experienced game design at home through programs such as Minecraft or Kerbal Space Program, however there is an additional application when introduced in formal education settings. Without some form of framework or guiding objective, students can easily become disconnected with the content and build a game that is confusing or completely off topic. When students build at home through popular programs such as Minecraft, they have the freedom to construct a game that suits their interests, however when building at school they are required to frame their game to demonstrate their knowledge of the curricula.

To ensure students are able to stay connected with the curricula, the role of the teacher is perhaps more vital than in a more traditional lesson. As 21st century learning indicates, the role of the teacher has shifted from lecturer to facilitator, which stands true for game construction. To ensure success for the students, the teacher is continually travelling around the game arcade supporting and guiding the students to center their game on the content and help them drill deeper into their understanding. Video game construction is often framed as a discovery based learning experience, but discovery learning does not indicate that there is an absence of content or an absence of directive. The teacher plays a significant role in supporting students to conceptualize their game and formulate their thoughts.

As video game construction is comparatively different from more traditional learning applications, it seems imperative that a thoughtful design and application is formulated to ensure it is successful in the learning space. Miller et al. (2010) input-process-outcome game cycle is helpful in exploring the significant features
of game construction, as is Koehler and Mishra’s (2008; 2009) TPACK framework. Video game construction is an incredibly exciting technology, particularly considering the interests 21st century learners. The future of learning has arrived, and it is framed through playing and constructing video games.

References


**Biographical Note**

Kandise Salerno is a PhD student at the University of Alberta, exploring the potential role video game construction programs have in school environments. She is also a technology coach with Edmonton Catholic Schools and collaborates with group of schools in Norway in exploring project based learning and educational technologies. She initiated one particular project, Oppfinnermesse i Nes which continues to play an important role in the community.
Appendix One

Videogame Project #2
The War of 1812

Skills Focus:
Computer Programming, Planning, Storytelling, Critical Thinking, Cooperation and Problem Solving

Project Description
For this project your team will:
• Build a video game world that helps to teach/reinforce grade 7 social studies content covered up to this point in the school year
• Teach/reinforce your interpretation of the War of 1812
• Use Microsoft’s Kodu software.

Remember that we focused on the following key elements of Canadian history up until this point:
1. political competition 2. conflicts 3. The Great Deportation of the Acadians (1755)
10. Act of Union of 1840

You will design a world where the characters from Canadian history interact to develop a story line that covers the 4 key elements listed above and that leads you into, including The War of 1812 and after the war of 1812

Your characters can include the French, British, loyalists, 13 Colonies rebels first nations groups, French colonists, British colonists, monarchs, merchants, different religious groups, Catholics, Jesuits, missionaries, Mother Earth…etc. Your video games should include different cases where cause and effect is illustrated. Here characters may have mental, emotional or physical responses

Remember that Canadian history is a story much like the books you read and the movies you watch. Having said that, remember to include the following elements of a story within your world:

Setting, exposition, beginning, middle, end, problem, solution, climax, conflicts, different types of characters, complications, flashbacks, foreshadowing, etc.

Let’s Get Started
***Part 1 Planning***
In this assignment you are to use Kodu to develop a small game module. Obviously, with real games taking years and millions of dollars I am not expecting a large project, but the Kodu examples should have shown you what is possible with a little bit of time and thought.

You are to produce the following for this assignment:

Plans

Game Proposal Paragraph
• What is the basic idea behind your game, setting, style, what is interesting about your idea? Don’t go into too much detail here – that’s for the other sections. This part is to simply explain the idea not the details.
World and Character Design (1 to 2 pages)
• Where does your game take place? What are the characters (both player and computer controlled) that inhabit your game world? What are the characters’ missions?

Game Script Document (storyboard, write it, mind map, story arch, timeline)
• Outlines the rules and core mechanics.
• Just what does a player do? What are the challenges in the game? What are the actions? How do they relate?

Any other relevant information (0 to 2 pages)
• Anything not covered by the above that you think others needs to know before they play your game.

***All of your plans will be marked out of 10. Plans will be assessed both on its content and its presentation (readability, layout, grammar and spelling, etc).
Think of this as a document selling your game to a potential publisher.
Grading Outline
Insufficient- the document is readable, but has some problems in presentation. It contains material on some, but not all of the areas listed under points 1 to 4 above.
Basic– the document is well presented, with few errors. It contains relevant and informative material on most, but not all of the areas listed.
Proficient– the document is well presented, with few errors. It contains relevant and informative material on all of the areas listed under points 1 to 3 above. As well as simply conveying the information, it has at least some elements that are convincing of worth of funding the idea – that it is, at least in some way, exciting and original
Excellent– in addition to meeting the requirements for a distinction, the whole document provides an exciting introduction to the game and what the designer is trying to achieve – it leaves the reader thinking “wow – I want to fund/play this”. Note the difference between Distinction and High Distinction – for the former at least parts of the document have to convey some excitement to the reader – for the latter the whole document should.

***Part 2 Game Creation***
Create your game!!!
Show us what you can do!

***Part 3 Game Play***
During this time your classmates will play your game and you will play their games!!! For each game that you play, your group will be expected to give other groups 2 stars and a wish.
## Video Game Planning Sheet

### Possible Characters:

<table>
<thead>
<tr>
<th>Character</th>
<th>Group that he/she/they represent</th>
<th>Description</th>
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### Possible Scenarios:

Describe each possible scenario that you come up with in the boxes below.
**Perspectives that could be shown:**

<table>
<thead>
<tr>
<th>CHARACTERS / GROUP</th>
<th>CHARACTER OR GROUP’S PERSPECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>CHARACTERS</td>
<td>DESCRIPTION OF RELATIONSHIP THAT THEY HAVE</td>
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</tbody>
</table>
## Appendix Three

### Assessment for Video Game Project

<table>
<thead>
<tr>
<th>Category</th>
<th>Insufficient (1)</th>
<th>Basic (2)</th>
<th>Proficient (3)</th>
<th>Excellent (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content area concepts X2</strong></td>
<td>Does not include ideas about the subject area or ideas are incorrect</td>
<td>Includes a few ideas about the subject, shows some understanding</td>
<td>Focuses on and understands important concepts about the subject matter</td>
<td>Makes important connections between subject area concepts, shows in-depth understanding</td>
</tr>
<tr>
<td><strong>Project design</strong></td>
<td>Did not try to make own artwork</td>
<td>Project uses artwork of others with some effort to change</td>
<td>Project uses original artwork or reuses imported images creatively</td>
<td>Project artwork and creativity significantly support the content</td>
</tr>
<tr>
<td></td>
<td>No clear purpose of project or organization</td>
<td>Has some sense of purpose and structure</td>
<td>Has clear purpose, makes sense, has structure</td>
<td>Has multiple layers or complex design</td>
</tr>
<tr>
<td></td>
<td>Does not provide a way for other people to interact with program</td>
<td>Includes way for user to interact with program, may need to be clearer or fit program’s purpose better</td>
<td>Includes way for user to interact with program and clear instructions</td>
<td>User interface fits content well, is complex; instructions are well-written and integrated into design</td>
</tr>
<tr>
<td><strong>Programming</strong></td>
<td>Lacks organization and logic</td>
<td>Has some organization and logic</td>
<td>Is organized, logical, and debugged</td>
<td>Is particularly well organized, logical,</td>
</tr>
<tr>
<td></td>
<td>Has several</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td>bugs</td>
<td>and debugged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>__ Student did not</td>
<td>___ May have a couple bugs</td>
<td>___ Student made significant use of the design process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>get involved in</td>
<td></td>
<td>___ Used project time constructively, finished early or added additional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>design process</td>
<td></td>
<td>elements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>___ Did not use</td>
<td></td>
<td>___ Collaborated appropriately</td>
<td></td>
<td></td>
</tr>
<tr>
<td>project time</td>
<td>___ Used project time well sometimes and met some deadlines</td>
<td>___ Found ways to collaborate beyond class structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>well and did not</td>
<td>___ Collaborated at times</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>meet deadlines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>___ Did not</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>collaborate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Investigating Differences Between Male and Female Students’ Perceptions of School Library Learning Environments

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Abstract
Gender as a context within the learning environment is examined through the results of four studies in the past three years where learning environment instruments were used to evaluate the school library. Previous research indicates that male and female students have physiological differences in terms of brain-based learning and cognitive development. Research has also applied an examination of gender differences to reading preferences. The current research extends an examination of gender by asking the question: To what extent do differences between male and female student perceptions of the same school library learning environment occur, and how can these differences be addressed? The results indicate that females generally have higher expectations of their learning environments than do males, and experience less satisfaction with their actual learning environment than males.

Keywords: Learning environments, brain-based learning, cognition, gender

Introduction
Assessment of the school library learning environment equips the teacher librarian with valuable data that may challenge assumptions of how the learning environment is perceived by students. Additionally, the data can be used to correlate dimensions of the school library learning environment with gender differences so that variances in perception between male and female students can be determined and addressed. As we shape learning environments to support and advance student learning, knowledge of these differences could contribute to the development of psychosocial dimensions that address a variety of student needs.

An existing body of research on classroom learning environments, brain based learning, and gender differences supports the current analyses of the school library learning environment in a public school district in North Texas and two international schools in Europe, between 2010 and 2013.

Theoretical Framework
Learning Environment
Grounded on the constructivist point of view, learning environments are individual “constructions” (Tobin & Fraser, 1998, p.626) which are neither independent from, nor external to their participants. Lorsbach and Basolo (1998) state that students and
teachers simultaneously contribute to the creation of their learning environment; they interact within it and individually perceive it. These perceptions reflect individual needs and provide a basis on which to build an understanding of those needs and an opportunity to effect a learning environment that meets those needs.

The field of classroom learning environment research extends internationally over many decades (Goh & Khine, 2002) with a focus on the learning environment as a “social, psychological and pedagogical context in which learning occurs and which affect student achievement and attitudes” (Fraser, 1998a, p. 3). From the foundational work of research on behaviour by Lewin (1936) and Murray (1938) a notable number of evaluation instruments have been developed to investigate the relationship between how individuals respond to their environment and student learning outcomes (Fraser, 1998b). The applicability and validity of these questionnaires to an examination of the classroom learning environment has been firmly established. The range of applications of these instruments includes constructivist classroom environments, teacher interpersonal behaviour in the classroom, the evaluation of educational innovations, and “links between the classroom environment and student cognitive and affective outcomes” (Dorman and Fraser, 2009, p.78).

Assessing how school library participants perceive the socio/psychological aspect of their learning environment has been previously studied (Schultz-Jones & Ledbetter, 2009, 2010a, 2010b; Schultz-Jones, Ledbetter & Turpin, 2012) drawing on the foundation of learning environment research established for the science classroom. These studies demonstrated the applicability of learning environment research to the school library environment in terms of dimensions that align with efforts to provide an inquiry-based learning space. In each of the studies, significant differences were found between what is preferred by students and what is actually occurring. For those dimensions where significant differences occur, this knowledge provided guidance to school librarians and classroom teachers on ways to enhance the interaction between the school library and the classroom, and adjust the school library learning environment through new teaching methods, resources, and interaction with students within the school learning community.

The current research extends the findings of these studies to an examination of gender by asking the question: To what extent do differences between male and female student perceptions of the same school library learning environment occur, and how can these differences be addressed? Research related to cognition and gender differences was considered for support of the current research on gender within the learning environments.

**Brain-Based Learning**

Brain-based learning is an approach to education that is based on scientific research about how the brain learns and includes factors of cognitive development such as how students learn differently as they age and mature socially, emotionally and cognitively. This neuroscience of learning crosses many disciplines, including biology, chemistry, genetics, neurology, psychology, sociology and technology. Approaching learning from the perspective of how the brain operates provides an opportunity to consider the wide variety of influences on this complex organ, the processes that can be adopted to activate and encourage learning, and the context or learning environment that enables learning.
Research now indicates that physical differences between male and female brains may account for behavioral, developmental, and cognitive-processing differences. These include functional differences such as the five senses, activity, and problem solving (Jensen, 2008, p.34). Based on this research, Jensen identifies an array of gender differences, presented in Table 1. Understanding these differences could be important for teachers and librarians as they consider how to engage and challenge learners.

<table>
<thead>
<tr>
<th>Male Strengths</th>
<th>Female Strengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeting skills</td>
<td>Fine motor skills – ability to move fingers rapidly in unison</td>
</tr>
<tr>
<td>Working vocabulary</td>
<td>Computation tests</td>
</tr>
<tr>
<td>Extended focus and concentration</td>
<td>Multitasking</td>
</tr>
<tr>
<td>Mathematical reasoning and problem-solving aptitude</td>
<td>Recalling the position of objects in an array</td>
</tr>
<tr>
<td>Navigation with geometric properties of space</td>
<td>Spelling</td>
</tr>
<tr>
<td>Verbal intelligence</td>
<td>Fluency of word generation</td>
</tr>
<tr>
<td>Habit formation and maintenance</td>
<td>Tasks that require being sensitive to external stimuli (except visual stimuli)</td>
</tr>
<tr>
<td>Most spatial tasks</td>
<td>Remembering landmarks along a route</td>
</tr>
<tr>
<td></td>
<td>Use of verbal memory</td>
</tr>
<tr>
<td></td>
<td>Appreciation of depth and perceptual speed</td>
</tr>
<tr>
<td></td>
<td>Reading body language/facial expressions</td>
</tr>
</tbody>
</table>

Alongside research related to gender differences is research about how people learn. Prominent among these researchers are Caine and Caine (2011) who summarize three key points about learning:

1. The search for meaning occurs through patterning. Every human being is born with a drive to make sense of experience. Simply put, in the real world all human beings (and every living organism) have to engage with their environment as a matter of survival.
2. Cognition is emotional. Among the many factors that influence meaning making is the fact that cognition is affected by emotions.
3. The brain/mind is social. No one is an island, not biologically. Even for people who love to spend most time alone, some aspects of learning are intrinsically social (p.15).

The science of learning continues to inform what we know about each other, our physiology, and how we learn. Sykes (2006) believes that it is the responsibility of teacher librarians to understand the principles emerging from brain research to make “the school library more brain friendly and connect their practice to what works” (p.4).

**Gender and Library Services**

Gender has previously been considered in terms of the library and library services. According to Stauffer (2007, p.402) research has demonstrated that the gender-based differences in reading do not appear until about nine years old. With an historical view, efforts to promote reading along gender lines were related to socializing children into
culturally acceptable roles from the late 1800s through the 1970s. In the 1970s, researchers began questioning what motivated children to read, and gender differences became a prominent focus through the 1990s. However, Stauffer (p.418) suggests that it is an over-simplification to promote a dichotomous view of reading, since: complex causal factors are reduced to simple biology and the effects of ethnicity, socioeconomic status and teaching methods, in particular standardized reading lists and tests, are discounted as boys and girls are stereotyped as "non-readers" and "readers". In addition, research has yet to reveal why some boys read and read well and why some girls do not. Instead, what the research supports as the best method for encouraging all children to read, regardless of gender, is providing "access to a large number and wide range of materials, to allow children free choice in their reading, and to provide an ethnically, sexually, and socially diverse group of adult role models to read" (p.418).

While gender differences in reading achievement are consistently found in national and international assessments, Logan and Johnston, 2010, state that other factors, including cognitive development, may explain gender differences in reading achievement: "within the classroom environment, whilst all children receive the same literacy instruction, differences in attention, interest and preference for different types of classroom activities may mean that boys and girls spend different amounts of time engaged in literacy activities" (p.177). For any type of reading instruction to be effective, children need to be attentive and engaged when learning and for boys, they may require a type of reading instruction that effectively focuses their attention. More research into the cognitive effects of instruction is required since "there is very little research examining the skills underpinning children’s reading development as they learn to read by different methods" (p.184).

Tilley and Callison (2005) also caution against over generalizing the differences between genders. They suggest that while observations have been made that "girls tend to prefer collaboration while boys seem to prefer competition" and "girls tend to be open to options, while boys favor finding a single path when faced with solving online information search problems", "little has been tested to determine best practice to meet these differences when students are involved in student research and inquiry projects" (p.35).

In the Ohio School Library Study, Todd and Kuhlthau (2005) noted gender differences in topic preferences for recreational reading: "Boys appeared to prefer action-oriented topics such as sports, cars, animals, sciences, wars, and space; and girls placed stronger emphasis on the arts and literature, as well as sports and animals" (p.81). This wide range of preferential differences was placed in the context of the diverse information base that school libraries provide to serve a wide variety of personal interests outside immediate curriculum needs.

Agosto, Paone, and Ipock (2007) investigated reasons for teens’ use of libraries and found that there were more similarities between adolescent girl’ and boys’ perceptions and uses of public libraries than differences. The only major gender difference was that girls tended to rate libraries as more useful in helping them with their information needs and valued more what the authors call "female-friendly spaces" (p.399). This responsiveness to needs and provision of a welcoming environment are hallmarks of engaging libraries and complement the dimensions measured in the school library learning environment.
Data Source
The research settings include K-5 public elementary and middle schools from a school district in north Texas (2010-2011), the lower school library setting in an International Baccalaureate (IB) World School in Germany (2010-2012), and the lower and middle school settings in an International Baccalaureate (IB) World School in Russia (2013). Table 2 details the demographic makeup of the schools’ students.

Table 2: Demographic Student Data

<table>
<thead>
<tr>
<th>Location</th>
<th>Year</th>
<th>Grade</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Texas School District</td>
<td>2010/2011</td>
<td>3</td>
<td>73</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>73</td>
<td>116</td>
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<td>5</td>
<td>95</td>
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<tr>
<td></td>
<td></td>
<td>8</td>
<td>134</td>
<td>126</td>
</tr>
<tr>
<td>Germany International School</td>
<td>2010/2011</td>
<td>3</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>14</td>
<td>24</td>
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<td></td>
<td></td>
<td>5</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>2011/2012</td>
<td>3</td>
<td>16</td>
<td>16</td>
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<td></td>
<td>4</td>
<td>16</td>
<td>12</td>
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<tr>
<td></td>
<td></td>
<td>5</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Russia International School</td>
<td>2013</td>
<td>3</td>
<td>8</td>
<td>6</td>
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<td>4</td>
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<td>15</td>
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<td></td>
<td>8</td>
<td>18</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>770</td>
<td>841</td>
</tr>
</tbody>
</table>

Methods
The studies were based on quantitative data derived from the learning environment questionnaires administered to elementary and middle school students in regard to their school library experiences. The How My Library Supports Inquiry (HMLSI) questionnaires were developed to evaluate student perceptions of student learning in an inquiry-based constructivist school library learning environment and have been validated for use as data collection instruments (Schultz-Jones & Ledbetter, 2013).

The questionnaires have two distinct applications: student assessment of the preferred learning environment followed by student assessment of the current (actual) learning environment. They are administered in two sittings. The first questionnaire focuses attention on the preferred learning environment. Then, following a substantial time gap of several weeks, the second administration provides the same set of questions with attention on the actual learning environment.

The lower grade (third, fourth and fifth) students and middle grade (sixth, seventh and eighth) students in the 2010/2011 data collection year received the HMLSI questionnaire that delivered 28 statements with four items in each of the seven climate scales of
Reflection, Librarian Support, Involvement, Investigation, Task Orientation, Cooperation, and Equity. Table 4 provides a description of the seven climate scales for the HMLSI.

<table>
<thead>
<tr>
<th>Scale Name</th>
<th>Items Per Scale</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Librarian Support</td>
<td>4</td>
<td>Degree to which students feel the librarian supports them.</td>
</tr>
<tr>
<td>Investigation</td>
<td>4</td>
<td>Degree to which students are comfortable doing their own research.</td>
</tr>
<tr>
<td>Reflection</td>
<td>4</td>
<td>Degree to which students think about inquiry and the learning process.</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>4</td>
<td>Degree to which students experience difficulty in their learning tasks or understand how to use the library.</td>
</tr>
<tr>
<td>Cooperation</td>
<td>4</td>
<td>Degree to which students feel a sense of comfort working with others in the library.</td>
</tr>
<tr>
<td>Involvement</td>
<td>4</td>
<td>Degree to which students feel a part of the library learning community.</td>
</tr>
<tr>
<td>Equity</td>
<td>4</td>
<td>Degree to which students feel they are treated fairly.</td>
</tr>
</tbody>
</table>

Table 5 provides an example of the questions in two of the seven climate scales.

<table>
<thead>
<tr>
<th>Librarian Support</th>
<th>In my current school library (Actual)</th>
<th>In a perfect school library (Preferred)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The librarian would discuss things with me.</td>
<td>The librarian would talk with me.</td>
<td></td>
</tr>
<tr>
<td>The librarian would be interested in my research questions.</td>
<td>The librarian would be interested in my questions.</td>
<td></td>
</tr>
<tr>
<td>The librarian would move about the library to talk with me.</td>
<td>The librarian would move around the library to talk with me.</td>
<td></td>
</tr>
<tr>
<td>The librarian’s questions would help me to understand what I am looking for.</td>
<td>The librarian’s questions would help me to understand what I am looking for.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investigation</th>
<th>In my current school library (Actual)</th>
<th>In a perfect school library (Preferred)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I investigate questions that puzzle me.</td>
<td>I would be able to ask questions that puzzle me.</td>
<td></td>
</tr>
<tr>
<td>I investigate answers to the teacher’s questions.</td>
<td>I would be able to look for answers to the teacher’s questions.</td>
<td></td>
</tr>
<tr>
<td>I find out answers to questions by doing investigations in the library.</td>
<td>I would be able to find out answers to questions by doing research.</td>
<td></td>
</tr>
<tr>
<td>I solve problems by using answers I found in my own investigations in the library.</td>
<td>I would be able to solve problems by using answers I found in my own research.</td>
<td></td>
</tr>
</tbody>
</table>

During a regularly scheduled class session, the teachers distributed the questionnaires and read the instructions to the students, assuring the students that the answers remain anonymous. Once completed, the questionnaires were collected, sealed in an envelope and delivered to the researchers.

Results
Students provided their perceptions of the perfect School Library (Preferred) and of the current School Library (Actual).

**t-Test Analyses**
Comparison of the means from all students in all studies showed significant differences between their perceptions of their preferred and actual learning environments. To determine if these perceptions were consistent for females and males, the data were analysed by gender in each of the research study years. First the data for each study were analysed using an independent t-test analysis to determine if the means of the two genders are statistically different for each dimension. Then the data for each gender were analysed using a dependent t-test analysis to determine if the means for each dimension are statistically different. Each study produced statistically significant results.

**t-Test Analyses 2010/2011 Texas School District**
For the 2010/2011 study in a north Texas school district elementary students (n = 534) indicated that they would prefer more librarian support, involvement, investigation and cooperation than they are experiencing. The data were next parsed by grade level and gender.

There is a significant difference (independent t-test) when comparing Preferred or Actual for third grade females versus third grade males. Third grade females experienced more equity than the males. There were no significant differences in their preferences. There are significant differences (dependent t-test) when comparing Preferred versus Actual for all males (n = 73) and for all females (n = 92). Third grade females and males wanted more involvement than they are experiencing. Females also wanted more cooperation while males wanted more opportunities for investigation.

Fourth grade females and males indicate a significant difference (independent t-test) when comparing Preferred or Actual. Fourth grade females experienced more investigation, task orientation and equity than the males. The females also preferred more library support than the males. Significant differences (dependent t-test) also exist when comparing Preferred versus Actual for all fourth grade females (n = 116) and for all males (n = 73). Fourth grade females and males wanted more involvement, investigation and cooperation than they were experiencing.

For the fifth grade, there is a significant difference (independent t-test) when comparing Preferred or Actual for females versus males. Fifth grade females preferred more experience with each scale than the males. There were no significant differences (dependent t-test) when comparing Preferred versus Actual for 5th grade males (n = 95). However, significant differences exist (dependent t-test) when comparing Preferred versus Actual for all fifth grade females (n = 85) who wanted more librarian support, involvement, and investigation than they were experiencing. The results for preferences by gender in grades three through five are summarized in Table 6.

| Table 6. Significant Preferences by Gender 2010/2011 Texas Study |
|-------------------------|------------------------------|-------------------------|------------------------------|
| Scale | Grade 3 | | Grade 4 | | Grade 5 |
| | Male | Female | Male | Female | Male | Female |
| Librarian Support | - | - | - | More | - | More |
| Investigation | More | - | More | More | - | More |
| Reflection | - | - | - | - | - | More |
For the 2010/2011 study in a north Texas school district middle school students (n = 692) indicated that they would prefer more reflection, librarian support, involvement, investigation, cooperation and equity than they are experiencing. The data were next parsed by grade level and gender.

There is a significant difference (independent t-test) when comparing Preferred or Actual for 6th grade females versus 6th grade males on the scale of Actual Investigation. Sixth grade females experienced more investigation, and task orientation than the males. There were no significant differences in the preferences of the males and females. There are significant differences (dependent t-test) when comparing Preferred versus Actual for all sixth grade females (n = 100) and when comparing Preferred versus Actual for all males (n = 78). Sixth grade females and males wanted more librarian support, investigation and cooperation than they were experiencing. The males are experiencing less of each of the other scales than they prefer.

With seventh grade there is a significant difference (independent t-test) when comparing Preferred or Actual for 7th grade females versus 7th grade males. Seventh grade females experienced more reflection, investigation, task orientation and equity than the males. Females also preferred more reflection, task orientation and equity than the males. Significant differences (dependent t-test) also exist when comparing Preferred versus Actual for all 7th grade females (n = 127) and when comparing Preferred versus Actual for all males (n = 127). Seventh grade females and males wanted more reflection, involvement, cooperation and equity than they were experiencing. The females are not experiencing as much librarian support, or task orientation as they prefer. The males are experiencing less investigation than they prefer.

In the eighth grade there is a significant difference (independent t-test) when comparing Preferred or Actual for females versus males. Eighth grade females experienced less reflection than the males. Females also preferred more task orientation, cooperation and equity than the males. There are also significant differences (dependent t-test) when comparing Preferred versus Actual for all females (n = 126) and for all males (n = 134). Eighth grade females and males wanted more librarian support than they were experiencing. The females are not experiencing as much reflection, involvement, investigation, task orientation, cooperation or equity as they prefer. The results for preferences by gender in grades six through eight are summarized in Table 7.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade 6</th>
<th>Grade 7</th>
<th>Grade 8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Investigation</td>
<td>More</td>
<td>More</td>
<td>More</td>
</tr>
<tr>
<td>Reflection</td>
<td>More</td>
<td>-</td>
<td>More</td>
</tr>
<tr>
<td>Involvement</td>
<td>More</td>
<td>-</td>
<td>More</td>
</tr>
</tbody>
</table>
**t-Test Analyses 2010/2011 Germany International School**

In the 2010-2011 school year, elementary students (n = 114) indicated that they preferred more involvement and investigation opportunities in their learning environment than they were currently receiving. Due to lower numbers in the individual grade years, the data for each gender were combined and then evaluated using dependent samples t-tests for samples greater than n = 20. When parsed by gender, females in the 2010-2011 school year (n = 64) indicated that they prefer more involvement than they were experiencing while male participants (n = 50) indicated that they prefer more involvement and investigation opportunities. The results for preferences by gender in grades three through five are summarized in Table 8.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Librarian Support</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Investigation</td>
<td>More</td>
<td>-</td>
<td>More</td>
</tr>
<tr>
<td>Reflection</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cooperation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Involvement</td>
<td>More</td>
<td>More</td>
<td>More</td>
</tr>
<tr>
<td>Equity</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**t-Test Analyses 2011/2012 Germany International School**

In the 2011-2012 school year elementary students (n = 92) continued to indicate that they would prefer more involvement and investigation opportunities than they perceive they actually receive. And, they added librarian support and cooperation as dimensions they would prefer to see increased. When examined by gender, females in the 2011-2012 school year (n = 44) again indicated that they prefer more involvement than they were experiencing. Male participants (n = 48) again indicated that they prefer more involvement and investigation opportunities. In addition, they perceive that there is less cooperation than they prefer (data summarized in Table 9).

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Librarian Support</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Investigation</td>
<td>More</td>
<td>-</td>
<td>More</td>
</tr>
<tr>
<td>Reflection</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cooperation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Involvement</td>
<td>More</td>
<td>More</td>
<td>More</td>
</tr>
<tr>
<td>Equity</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**t-Test Analyses 2013 Russia International School Lower Grades**

In general, elementary students (n = 97) would like to experience an increase in all areas surveyed, except for Task Orientation. Again, due to lower numbers in the individual grade years, the data for each gender were combined and then evaluated.
using dependent samples t-tests for samples greater then \( n = 20 \). When divided by gender, the data show that males (\( n = 50 \)) would like more opportunities for Reflection (see Table 10).

<table>
<thead>
<tr>
<th>Table 10. Significant Gender Preferences 2013 Russia Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Librarian Support</td>
</tr>
<tr>
<td>Investigation</td>
</tr>
<tr>
<td>Reflection</td>
</tr>
<tr>
<td>Task Orientation</td>
</tr>
<tr>
<td>Cooperation</td>
</tr>
<tr>
<td>Involvement</td>
</tr>
<tr>
<td>Equity</td>
</tr>
</tbody>
</table>

**t-Test Analyses 2013 Russia International School Middle Grades**

In general, middle school students (\( n = 82 \)) would like to experience an increase in all areas surveyed, except for Investigation and Task Orientation. When parsed by gender, the data show that females (\( n = 40 \)) would like more Library Support, Involvement, Investigation and Equity than the males (\( n = 42 \)). However, the females experience more cooperation than the males (see Table 11).

<table>
<thead>
<tr>
<th>Table 11. Significant Gender Preferences 2013 Russia Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Librarian Support</td>
</tr>
<tr>
<td>Investigation</td>
</tr>
<tr>
<td>Reflection</td>
</tr>
<tr>
<td>Task Orientation</td>
</tr>
<tr>
<td>Cooperation</td>
</tr>
<tr>
<td>Involvement</td>
</tr>
<tr>
<td>Equity</td>
</tr>
</tbody>
</table>

**Pearson r Correlations**

A correlation shows a relationship between two variables. There is no causation tested, only the strength of the relationship. It is also used to determine if as one variable becomes more positive another does, or if as one variable becomes positive another becomes negative. To determine if there were relationships among the scales, a Pearson \( r \) statistical test was used for data submitted by male and female students across all studies.

When the results from the Actual instrument are examined, it becomes apparent that the males and females have differing perceptions. For the females, there is a positive correlation between the Teacher and female students’ perceptions of Cooperation and Equity; the girls feel they are being treated equally and there is a spirit of cooperation associated with the behaviour or expectations of a teacher.

For males, the teacher also seems to be a determining factor influencing perceptions of the actual learning environment. Teachers are positively correlated with Librarian Support, Involvement and Task Orientation. This may mean that a homeroom teacher
correlates to an appreciation of librarian support and a feeling of involvement where it is apparent a teacher and a librarian enjoy a positive relationship or productive work experiences.

**Discussion**

Learning environment assessment involves a cycle of data collection, data analysis and reflection on the results, recommendations, changes and/or modifications, and reassessment. By gaining insight into student perceptions, male and female, the potential exists to consider ways to guide changes aimed at aligning the actual learning environment with the preferred learning environment (Fraser, 2012). These perceptions also provide an opportunity to advance the development of students’ metacognition and reasoning processes through consideration of the inquiry and behavioural factors at play within these learning environments.

The results indicate that there are differences between what the females prefer and perceive is happening in the actual learning environment. These differences are not as prevalent among the males. And, there are differences between what the females and males prefer, but not particularly what they perceive is happening within that actual learning environment. Overall, the results indicate that females generally have higher expectations of their learning environments than do males, and experience less satisfaction with their actual learning environment than males.

But, there are no dimensions that consistently display a preference or a perception for females or for males across all locations. Instead, the differences appear predicated on the specific learning environment location and circumstances. In each location, the learning environment is not meeting the needs of the females and males in several areas and in some cases those needs are different.

How these differences can be addressed requires sensitivity to the research results within each learning environment and consideration of the different behavioral, developmental, and cognitive-processing differences and experiences that students bring to their learning environment. This requires explicit and well-considered teaching activities and discourse that recognize the importance of the teacher and the teacher librarian in developing and altering the learning environment in order to meet student needs and affect student change. As Todd and Kuhlthau (2005) relate, “This shared dimension of pedagogy clearly plays a key role in maximizing learning outcomes” (p. 86).

Correlation results reinforce the need to consider teacher and school librarian interactions when developing approaches to help students experience inquiry and advance student learning.

**Scholarly Significance and Implications**

The purpose of learning environment research is to allow students to describe their perceptions of and preferences for the interactions among the students, teachers and curriculum. Knowledge of these perceptions can contribute to an understanding of student needs and lead to improvements in the school library learning environment. The evolution of this learning environment could also include enhanced interaction among school librarians, classroom teachers, and students.
While examination of data collected among schools in different locales shows that there are definite differences in how females and males perceive their libraries and in their preferences for a particular library learning environment, these differences suggest careful consideration of each learning situation that could lead to changes that would affect students’ learning through their more positive perceptions of their specific library.

The implication of this research suggests a need for sensitivity to possible differences in expectations and needs between genders. As Caine and Caine (1994) suggest, “it is conceivable that some approaches to education may favour one sex over the other. Educators need to track such research for possible implications for teaching.” (p.35) But, those considerations of gender should not limit our sensitivity to the learning needs of individuals and development of students’ metacognition and reasoning processes within the learning environment. Tilley and Callison (2005) make the case that “gender research should not narrow our target for learning support, but open our minds as educators to the wide variety of learning barriers we all face – cognitive, physical, social, and emotional.” (p.36)

The school library is a dynamic learning environment where spaces, resources and guidance can be provided at various levels to meet the learning needs of all students. Additional research is required before we could draw more definitive conclusions on the difference between male and female perception and needs of the learning environment. More research is also needed to determine the cognitive effects in relation to various types of instruction and interaction, toward the development of best practices to meet these differences.

References


**Biographical note**

**Barbara Schultz-Jones, PhD** is an Associate Professor and Director of the School Library Program in the College of Information at the University of North Texas. She has published and taught in the areas of Information Literacy, Cataloguing and Classification, Learning Environments and Social Network Analysis. Barbara became the Chair of the Section on School Libraries for the International Federation of Library Associations (IFLA) in August, 2013. She leads study abroad projects optimizing automation systems and services in school libraries, including projects in Thailand (2003, 2004, 2005, 2006), Albania (2008), Ukraine (2010), Peru (2011), Russia (2012, 2013), Germany and Czech Republic (2014).

**Cynthia Ledbetter, PhD** is Professor Emeritus of Science and Mathematics Education at the University of Texas at Dallas. She has extensive experience with learning environment research in the science classroom and has moved this research to the school library learning environment in recent years. Cynthia has participated in studies related to the correlation between science and library learning environments and guides the statistical analyses for these research studies.

**John Bishop, MLIS** is the Head Librarian at the Anglo-American School of Moscow. A native Texan, he has worked in international school libraries in Russia, the United Arab Emirates, and Romania; public libraries in Texas, California, and New Zealand; and joint-use libraries in New Mexico and California. He started his career as a classroom teacher of Spanish and English, and then moved into professional library work upon completion of his Master’s in Library and Information Science from the University of Texas in 1992. He is passionate about libraries, and has participated in the building of 7 new library buildings in four countries.
Developing Online Master’s Programs for Teacher-Librarians: 
Current and Proposed Programs at the University of the West Indies, Mona

Abstract
The Department of Library and Information Studies (DLIS) at the University of the West Indies, Mona campus presently offers the Master of Library and Information Studies (39 credits) and the Master of Arts in Library and Information Studies (36 credits). These programs offer a wide range of courses over two to three years. As a result of the decrease in registration and the heavy demand for a multi-modal delivery approach, the DLIS has written a proposal to the university to implement the two postgraduate programs in this format. The Our Virtual Learning Environment (OurVLE) has been selected as the learning support system for these programs as its features are ideal for multi-modal delivery. The DLIS awaits final approval from the campus-wide committee.

Keywords: Department of Library and Information Studies, UWI, Mona, master’s programs, postgraduate, multi-modal delivery program

Introduction
The 66-year-old University of the West Indies, Mona campus presently serves 15 English-speaking countries through three physical campuses in Barbados (Cave Hill), Jamaica (Mona), and Trinidad and Tobago (St. Augustine). The Open Campus, its newest, was formally opened in 2008 and offers multi-modal teaching and learning services across the Caribbean region. There are currently 42 site locations of the Open Campus in the region, serving 16 countries in the English-speaking Caribbean (Open Campus Website).

The Department of Library and Information Studies (DLIS) is a part of the Faculty of Humanities and Education on the Mona campus. The only library school in the English-speaking Caribbean region offering postgraduate studies, its mission is “to provide the highest standard of teaching and research to produce library and information professionals well-equipped to face [the] challenges of the dynamic environment and capable of managing the information needs of the Caribbean for the 21st Century and beyond” (DLIS Website).

Program history
Up to 1987, the Department offered undergraduate programs as well as a Diploma in Library Studies to students who already had an undergraduate degree. The Diploma in Library Studies was upgraded to the Master in Library Studies (MLS), and graduates holding the diploma were encouraged to upgrade. In 2000, the word ‘information’ was added to the name of the Department, and the degree was re-named Master in Library and Information Studies (MLIS); it then targeted students whose first degree was in another discipline. In 1998, the Master of Arts in Library and Information Studies (MALIS) was added as an advanced degree for graduates possessing the Bachelor of Arts in Librarianship.
In 2007, the DLIS began toying with the idea of offering the MALIS program using a blended mode of delivery (face-to-face and online). The MALIS program was seen as the likely program for this conversion as it was felt that those persons who would matriculate into this program would able to manage an online course because of their experience with information technology from working in libraries. However, overtime, with the decrease in population in the postgraduate programs, the Department began contemplating using the blended mode to deliver the MLIS program.

**The current graduate programs**

The MLIS program “equips graduates with a bachelor’s degree in other disciplines with professional education in the field of library and information studies in order to prepare them to effectively manage library and information units and organizations in different types of environments” (DLIS Website). The MALIS program provides graduates of a BA in Library and Information Studies with the opportunity to upgrade their qualification to meet the demands of the modern information environment (DLIS Website).

**Matriculation requirement**

To be admitted to the MLIS program, applicants must generally be graduates of approved universities with at least a lower second-class honors degree in any discipline. Applicants are required to be computer literate. The MALIS program requires applicants to have at least a lower second-class honors degree (Bachelor of Arts in Library and Information Studies/Bachelor of Education in Library and Information Studies and appropriate work experience).

**Course requirement**

The MLIS students are required to read 10 semester courses and write a research paper of 10,000 – 15,000 words (option 1), or write an Independent Study (a state of the art essay) for 3 credits and an additional course (option 2). At the end of the course work, the MLIS students are required to do a practicum over six weeks for 3 credits. A minimum of 36 credits are required.

The MALIS students are required to read ten semester courses and write a research paper of 10,000 – 15,000 words. A minimum of 36 credits are required.

Students doing the research paper are required to attend at least four research seminars and make at least one presentation based on their research. The research seminars are designed to provide a platform for students to present research ideas—completed or in-progress—in a formal and collegial setting and to get feedback about their research (DLIS Website).
The length of MLIS program in credit hours
Full-time MLIS students take one academic year to complete all the required courses. Those who opt to pursue option 1 will then register as part-time students for an additional academic year to complete the research paper, making a total of two years. Students who opt to pursue option 2 will register full time for one additional semester to write the Independent Study and complete one extra course making a total of one and a half years.

Students who register for part-time study will take two academic years to complete all the required courses and one year part time to complete the research paper, making a total of 3 years. Those who opt to pursue option 2 will register as part-time students for one additional semester to complete the Independent Study and one extra course, making 2 and a half years (DLIS Website).

Practicum
Full-time students do the fieldwork at the end of the first year and part-time students at the end of the second year. The practicum is done in an information unit where there is a trained information specialist who prepares a program of activities for the students and supervises them for the period of the practicum. At the end of the practicum, the supervisor is required to complete the evaluation form designed by the DLIS and forward it to the adjunct staff in charge of fieldwork. Any of these options will make a total of the required 39 credits (DLIS Website).

Full-time students take one academic year to complete all the required courses and an additional academic year part time to complete the research paper, making a total of two years. Part-time students take two academic years to complete all the required courses and one year parttime to complete the research paper, making a total of three years. This makes a total of 36 credits (LIS Website).

Total number of faculty/students
The number of full-time members of staff is six including the Department’s librarians. One of these staff members is on study leave. The number of adjunct staff is seventeen (17). Presently, the MLIS program has only twenty-four (24) part-time students and the MALIS has only twenty-three (23) part-time students. Thirty-two (32) of these are in the process of writing the Independent Study or the research paper. The examination scripts are externally examined by approximately eight external examiners from various universities overseas.

Tuition by program and approximate cost
Both programs (face-to-face and multi-modal) are University Grants Committee (UGC) funded meaning that students pay 20% of the economic cost of the tuition
fee (Downes, 2013, p.19). For the 2013-2014 academic year, the fee for both programs was US$2,600 per year for full time and US$1,300 for part time (Office of the Campus Registrar, Graduate Studies & Research (2013/13, p. 3). The fee is increased by varying amounts each academic year. In 2013-2014, it was increased by 5.5%. This rate of increase was below the inflation level in Jamaica, which was reported at 8% for 2012 and represents a 20% recovery of economic costs (UWIOG.NR, n.d.).

**Availability for international study**
The International Students Office (ISO) was established on August 1, 2008 as a campus initiative to both enhance the services to international students and to drive the internationalization imperatives of the UWI, Mona campus. The Office provides a wide range of support services for non-Jamaican students, giving them a place to call home while on exchange, studying abroad, visiting the UWI, Mona Campus for elective clerkships, or visiting for research/study purposes under special admissions (International Student Office, UWI, Mona, para. 1). Through this program, postgraduate students in DLIS have been to the University of Toronto to pursue courses as part of their postgraduate program. If a student makes a request to do his/her practicum in an overseas institution, this is facilitated.

**MLIS Program preparing students to work in school libraries**
Previously, students who pursued this program would seek employment in school libraries, or were already employed in a school library without being trained. Recently, it was discovered that students who matriculated into this program were mainly school teachers who desired to leave the primary or high school system at the end of the program. Upon graduation, they would seek jobs in higher educational institutions, public libraries or special libraries. Very few have returned to the school libraries, and those who do continue to seek employment in another type of information unit. Accordingly, for many years, students did not take Management of School Libraries and Contemporary Literature for Children and Young Adults. These were finally dropped from the program in 2013/2014.

Students who intend to work in school libraries when they graduate are required to pursue the core course, Management of Libraries and Information Units, of which management of school libraries is a component. In addition, they opt to take the Information Literacy Instruction course. Invariably, graduates of the MLIS postgraduate program do not resume their posts in the schools. This is because most of these educational intuitions do not offer a teacher-librarian position which carries a higher remuneration than that of a trained graduate teacher. As a result, they seek employment in information units such as public, special or academic libraries. Therefore, the school libraries are managed by graduates of the Bachelor of Education in School Librarianship and the Bachelor of Arts in Library and Information Studies programs.
Table 1: Courses in the Current Programs

<table>
<thead>
<tr>
<th>Master of Library and Information Studies (MLIS)</th>
<th>Master of Arts in Library and Information Studies (MALIS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1 (Aug to Dec)</strong></td>
<td><strong>Semester 1 (Aug to Dec)</strong></td>
</tr>
<tr>
<td>Compulsory (5)</td>
<td>Compulsory (3)</td>
</tr>
<tr>
<td>Information Technology I</td>
<td>Information Technology I</td>
</tr>
<tr>
<td>Foundations of LIS</td>
<td>Trends &amp; Issues in LIS Work</td>
</tr>
<tr>
<td>Management of Information Units</td>
<td>Basic Statistics</td>
</tr>
<tr>
<td>Subject Analysis/Indexing in Info Retrieval</td>
<td>Electives (2)</td>
</tr>
<tr>
<td>Bibliography &amp; Reference Methods/Materials</td>
<td>Copyright Issues Affecting Caribbean LIS</td>
</tr>
<tr>
<td></td>
<td>Metadata &amp; Resources Discovery</td>
</tr>
<tr>
<td></td>
<td>A course from another Department or Faculty with the approval of DLIS</td>
</tr>
<tr>
<td><strong>Semester 2 (Jan to May)</strong></td>
<td><strong>Semester 2 (Jan to May)</strong></td>
</tr>
<tr>
<td>Compulsory (3)</td>
<td>Compulsory (4)</td>
</tr>
<tr>
<td>Subject Analysis &amp; Indexing in Info Retrieval</td>
<td>Information, Communication &amp; Society</td>
</tr>
<tr>
<td>Research Methods in LIS</td>
<td>Information Literacy Instruction</td>
</tr>
<tr>
<td>Integrated Library Systems</td>
<td>Research Methods in LIS</td>
</tr>
<tr>
<td>Electives (2)</td>
<td>Integrated Library Systems</td>
</tr>
<tr>
<td>Mgmt. of University and Research Libraries</td>
<td>Elective (1)</td>
</tr>
<tr>
<td>Mgmt. of Special Libraries &amp; Info Centres</td>
<td>Archives and Records Management</td>
</tr>
<tr>
<td>Mgmt. of Public Libraries</td>
<td>Introduction to Digital Libraries</td>
</tr>
<tr>
<td>Mgmt. of School Libraries LRCs &amp; Info Resources in Science &amp; Technology</td>
<td>A course from another Department or Faculty with the approval of DLIS</td>
</tr>
<tr>
<td>Info Resources in the Social Sciences</td>
<td></td>
</tr>
<tr>
<td>Contemporary Literature for Children &amp; YA</td>
<td></td>
</tr>
<tr>
<td><strong>Semesters 3 and 4 (Aug to Dec, Jan to May)</strong></td>
<td><strong>Semesters 3 and 4 (Aug to Dec, Jan to May)</strong></td>
</tr>
<tr>
<td>Option 1 Research Paper</td>
<td>Research Paper</td>
</tr>
<tr>
<td>Option 2 Independent Study plus one additional elective course</td>
<td></td>
</tr>
<tr>
<td><strong>Practicum (Jun to Aug)</strong> –6 weeks</td>
<td><strong>No practicum required</strong></td>
</tr>
<tr>
<td>Source: DLIS Program Handbook 2013-2014</td>
<td></td>
</tr>
</tbody>
</table>

**Sample of Course Content**
The duration of each course is 13 weeks and each covers a wide range of topics to give students a good knowledge of the content. For example, the course
LIBS6003 Information Literacy Instruction covers the following topics to achieve the learning outcomes.

LIBS6003 Information Literacy Instruction

Course Description
This course is aimed at introducing students to information literacy instruction which will include the pedagogical and andragogical approach to teaching adults and children information literacy. It will place emphasis on the planning and teaching of information literacy instruction to students and adults through a systematic program. The Big6 and the Marland Nine-step Information Literacy Model will be included to provide a framework for instruction. Human information behavior and the impact that this has on users when they seek information will be explored. Students will be allowed to conduct needs assessments and get practice in writing effective library research assignments.

Rationale
Information literacy is regarded as a basic human right; as such, UNESCO has recommended that all governments introduce information literacy instruction in their curriculum at all levels. Since library and information professionals play an important role in educating the public on information management skills, they need to be equipped with the knowledge and competencies to plan, implement and effectively manage the information literacy programs. The UWI Strategic Plan 2007-2012, STRIDE, has also expressed a number of key graduate attributes including being information literate. Recognizing the critical role of information literacy in academic and personal endeavors, this course is designed to equip library and information professionals to provide effective information literacy instruction.

Learning outcomes
At the end of the course students will be able to:
1. Apply the theories of information literacy to their teaching;
2. Explain some models of information literacy and the established standards for information literacy at all levels;
3. Employ the teaching strategies to instruct adults and children;
4. Plan and effectively manage an Information Literacy instruction program for any given audience;
5. Identify and explain the various stages in the information search process and the responsibilities of teachers, students and librarians at each stage;
6. Plan and develop effective Information literacy assignments;
7. Develop an assessment/assessment tool for their information literacy instruction;
8. Develop an outline of an information literacy curriculum.

Unit 1
Concept and Theory of Information Literacy
Information literacy definition, concept and contexts
Multiple literacies
Elements of information literacy
Information literacy and libraries
Information literacy research

Unit 2
Information Literacy: Standards and Models
Information Literacy Standards for Student Learning
Implications of these standards for teaching and learning
Information literacy models

Unit 3
Theories of Information-seeking Behavior
Models of information seeking behavior
-Kuhlthau’s theory
-Dervin’s sense-making theory
-Wilson’s model
-Implications of information-seeking behavior for libraries

Unit 4
Educational Theories and Information Literacy Instruction
Learning styles
How children and adults learn
Bloom’s taxonomy
The constructive approach to learning
Resource-based instruction
The inquiry approach

Unit 5
The Information Literacy Curriculum
Components of the information literacy curriculum
Developing an information literacy continuum
Integrating information literacy into the primary, secondary and tertiary curriculum

Unit 6
Planning Information Literacy Instruction
Needs assessment
Approaches to teaching information literacy
Creating lesson plans
Evaluating information literacy instruction

UNIT 7
Information Literacy Instruction in Libraries
Information literacy in different library environments
Integrating information literacy in the curriculum – (pre-requisites and process)
Librarian/faculty collaboration for instruction
Using Web 2.0 tools

Evaluation
Creating assignments
Construct assessments

**Websites or other information sources for the programs**
Information about the programs is located on the DLIS and Graduate Studies and Research websites at http://myspot.mona.uwi.edu/dlis/. Information is also found in the DLIS Program Handbook and the DLIS Postgraduate Brochure.

**The proposed postgraduate multi-modal delivery programs**
The decision by the Department of Library and Information Studies (DLIS) to offer the MALIS program using a blended mode of delivery (face-to-face and online) is informed by:

1. DLIS Strategic Objective to ‘enhance learning effectiveness,’ which reflects the UWI, Mona Strategic Plan to provide “multiple and flexible paths for all constituencies to pursue tertiary education in their lifetime”;
2. UWI Strategic Plan to provide “high quality student experience as a platform for enhanced regional and international student success and long term commitment to the UWI”; (UWI Strategic Plan, p. 6)
4. Increased global and national competition for our students;
5. Decreasing student numbers and low student recruitment, especially at the graduate level.

This blended approach was also considered because it would likely lead to an increase in the number of Caribbean students pursuing courses in the DLIS and so fulfill the mission of “providing leadership in managing the information needs of the Caribbean for the 21st century and beyond.” It is also possible that the programs will reach a more diverse audience using this mode of delivery.

**Evidence of demand for multi-modal delivery**
The Department is cognizant of the demand for the multi-modal delivery articulated by graduates of DLIS, members of the Library and Information Association of Jamaica (LIAJA) and the College Library Network (COLINET) at meetings held in 2013 by the Head of DLIS. These members expressed the challenges associated with obtaining leave to pursue the face-to-face Program. The Head of DLIS also held meetings with over 30 graduates of the Department at the St. Augustine Campus of UWI, graduates and other information professionals who overwhelmingly recommended the multi-modal offerings of DLIS programs. In addition, the Director of the National Library and Information System Authority (NALIS), the largest network of public and school libraries in Trinidad and Tobago, reiterated the need for DLIS to use the multi-modal delivery to offer the program, especially since the government of Trinidad and Tobago offers a number of scholarships annually to nationals to pursue degrees in library and information science. Most persons, however, opt to pursue online and blended programs in the USA and the UK with a short face-to-face component. Informal meetings in St. Lucia with information professionals from the Caribbean also confirmed the need for the multi-modal delivery of courses and programs.
A major group of applicants for the MLIS program has been teachers seeking career change or enhancement. The need to offer the program via a blended mode became more urgent with the announcement by the Ministry of Education in 2013 to suspend study leave to teachers (Thwaites, 2013). This move severely reduced the number of applicants for the last academic year, and there were no applicants for full-time study.

Table 2: Outlines the Requirements of the Proposed MLIS and MALIS Programs

<table>
<thead>
<tr>
<th>Master of Library and Information Studies (MLIS)</th>
<th>Master of Arts in Library and Information Studies (MALIS)</th>
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<tr>
<td><strong>Semester 1 (Aug to Dec)</strong></td>
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<td>Core (4)</td>
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<td>Information Technology I</td>
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<td>Foundations of LIS</td>
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<td>Management of Information Units</td>
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<td>Subject Analysis/Indexing in Info Retrieval</td>
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<td>Bibliography &amp; Reference Methods/ Materials</td>
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<tr>
<td>Electives (1)</td>
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<tr>
<td>Copyright Issues Affecting Caribbean LIS</td>
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<td>Metadata &amp; Resources Discovery</td>
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<td>Trends &amp; Issues in LIS Work</td>
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<tr>
<td>(Compulsory for students selecting independent study paper option)</td>
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<tr>
<td><strong>Semester 2 (Jan to May)</strong></td>
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<tr>
<td>Core (1)</td>
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<tr>
<td>Research Methods in LIS</td>
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<td>Electives (2)</td>
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<td>Information Literacy Instruction</td>
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<td>Info Resources in Science &amp; Technology</td>
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<td>Info Resources in the Social Sciences</td>
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<td>Archives and Records Management</td>
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<td>Introduction to Digital Libraries</td>
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<td><strong>Summer Session 1 (Face-to-Face)</strong></td>
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<td>Core (3)</td>
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<td>Catalogue Creation and Use</td>
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<td>Information Technology I</td>
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<td>Copyright Issues Affecting Caribbean LIS</td>
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<td>Metadata &amp; Resources Discovery</td>
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<td>Legal Information Resource Management</td>
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<td>A course from another Department or Faculty with the approval of DLIS</td>
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<th>Semester 2 (Jan to May)</th>
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<td>Information, Communication &amp; Society</td>
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<td>Information Literacy Instruction</td>
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<th>Summer Session (Face-to-Face)</th>
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<td>Basic Statistics</td>
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Major change in the program
Table 2 shows the various library management courses that were dropped and replaced by LIBS6106 Management of Libraries and Information Units. This was done based on feedback received from the Quality Review Team in 2012 after they interviewed students who pursued the MLIS program. Their complaint was that because of the number core courses that they had to pursue, they were not able to complete courses such as Archives and Records Management and Copyright Issues Affecting Caribbean LIS and the newly developed course, Information Literacy Instruction. The new management course will be taught for 13 weeks. The first 6 weeks will cover the management theories and the other 7 weeks will cover the management of the various types of libraries. By doing this, students will have the opportunity to do other courses without having to do extra credits.

Preparation for presentation of proposal at various UWI, Mona Committees
The extremely low registration in 2013-2014 academic year forced the Department to begin in earnest preparation to implement the blended learning postgraduate programs. Staff attended a number of face-to-face and webinar workshops to get a greater understanding of how to implement and deliver a blended learning program. Two examples of these workshops are “Introduction to Blended Hybrid Learning” and Blended and Online Learning Workshop. Staff then attended workshops on how to write course content for online delivery. Practice sessions were included in these workshops. Workshops were also conducted on how to use the Moodle platform, Our Virtual Learning Environment (OurVLE), to manage the programs, for example uploading course contents and writing online quizzes. Staff were then ready to re-write their course contents to suit this mode of delivery. One member of staff who is familiar with the technique was assigned to supervise the re-writing process.
Re-writing contents for online courses
The decision was taken as to which courses would be delivered face-to-face only and which courses would be delivered both face-to-face and online. The existing outlines for the online courses were adjusted to reflect the change in delivery. This means that the mode of instruction was modified to include online quizzes, graded activities which are embedded in the contents of the courses and virtual presentations by students. A period of one semester was given to prepare these course contents.

Presentation of proposal to the sub-committee
The Department wrote a proposal to the Faculty of Humanities and Education Sub-committee indicating its intent to offer the MLIS and the MALIS programs using the multi-modal delivery. All the course outlines in the programs were attached to the proposal and taken to the sub-committee for discussion and approval. The sub-committee is comprised of one staff member for each department in the Faculty of Humanities and Education. This committee is chaired by the Deputy Dean of the Faculty. After the presentation was made to this committee and discussion held, the proposal was accepted with two suggestions, which were: 1) to keep the program UGC Funded to make it affordable for prospective students; 2) and to prepare a budget for the extra costs that this blended mode would attract. These were expected to be the transportation of examination scripts to various locations in the region, payment for personnel to invigilate these examinations and the cost for the venue for the examinations. The budget was made up and the document was ready to be sent to the next committee, Faculty of Humanities and Education Board.

Presentation to Faculty Board
At this meeting comprising all staff from the Faculty of Humanities and Education, the document was presented for discussion and approval. It was approved with one suggestion: that we use the term multi-modal to describe the delivery instead of online and face-to-face. The change was made and the proposal was sent to the Campus Committee.

Presentation to Campus Committee
This committee was comprised of the Assistant Registrar of the UWI, Mona Campus, the Campus Coordinator, School of Graduate Studies and Research, the Deputy Deans who chair the sub-committee in their faculty and other campus personnel. This committee scrutinized the proposal in detail to ensure that it was feasible. After much deliberation, the committee suggested a number of inclusions. Some of these were:

1. Documentation of the process of uploading the online and face-to-face courses separately;
2. Statement on how the system will allow the online students to pay the supplementary fees;
3. Documentation stating how the online students would register and pay the supplementary fees;
4. Statement that “students will pay an additional $21,600 per semester for additional services, for example, off site examinations.”

Discussion with a representative from the bursary confirmed that students can be accommodated in two streams for each course to be delivered multi-modal. The Bursary would be informed of students in each stream and costs assigned accordingly. Information from the Campus Registrar Office to request approval of the supplementary fees was followed through (DLIS Program Proposal, 2014, p. 7).

**Presentation at Academic Board**
The necessary inclusions were done and the document was sent back to the Campus Committee, which then sent it to the Academic Board. The Board consists of the UWI Mona Principal and Vice Principal, the Campus Registrar, the Deans from all the Faculties and the Heads of All Departments. The Board discussed the proposal and accepted it, after which it was sent to the Campus Wide Committee. At this stage, we are confident that the proposal will be approved. We are now seeking to have applications to these programs reopened and to embark on a massive advertising campaign.

**The learning management system selected**
The learning management system to be used is the Our Virtual Learning Environment (OurVLE). This is the “Moodle-based” platform used for online learning support at the University of the West Indies, Mona Campus. OurVLE features tools such as Forums, Document Sharing, Online Assignment Submission and Online Quizzes which are able to support the online courses (What is OurVLE, par.1). Staff are familiar with this system as it is used to manage the face-to-face courses.

**Pedagogical approaches use for instruction**
A blend of interactive and discovery approaches are used in this department. This teaching strategy is done through in-class discussion, debates and presentations. The discovery approach will allow students to become self-directed and constructivist learners, thus providing them with a range of options from which to construct their own knowledge. Lecturers provide coaching or scaffolding to assist students in their discovery. These approaches will also be used in the multi-modal delivery as the learning management system can accommodate interactive learning. The learning activities will provide opportunities for the implementation of discovery learning.

**Supports and/or obstacles to development the development of the blended learning program**
During the writing of the proposal, DLIS requested a meeting with the Campus Coordinator, School of Graduate Studies and Research to inform them of our
intent. This meeting proved invaluable, as crucial information was given to guide the process.

Support is expected from the Mona Information Technology Department in terms of further training DLIS staff to use the features of OurVLE. The Faculty of Humanities and Education has a technology room from where live streaming will be carried out to conduct orientation sessions and to deliver some of the lectures. Laboratory technicians will be on hand in the event that technological problems arise.

*Evaluation of past and proposed programs (content, quality, outcomes, impact)*
Both programs are evaluated every five years. This evaluation is supervised by the Quality Assurance Department of the University of the West Indies. A committee is selected which includes faculty from universities overseas and librarians from various information units. The evaluation process usually lasts three days and includes committee members looking at the course outlines and interviewing employers of graduates, students, Head of DLIS, faculty and support staff. A detailed report from the committee always follows, which includes the evaluation’s findings and the recommendations.

The courses undergo continuous revision to ensure that course contents are updated with current information and practices in the field. Whenever there are major changes to be made, for example, changing the method of assessment or the in-course and exam weighting, the course outline has to be presented at the sub-committee, Faculty Board and the Quality Assurance Committee for final approval.

The multi-modal program is new, therefore formative evaluation will be conducted to monitor how well: the programs are meeting their objectives, students are accessing the course and using the features of the learning management system, etc. The findings will guide staff to make adjustments if necessary. Toward the end of the first semester, students will be asked to do an evaluation of the content of the courses they pursue using the evaluation form created by the Department as well as the functionality of the learning management system. A major summative evaluation will be conducted by staff before it is offered in the second year.

This will determine what changes, if any, should be made to the learning outcomes, the contents of the courses and the use of the system by students. The course management system will also be evaluated to see if there is a need to upgrade any aspect of it. This will be done in consultation with the Mona Information Technology Department as their expertise will be required to make any changes necessary.

*Impact evaluation*
An evaluation will be conducted at the end of the first academic year to determine the impact that the program has on DLIS in terms of increase in the number of students, benefits to students and change in the profile of the Department, among other things. The findings will be used as evidence to improve the programs.

**Lessons learned and future plans**

The most important lesson learned is how to write an acceptable proposal for a multi-modal delivery format and in addition, how to organize the courses of an already planned program to multi-modal delivery.

Three of the future plans that DLIS has for these programs are to:

1. Complete the process of developing a fully online postgraduate Archives and Records Management course. Lecturers from various universities overseas who are proficient in this area are in the process of assisting with the development process.
2. Add new courses to the already existing programs to educate students to meet the current demand of the information units in which they plan to work.
4. Promote programs.

**References**


DLIS Program Proposal for Multi-modal Delivery Proposal. (2014). Department of Library and Information Studies, The University of the West Indies.

Department of Library and Information Studies Website. http://myspot.mona.uwi.edu/dlis/


Biographical note

Paulette Stewart, PhD is a lecturer in the Department of Library Studies at the University of the West Indies, at Mona. She is the IASL Regional Director for Latin America and the Caribbean and was the President of the Library and Information Association of Jamaica (LIAJA) in 2010. Dr. Stewart received the Ken Haycock Leadership Award in 2006 in Portugal for her outstanding leadership role in the Schools Section of the Library and Information Association of Jamaica. She was also elected by LIAJA as Librarian of the year in 2009. Her research interests include, school library education, school libraries and information literacy.
Moving Beyond Tradition: Technologies Facilitating Students’ Cognitive Ability and Modifying Pedagogical Practices of School Librarians in Jamaica and Antigua

Abstract
School library collections in Jamaica and Antigua have moved beyond the traditional print-only collection to various technologies that facilitate teaching and learning. Some of these technologies are not directly located in the library but are placed in computer labs where the school librarians have access to them. This research was conducted to determine what types of technologies were used in the libraries studied, how they facilitated students’ cognitive skills, and how they modified school librarians’ pedagogical practices. The sample consisted of 52 school librarians in Jamaica and Antigua. The findings showed that participants had or had access to technologies such as multi-media projectors, interactive SMART Boards, computers with and without internet access, and tablets. These technologies facilitated students’ cognitive behavior by providing them with additional content, and promoted active learning, among other things. Participants’ pedagogical practices were modified as they now deliver instruction using PowerPoint, blogs, Twitter, Facebook, podcasts, and e-books.

Keywords: Cognitive ability and technology, technologies in school libraries, pedagogy and technology, school libraries in Jamaica and Antigua

Introduction
Prior to the era of electronic technology, school libraries were institutions that concentrated on the acquisition of knowledge intended to be shared for the development of the society (Bonanno, 2012). However, in the 21st century, school libraries have become hi-tech learning centers designed to prepare students for responsible citizenship and enable them to function effectively in a complex information landscape (Hay & Todd, as cited in Bonanno, 2012). Robinson (as cited in Peltier-Davis & Rennick, 2007, p. 99) mentioned that in the Caribbean, Jamaica and Antigua were among the few countries with a semblance of school library services. Her research indicated that historically, in Jamaica, school libraries were predominantly print-based, with less than 20% having common multi-media formats such as CD-ROMs, audio cassettes, and video-tapes (p. 104). The same can be said of the school libraries in Antigua.

Over time, computers were introduced in these school libraries, which were basically used for word processing because of these schools’ lack of internet connection. In recent times, more and more schools have obtained internet connection and a number of supporting technologies. This change supports the use of technologies by this generation of secondary school students who are
described as “born digital,” that is, born between 1996 and the present. They see digital technology as the norm, as it has been fully integrated into their lives (Green & Hannon, as cited in Klopfer, Osterweil, Groff, & Haas, 2009, p. 5).

**Purpose and significance of the study**
The purpose of this study is to ascertain the technological infrastructure of secondary school libraries in Jamaica and Antigua and to determine how these technologies have facilitated the cognitive ability of students and modified the pedagogical practices of these schools' librarians.

Providing information technology tools in school libraries is highly valued since this digital-born generation has gravitated toward them. Therefore, this study will provide evidence-based results on how various technologies facilitate students' cognitive ability. The researchers hope to consequently impress the Ministries of Education in Jamaica and Antigua with the need to provide more technologies in school libraries to improve students' academic performance. Students' learning outcomes are heavily dependent on the pedagogical strategies used by teachers because the methodology and instructional materials they use can contribute to students' academic performance. If the findings indicate that the use of technology by school librarians has indeed improved their pedagogical practices, the Ministries of Education in Jamaica and Antigua could use the findings to substantiate placing more technologies in school libraries to support teaching and learning.

**Theoretical framework underlying cognition and technology**
Cognitive Consultant International Limited postulates that “as technologies advance, they are quickly penetrating more into the daily life of ordinary people as well as into human expert domains. As technologies are used in our cognitive processes, as they cognitize with us and for us, they influence and impact the very way we acquire information and think, and affect the very nature of cognition. Such technologies can be characterised and termed as Cognitive Technologies” (para. 1). The writer further explains that training and education are now using and integrating the World Wide Web, podcasts, mobile and distance learning, interactive videos, serious games, and a whole range of e-learning methods. E-learning is described by the writer as ‘brain friendly,’ and so it is said that “it optimizes learning to the cognitive architecture of the learners. If technology enhanced learning promotes the formation of effective mental representations and works with the human cognitive system, then the learners will not only be able to acquire information more efficiently, but they will also remember it better and use it” (para. 4 & 5).

**Operationalization of variables**
*Cognitive ability* is defined by Subrahmanyam, Kraut, Greenfield, and Gross as “the skills associated with thinking and knowing—the skills required for children to understand language and numbers, to reason and problem solve, and to learn and remember” (2000, pp. 127-128).
Types of technologies in school libraries today
School libraries are gateways to the information-based society in which we live. Therefore, they must provide access to all necessary electronic, computer, and AV equipment (IFLA, p. 9). Quinlan (2012, para. 5) supports IFLA’s statement when he refers to Ballard’s comment that “libraries have morphed into a hybrid model that pulls resources from the traditional print format and the newer digital format” (para. 5). Rogers, a high school librarian, mentions that her school uses netbooks—small laptops, Kindles—a program that allows students to download a book or periodical onto any device such as an iPad or smartphone, and an educational adaptation of YouTube (Quinlan, 2012, para. 10). She adds that her school library and others use a variety of supplemental academic databases that connect well with different students as well as laptops, Skype, a video chat program that various classes have used to talk to people in other countries, e-books, Nooks, and Kindle readers (Quinlan 2012, para. 7 & 9).

Technology facilitating cognitive skills

Students can create knowledge using technologies
Liu (2003) conducted research with high and elementary school students on the effect of a multimedia environment on students’ motivation toward learning and their cognitive skills acquisition. The researchers had students involved in a three-phase project. In phase 1, they learned how to use multi-media tools such as software programs; they also got used to the hardware and did exercises related to the hardware. In phase 2, students designed a storyboard and learned multi-media tools. In phase 3, they learned to scan photographs, create animation, and digitize audio.

The findings show that at the high school level, students’ understanding was significantly increased for planning, searching information, and connecting ideas (p. 32). At the elementary level, there was a significant increase in students’ design knowledge, and they were able to list more relevant concepts than in the pre-concept maps. It was also noted that “needing a storyboard,” “leaving more time for revising” and “having a better interface” began to be a part of these students’ vocabulary (p. 33).

Technology improves learning
As Cruse (2006, p. 9) mentioned, that in 1989, Barron conducted two unrelated studies and discovered that the use of video to “anchor” instruction to a shared classroom experience resulted in improved vocabulary use, a greater understanding of plot and characterization, and an increased ability to draw inferences based on historical information (p. 9). Dolegui (2013, para. 5) cited a 1997 study by Cockerton, Moore, and Norman expressing that “although previous research has established that music can either distract or facilitate cognitive task performance, improved performance in the presence of music might be directly related to the type of music listened to.” She also referred to the findings of a study conducted by Hallman, Price, and Katsarou in 2002.
supporting this argument. These researchers tested the effect of calming and relaxing music on arithmetic and memory performance tests on children ranging from ages 10 to 12. They found better performance on both tasks with calming and relaxing music conditions when compared with no-music conditions.

In the article “Positive effectives of internet usage on child development,” the writer articulates that students are exposed to information to improve the quality of learning that can transform into knowledge. The article also mentions that students’ language and literacy development is often promoted through the internet, and this allows for greater gains in verbal and nonverbal skills (para. 2).

**Retaining of concepts learned**
McDaniel (2014, para. 5) remarks that the interactive SMART Board provides an opportunity for students to interact on a more personal level with the lesson and increases their likelihood of learning and retaining lesson material. It also helps students stay focused by having them use the board as a learning tool that they can interact with using their hands during lesson delivery.

**Technology improves capacity to think**
As reported by Nauert (2013,para.7-9), studies have found that video games improve a player’s capacity to think about objects in three dimensions, just as well as academic courses targeting these same skills. Nauert explains that this finding has critical implications for education and career development. Jonassen (2010, para. 10) asserts that neither teachers nor technologies are repositories of information and confirms that for students to learn from technology, they (students) should use the technologies around them to represent what they know rather than memorizing what the teacher and the textbook tell them. In other words, students learn best when they use technology to create knowledge. Thus, different technologies should be used as tools to learn with rather than from.

A study done by Sethy (2012, para.29) found that students performed better in content areas, and develop higher order thinking while using technology to learn. Sethy’s study (2012) further affirms that cognitive skills subsume many activities which include: creativity, judgement, comparison, contradiction, description, interpretation, argument analysis, evaluation, questioning, observation, logical presentation of contents, and problem solving approach. Du Plessis (2008, p. 1) expresses that the most important cognitive skills are concentration, perception, memory, and logical thinking.

**Technology engenders dialogue and active learning**
A study conducted by Yiong, Sam, and Wah (2008, p.547) found that students felt they learned better using technology, especially those who facilitated dialogue between peers and teachers. This was because they were able to ask each other, as well as their teachers, questions. The ability to communicate outside of class time allows students to focus more on the quality of learning.
because they are engaged. Watson and Gable (2010, para. 16) also observed that using technology as a strategy in the learning process can help students with their working memory—the ability to move information from short term to long term memory. This is achieved through the use of interactive software, demonstration, and audio-visual representation of concepts and processes. Working memory is critical to the acquisition of increasingly more complex knowledge and skills.

Mayer (2001, as cited in Cruse, n.d., p. 3) explains that while viewing may appear to be passive, it can involve the high cognitive activity necessary for active learning. Furthermore, he mentions that “well-designed multimedia instructional messages can promote active cognitive processing in students, even when learners seem to be behaviourally inactive. The content and context of the viewing are both crucial elements for engaging students as active learners.”

**Video games can facilitate the development of cognitive abilities**
Facer (2003, p. 1) cites Greenfield, who argues that the habitual playing of video games results in the development of cognitive abilities that are important in the way we operate in the world. Klopf er et al. (2009) refer to Jenkins et al. (2006, p. 6) cognitive abilities as:

- The ability to process information very quickly;
- The ability to determine what is and is not of relevance to them;
- The ability to process information in parallel, at the same time, and from a range of different sources;
- Familiarity with exploring information in a non-linear fashion;
- A tendency to access information in the first instance through imagery and then use text to clarify, expand, and explore;
- Familiarity with non-geographically bound networks of communication; and
- A relaxed approach to play—the capacity to experiment with one’s surroundings as a form of problem solving.

**Technology supports students’ learning styles**
Sethy (2012, para.4) cites Askar and Altun (2009), who posit that cognitive skills in a technology enabled teaching-learning situation help learners to access the navigation for their learning path, as cognitive skills facilitate their learning through scaffolding. They continue by suggesting that cognitive skills assist learners in achieving objectives, and cognitive skills enable learners to diagnose their shortcomings related to subject content and use of technological tools, and encourage them to work on their shortcomings.

According to McDaniel (2014, para. 4), students with different learning styles benefit from the use of SMART Board technology. He explains that “because of the size and visual components of the board, students who learn through seeing are better able to process lesson material. Using websites or software on the SMART Board that promotes activities such as learning through music is beneficial to audial learners. Students who learn more by touch can use the pen or their fingers to interact with the board as well.
Cognitive learners will benefit from the availability of numerous lessons of varying challenge levels available for SMART Boards on the web” (para. 4).

Cruse (2006, p. 10) cites Denning’s comment that video may help to promote learning in students with high visual orientation in their learning styles. He continues by stating that the viewing of “videos can also provide visually-compelling access to information for many learners with learning difficulties who might miss learning opportunities provided solely by print-based materials. In this respect, videos provide important learning opportunities to students working in a second language”.

**Impact of technology on pedagogy**

In this age, teachers are using various technologies and equipment to deliver content to students within and outside of the classroom. These include podcasts of lessons (Pennarola & Caporarello, 2013), digital gaming (Klopfer et al., 2009), interactive whiteboards (TechLearn), wikis, and blogs (Tucker, 2014, p. 169). These make up part of what Tucker (2014, p. 168) refers to as the ‘learning ecosystem.’ The role of this system is to unite participants “through cooperation, sharing, reflection, publishing, development and learning, and through resources and participants” in an education system that extends beyond the boundaries of the classroom (Tucker, 2014, p. 168).

Okojie, Olinzock, and Okojie-Boulder (2006, para. 5) note that it is important for teachers to recognize that a relationship exists between technology in education and pedagogical decision-making. Wong, Li, Choi, and Lee (2008, p. 249) indicate that at present, the ongoing and unprecedented development of technology has led to the widespread use of technology to advance educational goals. School librarians have been trained in the use of technology; therefore, it is evident that they would be a part of those educators who use technology to reshape the delivery of their instruction in order to improve the cognitive skills of the digital generation that they teach.

Wilkin et al. (2013, p. 89) assert that self-efficacy impacts how willing teachers are to try new ways to apply technology in their content delivery. Here, technology is not used as an end but as a strategic lever to deliver content more effectively or engage students in the learning process. Henry-Wilson, a former Jamaican Minister of Education, was quoted as saying that the introduction of technology in pedagogy allows teachers to “segment their classrooms” (Thompson, 2014, para. 15). This allows the teacher to plan a lesson that reaches students with different abilities. Thus, better engagement, creativity, interaction, and classroom management will take place in the class. In Antigua, the article in the “Technology for Communication, Education, and Empowerment”,p. 9) stated that by the end of 2011, teachers throughout Antigua and Barbuda would be provided with cutting-edge technology; they would also benefit from technologies that would likely enable them to better plan their lessons as well as establish a variety of databases.

**Research objectives are to:**
1. Ascertain the types of technologies currently in school libraries in Jamaica and Antigua;
2. Determine how these technologies facilitated students’ cognitive ability in this study;
3. Find out how these technologies modified participants pedagogical practice.

Methodology
This is a quantitative study using the survey methodology. One newly developed questionnaire was used to collect data from a select group of school librarians in Jamaica and Antigua. The questionnaire was pilot-tested on two school librarians, adjustments were made, and then it was mailed to each participant with a letter of request for voluntary participation, the assurance of confidentiality, and a return date for the questionnaire. The data was collected over a period of two weeks. The data was then presented, analyzed, conclusion drawn and implicated delineated.

Population
There are one hundred and forty-eight (148) secondary schools in Jamaica and ten (10) in Antigua, making the population one hundred and fifty-eight (158). These schools had libraries that were equipped with one, two, or more technologies. In addition, other technologies were located in the schools’ computer labs and participants had access to them for instruction.

Sample
The Krejcie and Morgan Table was used to determine the sample size for the population. It indicated one hundred and eight (108) for the Jamaican population and ten (10) for the Antiguan population. However, because of time constraints, simple random sampling was used to select a sample size of seventy (70) school libraries in Jamaica. All ten (10) school libraries in Antigua were selected. The response rate was forty-seven (47) from Jamaica and five (5) from Antigua, making a total of fifty-two (52).

Data collection instruments
Questions in Section 1 sought demographic data on the participants. In Section 2, data was collected to ascertain the types of technologies in these school libraries. In Section 3, questions sought information on how the technologies in these school libraries facilitated students’ cognitive ability, and Section 4 sought data on how these new technologies altered these librarians’ pedagogical practice.

Analyses of data
Demographic data of participants
The data reveals that the majority of school librarians were employed between 1 and 9 years. This seems to suggest that they might not have had experience working in a traditional school library, that is, school libraries without technologies. On the other hand, those who had been working for 13-25 years would have witnessed the gradual change in technological infrastructure in the school libraries. The majority of these school librarians would have been trained in the use of these technologies while they were at library school and would therefore be more likely to use them than those who had been employed for between 15-25 years.

The academic achievements of these participants, as indicated by the data in Figure 2, reveal that the majority of these school librarians were trained in library and information science and would therefore know how to use technologies to deliver information literacy lessons. Those who had other degrees or no training might have learned how to incorporate these in their lessons through professional development workshops/seminars or from their peers.
**Wi-Fi in schools**
The data indicated that 88% of the school had Wi-Fi, though all had internet access. This electronic infrastructure set the stage for the use of some of the technologies that were found in these libraries. The researchers would like to point out that some of these schools had this service because it was provided to them free of cost from one of the telecommunication technology companies in Jamaica. In Antigua, the “Technology for Communication, Education & Empowerment” program uses Wi-Fi technology to bring broadband Internet to more than 5,000 secondary school students in their classrooms (Minister of Information, Broadcasting, Communication, Science & Technology, p. 2).

**Bring Your Own Device (BYOD)**
Seventy percent (71%) of the participants indicated that students were allowed to take their own devices to school. However, they also indicated that this privilege was given to students in the upper grades, with security issues cited as the reason. In two instances, students had to obtain permission from their parents to bring their own devices to school.

The BYOD initiative had a positive impact on students as they were able to work at their own pace to complete school related tasks. BYOD also enabled students to use technologies while in school when those in the library or computer labs were occupied.

<table>
<thead>
<tr>
<th>TYPES</th>
<th>NUMBER OF LIBRARIES WITH THESE TYPES OF TECHNOLOGIES</th>
<th>% out of 52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer with access to the internet</td>
<td>51</td>
<td>98%</td>
</tr>
<tr>
<td>Computer without internet access</td>
<td>14</td>
<td>26%</td>
</tr>
<tr>
<td>Digital camera</td>
<td>35</td>
<td>67%</td>
</tr>
<tr>
<td>Document reader</td>
<td>18</td>
<td>18%</td>
</tr>
<tr>
<td>DVD player</td>
<td>35</td>
<td>67%</td>
</tr>
<tr>
<td>Electronic games</td>
<td>8</td>
<td>14%</td>
</tr>
<tr>
<td>Electronic database</td>
<td>8</td>
<td>14%</td>
</tr>
<tr>
<td>Interactive SMART Board</td>
<td>24</td>
<td>47%</td>
</tr>
<tr>
<td>Laptop</td>
<td>35</td>
<td>48%</td>
</tr>
<tr>
<td>MP3 Player</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Multi-media projector</td>
<td>53</td>
<td>100%</td>
</tr>
<tr>
<td>Smart phone</td>
<td>4</td>
<td>7%</td>
</tr>
</tbody>
</table>
The data in Table 1 reveals that a wide variety of technologies was in these school libraries or was available for use by the librarians. The data shows that all school libraries had a multi-media projector or had access to one. Ninety-six percent (97%) had computers with internet access, 26% had computers without internet access, 67% had digital cameras, 18% had document readers, 67% had DVD players, 14% had electronic games, 14% had electronic databases, 47% had interactive SMART Boards, 48% had laptops, 10% had MP3 players, 100% had multi-media projectors, 7% had smartphones, and 14% had tablets. The data shows that six (6) school libraries still had the traditional VCR.

It is the researchers’ knowledge that some of the technologies mentioned, such as computers with and without internet access, multi-media projectors, electronic databases, electronic games, and MP3 players, were directly located in these school libraries. However, others such as the interactive SMART Boards, laptops, document readers, and educational DVDs/videos were placed in secondary schools in Jamaica because of the implementation of the e-learning project in these schools. However, the school librarians had access to them for instruction as they were placed in computer labs adjacent to these school libraries and the school librarians were charged with assisting students and teachers in the access and use of the e-learning resources (Pellington, 2012, p. 77). In Antigua, the government continues to explore the use and impact of digital devices in the classroom. Up to 2013, three thousand tablets were distributed to fourth and fifth form students in private and public secondary schools under the Government Assisted Technology Endeavor (GATE) project (Government of Antigua and Barbuda 2013, para. 1, 3).

**Impact of these technologies on students’ cognitive ability**

<table>
<thead>
<tr>
<th>Tablets</th>
<th>7</th>
<th>14%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other: Television</td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>✓ Cable</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>✓ Radio</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>✓ Scanner</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>✓ Printer</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>✓ VCR</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>✓ Copier</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>✓ Projector screen</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>✓ Photocopier</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
The data in Figure 3 indicates that computers with internet access facilitated students’ cognitive ability in various ways. Thirty percent (30%) of the participants in these islands have indicated that students’ academic ability was facilitated by acquiring more information from the internet, while 17% believed that the visual imagery students saw within the information they garnered facilitated their understanding of the content. Twenty-eight percent (28%) indicated that students developed research skills and were able to locate information that improved their cognitive ability. Fourteen percent (14%) and 9% of the participants also indicated that the computer with internet access facilitated students’ cognitive ability in that they received lessons over the internet as well as tutorial exercises to help them understand difficult concepts.

The writer of the article “Positive effectives of internet usage on child development” supports the finding that students using the internet are exposed to information to improve the quality of their learning, which can be transformed into knowledge. The researchers also believe that the visual imagery facilitates their cognitive ability as it can form a permanent image in students’ minds and help them to remember facts. The use of the internet is also attributed to increasing vocabulary, which will assist students in language development and likely lead to the creation of new knowledge.
The data collected in Figure 4 shows that thirteen (13) participants had computers without internet access. These participants indicated that students’ use of the graphic organizers facilitated comprehension of narrative. Twenty-six percent (26%) indicated that students’ cognitive ability was facilitated when they used the clipart software and graphic organizers to assist them in creating content for essays and other assignments. One participant indicated that these software stimulated students’ mental capacity to create animation. Eight percent (8%) of the participants stated that academic performance was increased when they designed movies related to the lessons. Furthermore, Liu’s (2003) research findings show that a computer software program can facilitate students’ cognitive ability in that student can learn how to scan photographs, use multi-media, and design storyboards.

The researchers agree that computers without internet access can facilitate cognitive ability when students use software such as PowerPoint and Publisher, which can help them create and publish information learned in a new format.

Table 2. How Electronic Games Facilitated Students’ Cognitive Ability
Table: How Electronic Games Facilitate Students’ Cognitive Ability

<table>
<thead>
<tr>
<th>Response</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforce concepts taught</td>
<td>7</td>
</tr>
<tr>
<td>Improve slow learners’ capacity to think</td>
<td>5</td>
</tr>
<tr>
<td>Teach the conceptual knowledge</td>
<td>2</td>
</tr>
<tr>
<td>Introduce new concepts</td>
<td>3</td>
</tr>
<tr>
<td>Assist with the framing of content taught</td>
<td>3</td>
</tr>
<tr>
<td>Teach the skill of negotiation</td>
<td>1</td>
</tr>
<tr>
<td>Collaborate in order to learn from each other</td>
<td>1</td>
</tr>
</tbody>
</table>

All seven (7) of the school librarians who indicated that they had electronic games in their school libraries specified that these games facilitated students’ cognitive ability. Nine percent (9%) indicated that they increased students’ capacity to think, while 5% noted that they helped students grasp and conceptualize new content.

These findings have some similarity to Facer’s (2003) research finding that playing video games helped students to process information quickly and to determine relevant concepts. Nauert’s (2013, pp. 7-9) research findings also indicate that playing games improves players’ capacity to think about three dimensional objects. Therefore, the impact that these participants have mentioned suggests that students’ cognitive ability was improved by getting more opportunities to solve problems and explore information in a non-linear fashion, which, in turn, promoted active cognitive learning.
Figure 5 shows that of the 24 participants with an interactive SMART Board, twenty-nine percent (29%) noted that students’ cognitive ability was improved because the board promoted active learning, and 25% pointed out that it positively influenced students’ cognitive ability as they used it to integrate a wide range of materials in their lessons. Another 23% indicated that when the interactive SMART Board was used, it generated discussions because students were freed from note taking. McDaniel (2014, para. 5) supports these findings as he indicates that the use of interactive SMART Boards provides opportunities for students to interact more with the lesson, which would increase the likelihood of them retaining what they had learned. This interaction can generate discussion among students, during which they are likely to gain knowledge about the lessons being taught.

The researchers are of the opinion that the very nature of the interactive SMART Board influenced active learning, which will keep them alert and focused during instruction, thus improving their cognitive ability.
The data in Figure 6 shows that twenty-four (24) participants indicated that when students used educational DVDs, their cognitive ability improved as these DVDs provided them with additional multi-media content for their lessons. Twenty-seven percent (27%) noted that when their students used DVDs, their visual ability was stimulated. Thirty percent (30%) indicated that it promoted active learning.

Cruse’s (2006, p. 3) mention of Mayers’ comment that the viewing of educational videos can involve the high cognitive activity necessary for active learning is evidence that there are others who support this finding. Cruse (2006) also cites Denning (p. 10) in stating that the viewing of educational videos can provide visually compelling access to information for students with learning difficulties. This finding is further substantiated by the findings from the unrelated studies conducted by Barron (1989), which revealed that the use of video in instruction resulted in improved vocabulary. The researchers believe that based on these findings, the use of educational DVDs did improve these students’ cognitive ability.
The data in Figure 7 shows that seven (7) of the participants indicated that students had the use of tablets. Twenty percent (20%) mentioned that it provided information when students were working individually, 9% indicated that students used them to take notes, and 18% used them to download e-books. As was indicated in Table 1, students had access to tablets belonging to their intuitions. In addition, 70% of the school libraries surveyed allowed students to bring their own devices to school, including tablets.

The researchers are of the opinion that the students’ use of tablets helped them to work at their own pace, that they preferred taking notes in this format rather than on paper and were able to garner more information not found in their school libraries. These activities would certainly motivate students as they engaged in the learning process and built their cognitive activity.

The findings show that of the five (5) school libraries that had or provided students with access to MP3 players, 9% pointed out that they were played while students were completing individual work and stimulated thinking, thus facilitating students’ cognitive ability. Dolegui (2013, para. 5) points out Hallman, Price and Katsarou’s research findings that students performed better when relaxing music was played during the time students were completing tests.
This strategy is certainly a good one as students of this age group are inclined to listen to music. However, it is the researchers’ opinion that these “digital born” students might not appreciate soothing music. Therefore, these librarians might have had challenges when music was introduced initially. It is, however, rewarding that students have been benefitting from this strategy. As Hallman, Price, and Katsarou, in Dolegui (2013), state, “one might imply that this type of music can provide a soothing environment that puts students at ease, facilitating cognitive processing” (para. 5).

All school librarians indicated that they used a multi-media projector and that this had facilitated students’ cognitive ability by providing visual representation of the content. Eighty-eight percent (88%) of the participants indicated that the use of multi-media projectors stimulated students’ critical thinking when they viewed content related photographs and YouTube, PowerPoint presentations, etc.

This finding is supported by the results of Sethy’s (2012) research showing that students did better in content area and developed higher order thinking when technology was used during instruction. The researchers are confident that since all the participants used multi-media projectors in their instruction, their students were likely to develop critical thinking and the visual representation created a better understanding of the content.

Six participants (6) had electronic databases, which provided students with current journal articles related to the curriculum, and this positively influenced their cognitive ability. The provision of current journal articles would have exposed students to historical and current information that added to these students’ knowledge, thus increasing their cognitive ability.
Figure 8 shows 26% of the participants indicating that students’ preferred learning style was catered to because they were allowed to view and listen more than listening only, while 19% who preferred to listen had the opportunity to do so. Twenty percent (20%) of the school librarians also indicated that students had the opportunity to create presentations, while 19% and 15% indicated that students were able to model the correct examples of content shown. Students whose learning styles were interpersonal and intrapersonal were also accommodated, as is indicated by 9% and 6% of the school librarians, respectively. Askar and Altun (2009) also agreed that technology enables students to navigate their learning path. This confirmation suggests that technologies can indeed positively impact students’ cognitive ability, and it does not matter which learning style students possess.
The data in Figure 9 indicates that 40% used PowerPoint in their instruction, 36% used YouTube, 8% Blogs and 7% Wiki, 2% Podcast and 3% Twitter.

It is obvious that the participants had the use of new technology in their instruction, which involved sight, sound, and color. Some were social media that secondary school students seem to prefer; this may have made them more attentive in class, which means they were likely to learn more. Even though Facebook is a popular Web 2.0 tool, it was not the tool most used by the participants. The researchers deduced that some school administrators are not in favor of having this tool in their institution. Correspondingly, in research conducted by Stewart (2009, p. 19), 20% of participants indicated that they did not use Facebook because the school policy banned the use of social media in their schools. It would appear that PowerPoint is well-used or even overused. The probable reason is that it is the easiest strategy to use, and if created attractively, it will hold students’ attention. It is also possible that participants did not use podcasts, Twitter, and blogs as instructional tools as they were not very proficient at using these tools.
The data in Table 3 indicates that the participants’ pedagogical practice was modified in that 53% began delivering notes to students electronically, 49% delivered assignments electronically, 37% had students delivering assignments electronically to them, 27% used e-books to supplement print collection, 49% indicated that there was more communication with students, 41% used technology as an assessment tool, 71% indicated that using the technology provided greater participation among students, 88% used it to retrieve content for their lesson plans, and 90% retrieved content for teaching.

The data revealed that these participants’ pedagogical practice was modified in that they used the various technologies to deliver instruction or to prepare their lessons. This impact seems to have made certain aspects of their teaching—for example, delivering notes and assignments to students and exposing them to e-books—come in line with current practices in other parts of the world. This approach will allow students to become familiar with these teaching strategies before they transition to institutions of higher learning where these pedagogical practices are the norm.

The pedagogical practices that call for collaboration among students are ideal as interaction among students can generate valuable discussions from which both teacher and students can learn. It will also improve the social interaction among students which will help them in the world of work.
The retrieval of information for lesson plans and content for teaching will provide these participants with current teaching strategies and ensure that both students and teachers will stay abreast of new knowledge and school librarians of new teaching strategies. It is important to note that because of these technologies, participants had easy access to information.

**Conclusion**

Based on the findings, it can be concluded that several technological devices and infrastructures were located in school libraries or the computer labs to which librarians had access. The findings also show that technologies in these school libraries facilitated students’ cognitive ability by way of catering to students’ preferred learning styles, facilitating out of classroom communication between students and teachers, and among students, and facilitating the research and creation of knowledge. Technology also facilitated modification in the pedagogical practices of teachers by providing tools that they can use to cater to the differing learning styles in their classrooms. Technology has also given school librarians several ways to collect up-to-date content for lessons. The use of technology as a tool thus facilitated participants’ efforts to develop students’ cognitive ability.

It is important to note that the concept of BYOD already exists in the schools of these countries, even though it is restricted to the upper school. It is hoped that the findings of this study will form the framework for this concept to be fully embraced in all schools in the Caribbean. As the proliferation of technology in Jamaica and Antigua is beyond the budgets of schools and their libraries, this BYOD thrust may free school administrators to fund the acquisition of more software than hardware in addition to other larger devices that will facilitate school librarians’ efforts to provide instruction using modern technology in this information age.

**Implications**

The study implies that an educational policy should be put in place to ensure that the use of technology is a part of all lessons, as the benefits to the cognitive abilities of students have been proven by many studies, including the current one. In addition, library school education in the Caribbean must continue to put an emphasis on the knowledge and use of these technologies and must incorporate newer ones into its curriculum as they are developed; in this way, it can adequately train new information professionals as well as provide continuing education for those school librarians in service. The use of internet related technology ensures that there is a framework for students to acquire lesson content if they are unable to attend class for reasons such as illness or extra-curricular activities.

The findings also indicate that there was a heavy reliance on PowerPoint and YouTube for the presentation of content by the school libraries surveyed. However, social media such as wikis, blogs, and podcasts were used sparingly. As a result of the impact that YouTube has had in classrooms, it would be
prudent of the school librarians to incorporate other web 2.0 tools in view of further facilitating students’ cognitive development and modifying pedagogical practices.

The study also indicated that nearly one third (29%) of the persons appointed to the post of school librarian by school boards are untrained. This implies that the skills of librarianship had to be gained on the job and through workshops and by any other means necessary for them to effectively accomplish assigned tasks.

The results of the study also indicated that 71% of those surveyed are trained, ranging from a diploma in librarianship to a Master of Arts in the field. This suggests that the importance of training in the field is increasing within these two countries.

**Recommendations**

Based on the findings of the research the following recommendations are suggested:

- To accompany this traditional change, school librarians need to be more engaged in the use of web 2.0 tools such as blogs, wikis, podcast and Twitter. These tools will foster greater student collaboration and cognitive development in non-traditional ways.
- There is room for improvement with regard to certification of school librarians in these two countries; thus workshops are needed to empower these persons to carry out their tasks as effectively as possible until all are properly trained.
- Minimum qualification standards for the appointment of school librarian must be established within these countries.
- A study should be conducted using other countries within the Caribbean to get a more regional understanding of how technology is facilitating students’ cognitive ability and changing the pedagogical practices of school librarians in the region.

**References**


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The onomatopoeia and your school libraries

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According to Article 5 in school library law in Japan, a teacher librarian should be posted to the school library. However most of teacher librarians are involved into the other tasks in school so much that they cannot afford to engage school library. The students, who take lesson on school librarianship at university, are less experienced in libraries in school days. Therefore at the beginning of lesson I always try to execute the activity of describing school libraries into onomatopoeias. This activity encourages them to study school librarianship. We will find out the condition, the problems and the challenges of school libraries in Japan.

Keywords: Onomatopoeias, Teacher librarian, Training course, Brainstorming

1. Background
In Japan, the school library law was enacted in 1953 after the World War II. In the school library law, Article 3 says “All schools should have a school library”. While Article 5 says “A teacher librarian (at least) should be posted to the school library”, the second schedule had said “A teacher librarian should not be posted to school library for a short period”. We had no training course of teacher librarians yet in those days. Besides there were a few teacher librarians with certification. After that, in spite of growing certified teachers gradually, we have less expectation that the condition was improving. According to the second schedule, most of school libraries had been understaffed for approximately 60 years. Exceptionally full-time teacher librarians were appointed to school libraries. The post of the full-time teacher librarians depended on the local broad of education. One of examples was the high schools in Tokyo.

The school library law was reformed in 1997. All lengthy endeavors of the Japan school library association and other groups had led to the amendment of the school library law. As a result, teacher librarians certificated weren’t appointed to schools with more than 12 class rooms until 2003. Thus teacher librarians have been appointed to school libraries since 1st April 2003. Now roughly 20,000 schools nominate teacher librarians. Teacher librarians are appointed in some small schools. However some teacher librarians are reluctant to do their work in school library. Because they teach in their classes so busy and hard that they cannot afford to manage their libraries. If they want to do anything in their libraries, all they do might be open the door and receive their students into library. In contrast some schools assign a school librarian into their library and they work actively. The school librarians aren’t required to have qualification of teacher as well as other countries. The activities of school library depend on staffs’ effort and the support of headmasters.

So I mentioned above, most of students, who study to be a teacher librarian in university, inconsistently have less experience in school libraries. In the school days they
passed, the library often closed. Some of them study hard for the entrance examination of university and others devoted themselves to extracurricular activities in school. In Japan, baseball game and football game are very popular among of high school students.

I often try to start in using brainstorming with onomatopoeias. At the beginning of lesson and training course of teacher librarian at some universities, students and trainees are encouraged to recollect school libraries which they have used. And then they are asked to put their school libraries into particular words, “onomatopoeias”.

2. Example of the lessons

There are plenty of onomatopoeias in Japanese language. For example, “Niko-Niko” means “smiling happily”, “Gera-Gera” means “laughing aloud”. Otherwise a dog is barking in “Wan-Wan”, a cat is meowing in “Nyaa-Nyaa”. Usually we cannot speak to persons and write a sentence without onomatopoeias in Japanese language. Japanese onomatopoeias enable us to widen the range of expressions.

At the beginning of lesson, students are encouraged to come up with onomatopoeias concerned to their school library and put them down notebook in 3 to 5 minutes in the class. And then students are divided into 5 to 3 persons’ gropes, talking about their onomatopoeias in 5 minutes. Facilitators are selected in each grope and they will collect the words in each grope. It is like a brainstorming. On behalf of each grope, students pick up them. I collect the onomatopoeias and put them down to the blackboard in classroom.

Bad impression

Most of students very often use the word “Shiin” to describe their school libraries. This onomatopoeia means silence or soundless. According to the rules, they were always required to be silent in school library. Some students say “Jime-Jime”, “Donyori”, or “Doyoon”. These words mean moisture and humid. In Japan we have a rainy season in June and July. Moreover typhoons often strike Okinawa islands to Honshu, the main island of Japan in August to October. The locked door of school library easily caused to be filled with the humid air in rainy and typhoon seasons. They felt even sticky on the books.

Some students say “Suya-Suya”, “Guu-Guu”, or “Zuuu”. These words mean that someone is napping, deeply sleeping and snoring. Because the atmosphere of school library is always ease and comfortable for themselves. But these words say that there are a few users in school library. “Kotu-Kotu” is the sound of footsteps. “Kari-Kari” sounds that someone is writing with a pencil. Most of students consider a school library as a place to study at the risk of their lives for the entrance examinations of high schools, colleges and universities – now the entrance examinations are not extremely keen, rather to say, it is seemed to be easy to enter a particular university even. “Koso-Koso” is whispering, or that someone keeps acting in secret. These words create, if anything, a bad impression. I mean the bad impression includes a static situation. I would rather to say that school libraries have not been frequently used in Japan. In those days libraries were located in the north side of school building. It was difficult to come to school library for teachers and students. A school library looked like a storage of the books off limited to students. Some school libraries are still not accessible for the staff and students.

Good impression

Recently I found some words that give a good impression in students’ statement in class. For example, “Waku-Waku” means that someone is expecting what is likely to
happen. “Uki-Uki” expresses such feeling as someone is skipping happily. “Honwaka” or “Poka-Poka” sounds warm and heartfelt. These days school libraries are likely to be located in the south or east side of school buildings when the school buildings are designed to be constructed or reformed. “Kira-Kira” has two meaning. They are that the sun or stars shining and that someone’s eyes are sparkling.

“Dokki” expresses shocked or astonished with something. “Doki-Doki” is a heart beating with exiting, expecting, or scaring.

“Wai-Wai” is that students are making some voices chiefly. “Doka-Doka”, or “Doya-Doya” are that a big grope of students comes to library at once. “Uro-Uro” is walking around in the library and looking for something.

“Pera-Pera” has two meanings; the one is turning over the pages of book and the other one is exactly speaking something with fluency but rather chatting with someone.

“Pecha-Kucha” has clearly the meaning — chatting with someone.

These words gave us a good impression. I mean the good impression includes a lively situation. I supposed that students came into school library and joined in some activities with their teacher or librarian. The aspect of school libraries is changing gradually. Actually Japanese teacher librarians work so hard in class that they are scarcely involved with their libraries but other teachers and students are likely to use the libraries. I found some activities in these words. It is the evidence that students work in school library.

Other examples

“Batan” and “Patan” are the sounds of a book falling down on the shelf. “Zuraa” is a scene of books standing on the shelves. “Kichiri” is a scene of books standing neatly. “Guichiri” is a scene of books stuffed without the crevice.

“Pi!” sounds scanning the bar codes on label of book’s cover when students borrow book. “Kacha-Kacha” sounds typing a keyboard. However they seldom use computers in their library for other purpose than circulation of materials. Students come to a computer room when they use CD-ROM and DVD-ROM, access to Internet or for information retrieval. School libraries are unlikely to connect with computer room in Japan.

3. Conclusion

I think that this programme of describing school libraries with onomatopoeias is popular among of students. They have a very good time at the activity. It brings them back to their libraries in school days and they are talking about their libraries with friends. The onomatopoeias inspires them to start studying on school librarianship more interestingly. With analysing of these words, we will find out condition, problems and challenges of school libraries in Japan. We know the changes of school libraries in Japan.

References

Biographical note
The school library as a "culture agent":
A Case Study of Sub-Cultural school libraries in Israel
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Introduction

Generally speaking, the Jewish population world-wide includes also two traditional sectors: modern orthodox and ultra-orthodox. Large communities of both population sectors exist in Israel and abroad, comprising 30% of Israel’s population and about 20% of the Jewish population outside the state of Israel. Both population sectors are characterized by observance of Jewish law and commandments, placing great emphasis on family life and personal modesty. However, the ultra-orthodox seek to insulate themselves from surrounding secular society and to achieve maximum cultural and social segregation. Striving to minimize their consumption of "secular" media, printed and electronic, they have developed their own subculture and recreational activities, isolated from the mainstream literary life in Israel (Friedman 1991, Zicherman 2014). While the general Israeli population, particularly youth, spends about a third of its leisure time watching TV, and another third on internet surfing, the ultra-orthodox population sector is totally different in this respect. The vast majority of these families avoid television and in principle do not own one. Many of those possessing home computers are not connected to the internet. Consequently, reading remains one of the main leisure activities, creating a constant demand for books, magazines and newspapers (Zicherman and Kahaner 2012).

Justly claiming that all literature conveys some message, and that there is no value-free literature (Karmi-Laniado 1983, Regev 2002), spiritual leaders of the ultra-orthodox communities insist that both adults and youngsters be exposed only to books and other reading materials upholding and promoting the population sector’s values and lifestyle. The demographic reality of large families results in a vast population of young book consumers, for whom reading is an alternative to television and the computer. Both population sectors mentioned above maintain their own separate public educational system, with most schools, but not all, having school libraries of various sizes. These school libraries, together with the community’s public libraries, are supposed to fulfill the reading needs of children and youth attending the community schools.

Our assumption was that these school libraries differ considerably from other school libraries serving the non-orthodox population. Since very little research, if any, has focused on this aspect, they warrant an exploratory study, which will hopefully lead the way to additional ones.

Purpose of the study
The main objective of the present exploratory study was to examine the extent to which school libraries in this population sector serve as a "culture agent". More specifically, our aims were:

1. To explore the characteristics of book collections in the sector's school libraries, especially regarding their content and the issue of external or internal censorship.
2. To gain insights concerning the growth rate of book publishing in this sector and its sociological and cultural reasons.
3. To gain insights concerning the authors of this unique children's literature, their motives as well as their opinions and attitudes towards various facets of life and society.

**Socio-cultural Background**

The ultra-orthodox community constitutes approximately 15% of Israeli society and about 10% (500,000 people) of the Jewish population in North America, mainly in New-York and New-Jersey. Smaller numbers live in Western European countries, mainly in the UK, France and Belgium. This community is a very unique and distinct group, in that it lives with strict adherence to Jewish Law. To an outsider, ultra-orthodox society may seem monolithic, but, in fact, it includes numerous subgroups with different customs and varying degrees of openness to the modern world. Nonetheless, all the subgroups have much in common, as already described by sociologists (Friedman 1991, Zicherman 2014, Zicherman and Kahaner 2012):

1. A strict observance of Jewish commandments and deep faith in Divine Providence and in free will, namely the ability to choose between good or evil.
2. Obedience to spiritual leaders, the rabbis, whose rulings carry much weight.
3. Attributing paramount importance to the study of Jewish sacred texts, primarily the Talmud.
4. Retaining the traditional division of roles between men and women, with significant changes, however, in recent decades.
5. A cautious view of the modern world and its new technological innovations, like internet, i-phones etc.
6. A closed society with their own communities and settlements, stressing personal integrity and mutual assistance.
7. A separate educational system which inculcates the ultra-orthodox sector principles in the next generation, offering a genuine alternative to modern secular society and culture. Their spiritual and educational leaders strongly oppose, on ideological grounds, any use of 'secular' media, both printed and electronic, including children's books. Thus, they have developed their own subculture and leisure activities, partly isolated from mainstream literary life in Israel.
8. A unique mode of modest dress and separation of sexes in their educational system. Youth are formally introduced by their parents or a professional matchmaker, based on similar background, sub-group affiliation, shared aspirations and financial compatibility.

10. Placing a great emphasis on family life, holding the family as the main institution.

Methods
The ultra-orthodox educational system includes more than 1300 kindergartens, about 700 elementary schools and close to 500 high-schools. Libraries in kindergartens differ considerably, in many aspects, from those in elementary schools and high-schools, and therefore it was decided to focus on libraries in elementary schools, consisting of 1st to 8th grades.

A combination of quantitative and qualitative methods was used, including visits to several school libraries, browsing in their collections and interviewing librarians, school students and their parents. Before studying the collections in-depth, a list was composed of about 3000 books held and over 500 were actually located. Their formal bibliographical details were recorded, and qualitative research techniques were applied, including in-depth content analysis of several books.

Findings and Discussion
Rate of growth
An enormous increase began in the 1970's, gaining momentum from 1980 on, thus raising their proportion to over 20% of all children’s fiction books published in Israel. This dramatic rise apparently resulted from an interesting combination of demographic and socio-educational factors, most of which were already described above, in our introduction.

Thus, publishing has become an important economic branch in this population sector, annually producing thousands of books of all genres: novels, thrillers, etc., intended for youngsters, women, and also men. Publishing became as important as the branches of food, clothing and children toys.

Ultra-orthodox children fiction books, like the adult ones, are easily distinguished from their counterparts by their typical "clean" content as well as by their authors and publishers. All latter ones belong to the ultra-orthodox population sector, whose adults and educational institutions, are the main target-population of these books. These books differs markedly from mainstream Israeli children fiction, both in themes and content. This unique type of children literature is didactic (Hovav 1994). For most authors and publishers, their work is not merely a source of livelihood, but a certain calling - a mission that will shape the minds and hearts of future generations.

Former studies already focused on censorship in Israeli school libraries (Yitzhaki 1998, 2001, 2003, Yitzhaki and Sharabi 2005). The current exploratory study, however, has also examined the typical phenomenon of 'self-censorship' in this unique branch of children's literature, published by and for, this specific population sector. The "self-censorship" is manifested in several ways:
1. Adherence to conventions which are deeply rooted in the ultra-orthodox community's system of values. The main characters do not violate Jewish Talmudical law. Most, if not all, books carry explicit or implicit value messages, about the behavior expected of the observant Jew.

2. Absence of any explicit mention of physical or emotional love between men and women, and obviously never graphic descriptions. This stands in sharp contrast to the very common reality of explicit sex descriptions in modern fiction literature.

3. No descriptions of premarital relations, extramarital affairs or spousal betrayal in the family.

4. Surprisingly, content analysis reveals that it is the woman, not the man, who is the real hero of many Ultra-orthodox novels. She is neither glamorous in appearance, nor a careerist super-achiever, but rather a model of good character, with unfailing concern for others, and a conscientious observer of religious laws.

5. Until recently, there was almost no mention of marital problems and conflicts or divorce, topics which were taboo until then. Recently, however, such topics have emerged in several fiction books, like in a 2008 book by the known and prolific authoress Hava Rosenberg, whose father was a known rabbi, and whose grandfather was a leader of a certain Hassidic dynasty. Another author - Hayim Walder - tells the story of a young bride, shocked to discover that her new husband suffers from mental illness, and requires psychiatric medications in order to function.

6. Another aspect of "educational censorship" is usually set by publishers. One of them recently acknowledged in an interview: "Upon receiving a manuscript, we first review the content to ensure that it does not contradict ethical values. Negative emotions, such as envy or hatred, can be mentioned, but must be condemned by the author. Our books should provide guidance and inspiration, since the ultra-orthodox sector reader wants to benefit from reading the book, learn its lessons, and enrich and strengthen her/his personality. As an Ultra-orthodox sector publishing house, it is important for us to fulfill this need, and
thus, if we find the book lacking any spiritual or educational benefit, we won’t publish it”.

We may add that the same considerations probably hold also for the home publishing industry of ultra-orthodox books, which comprises about 40% of all Ultra-orthodox sector books.

To sum up, most of the above described is typical of a conservative and traditional society. Scholars of comparative religion can find many parallels to customs of the Puritan society, hundreds of years ago. Sociologically, such school libraries and the fiction literature they carry and disseminate, can be considered one means by which a religious-cultural minority seeks to inculcate in its readers, a specific sub-culture of maximal separation from general secular culture dominating the general society in which they live.

Bibliography


