

Changing the Scope of Library Instruction in the Digital Age

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Chapter 8

Educating Caribbean Librarians to Provide Library Education in a Dynamic Information Environment

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ABSTRACT

The dynamism of the information sector driven by ICT and the resulting impact on library and information science professionals have resulted in significant changes in how teaching librarians in the Caribbean are educated. This research was conducted to: describe the education of teaching librarians; examine the changes in education; and investigate how teaching librarians develop and hone their teaching competencies. A mixed-method approach was used to garner quantitative data from 45 librarians and qualitative data from relevant documents in two library schools. The findings show there were significant changes as new courses and programs were developed, online programs were implemented and faculty qualifications upgraded. These changes were somewhat effective, however, teacher-librarians, who developed teaching skills mainly from teacher training, expressed a need for additional technology skills to make them more effective. It was recommended that LIS schools need to diversify their programs to make the content and the activities more aligned to the day to day practices of these teacher librarians.

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INTRODUCTION

There are a variety of tertiary level institutions in the Caribbean offering various types of professional and technical education and training including two which provide library education. Standing at the peak of this structure is The University of the West Indies (The UWI), a regional institution with three physical campuses located in Trinidad, Jamaica, and Barbados and an open or virtual campus. The UWI is partially funded by government allocations from “contributing countries.” These are Antigua and Barbuda, the Bahamas, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Jamaica, Montserrat, St. Kitts-Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago (The University of the West Indies, 2016). This institution provides undergraduate and graduate degrees in Library and Information Science (LIS) education for the region and over the years has trained personnel from all the territories mentioned previously. The Mico University College, with almost two centuries of teacher training expertise provides specialised training at both the undergraduate and graduate level to personnel for the education section, including teacher-librarians.

The rigors of tertiary education require that institutions provide their students with access to resources and this is usually accomplished through institutional libraries. Librarians are a very important part of this education landscape as they are the individuals who assist learners at all levels to locate, identify, select, and obtain the resources that are critical to their educational success. Caribbean librarians, like their counterparts worldwide, are faced with the challenge of remaining relevant in a shifting information environment where other information workers such as information technology personnel seem capable of performing some tasks normally associated with this profession. One way of ensuring that librarians remain relevant is to provide them with the education that will ensure that they understand their roles and possess the skills necessary to execute these roles effectively. Systems also need to be in place to ensure that library training institutions and library associations offer these individuals ongoing professional development that will help them to continue to remain relevant in this dynamic information environment. Teaching librarians, known as the teacher-librarians at the primary and secondary levels and instruction librarians in the academic setting, occupy a very privileged position as they have the potential to impact a number of individuals. This chapter therefore sets out to:

- Describe the training provided to teaching librarians by library training institutions;
- Examine the changes that have occurred in the content, methods of delivery, and qualifications for library educators in the region;

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- Determine the effectiveness of these changes in preparing teaching librarians to fully execute their roles; and
- Investigate how teaching librarians develop and hone their teaching competencies.

The chapter provides a brief overview of the history of library education generally and more specifically in the Caribbean and outlines the factors that have resulted in changes to library education. It provides an overview of the literature on changes to: content, training, modes of delivery in library education and the qualification for library faculty. It then examines the effectiveness of these changes. It also presents the findings of research aimed at discovering how library education has changed in the Caribbean, how librarians develop their teaching skills, and the effectiveness of the education on their ability to teach. The chapter concludes with suggestions for future research.

BACKGROUND

The Instruction Librarian

The Association of College and Research Libraries (ACRL, 2008) defines the instruction librarian as “any librarian with instructional responsibilities” (p. 4). Walter (2005) concurs as he emphatically states “teaching is the hallmark of the library profession today” (p. 356). This is a consequence of the need to assist users to independently locate, identify, select, and obtain resources in an information rich environment. Library instructions, or bibliographic instructions as it was originally called, is now known as user or information literacy instructions with the changes in name somewhat mirroring the dynamic nature of the service teaching librarians seek to provide to their users. Peacock (2001) sums this up by stating “universally accepted titles” such as “user education” or “bibliographic instructions” (p. 26) address both the evolving role and the established discipline. Library instructors may be found in all types of libraries, but the school and academic librarians more so than their counterparts in other information units have the responsibility to serve as either instructors or instructional partners due to the nature of the parent institutions in which they are employed.

In recognition of the pedagogical role of the school librarian, the School Library Association (SLA, 2006) notes that the school librarian functions as a partner with teaching staff in the education process, a partner in supporting individual learning styles, and a leader and partner with teaching staff in the collaborative design and implementation of information literacy programs throughout the school. The SLA

draws support from the International Federation of Library Association/UNESCO School Library Manifesto which states that within the current information environment “school librarians must be competent in planning and teaching different information-handling skills to both teachers and students” (2009, para 14). Lee (2005) agrees that the school librarian’s teaching role is not confined to serving students, but that she is a “teacher of other teachers who creates more self-reliant users of information resources and technology” (n.p.).

Within the academic setting, librarians seem to have accepted their teaching roles as Israeli librarians believed that teaching information literacy “is more a library role than a faculty role” (Aharony & Bronstein, 2014, p. 113). ACRL on the other hand, advocates a collaborative approach between course instructors and librarians for the teaching of information literacy. It acknowledges that the levels of collaboration may vary among institutions and even within faculties and departments in the same institutions (2015).

History of Training for Instructional Librarians

Formal education for professional librarians, the brainchild of Melvil Dewey, was initiated in 1887 at the School of Library Economy at Columbia College in New York (Gollop, 1999). Whereas provision of library instructions to college students by academic librarians is not a new innovation, Walter (2005) is of the view that changes in the student population and dynamism in the information environment have combined to cause a resultant “significant increase in the scope and prominence of library-based instructional programs” (p.373) worldwide.

In response to the needs of library users, it became necessary for librarians to expand their repertoire of pedagogical skills so as equip users to be more efficient at finding, locating, and using information. The current “instruction movement” has its genesis in the 1970s. It was triggered by the “increasing diversity of the student population” and “increasing sophistication in information technology”. These combined to create a “new interest and direction in library use” (Bodi as cited in Walter, 2005).

Library education in the Anglophone Caribbean lagged behind the developed countries. It was during the early 1970s that regional training for librarians was organized, and The UWI and The Mico University College began training librarians to meet the regional demand.

History of Library Education in the Caribbean

There are four institutions in the Anglophone Caribbean that provide LIS education from the paraprofessional to the graduate level. These are the Excelsior Community

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College, The Mico University College, The University of the West Indies (The UWI), Mona and the College of Science, Technology and Applied Arts of Trinidad and Tobago (COSTAATT).

Collings (1972) mentions that prior to the establishment of these programs, the initial training for Caribbean librarians was offered by recruiting pre-professionals in the libraries and providing them with in-service study so they could sit overseas examinations. The Eastern Caribbean Regional Library (ECRL) in Port of Spain, Trinidad set a precedence in 1942 by offering a six-month training course and awarding participants a certificate of competence. Six years later, a tutor provided by the British Council conducted training courses attended by individuals from other territories including Jamaica. The purpose of these courses was to prepare students to sit qualifying examinations in librarianship. This program came to an end in 1962, and to fill this gap, local library associations from Jamaica and Trinidad voluntarily offered in-service training. The Jamaica Library Service (JLS), the national library service in Jamaica, has also been integral to the provision of in-service training to its employees at various levels on the organizational ladder and to personnel working in school libraries. This training was done through “providing summer courses, seminars and an annual all island conference, sending junior staff to the ERCL tutorial sessions and, providing scholarships each year for studying abroad” (Collings, p. 129). The central library in Trinidad also provided ongoing staff development.

With no training institution in the Caribbean, prospective librarians looked to overseas studying opportunities with the majority of them going to United Kingdom, Canada, and the United States. The challenge posed by this practice was the funding required and the fact that this training was not specific to the issues common to libraries in the Caribbean (Collings, 1972). Another concern arose when the revised syllabus for the Library Association required a period of residential study in British library schools. A solution had to be found to these challenges and so the idea to establish a regional library school in the Caribbean was discussed between Jamaica and Trinidad and Tobago. In 1962 the matter was proposed to The UWI and in 1966, the Jamaican government through prompting from JLS applied to UNESCO for assistance to implement a library school to serve the region.

The 1970s was a very fruitful period in the development of library education within the region as both The University of the West Indies and The Mico University College (then called the Mico Teachers' College) launched library training programs. The Department of Library and Information Studies (DLIS), UWI, records that in 1969, a UNESCO memorandum of understanding was signed between Barbados, Trinidad and Tobago, Guyana, and Jamaica to support a regional library school. In 1970, the LIS degree program commenced at The UWI, Mona, and UNESCO extended its support one year later by providing a grant towards the cost of establishing

the library school. The program was extended to include a special certificate and post graduate diploma in 1973, one year before the first set of graduates exited the program. An offsite training program was launched in 1976, and in 1987, the post graduate diploma was upgraded to the Master of Library Science (MLS). The launch of a Certificate in Records Management in 1994 was followed by a Bachelor of Education in School Librarianship and a Master of Arts in Librarianship three years later.

The Bachelor of Arts in Education was a joint venture between the Department of Educational Studies and the DLIS. The program guidelines for 1999/2000 state that the purpose of the program was to “create a cadre of school librarians” for the primary and secondary schools. The Bachelor of Education in School Librarianship was discontinued in 2012 due to changes in the education sector and decreasing enrolment (Stewart, 2012). These changes had implications for qualification and registration of teachers generally, but would have significant impact on those trained as teacher librarians. The UWI reports that by 2012, 1231 students from territories across the Caribbean had graduated from both the undergraduate and graduate programs. The department currently offers two undergraduate degrees; three masters’ degrees and an MPhil/PhD, which prior to 2015 were offered in the face to face mode, but currently includes an online mode.

The Mico University, the oldest teacher training institution in the western hemisphere (The Mico University, 2015), established its library education program in the 1970s in response to a growing need for teacher-librarians in schools. It is currently the only institution in the region which trains teacher librarians. The program initially operated out of the Department of English and was a popular option for students, due in part to the flexibility of the program. Library education could be paired with any other subject (such as Science, Mathematics Geography etc.) as a double major. The institution has recently upgraded its three year Diploma in Library Education to a Bachelor of Secondary Education (B. Ed.) specializing in Library Education.

The Excelsior Community College, under the purview of the Council of Community Colleges of Jamaica (CCCJ), offers both a certificate and an associate degree in Library Technical Studies. The programs train paraprofessionals for the information sector. In 2015, an articulation agreement was forged between The CCCJ and The University of the West Indies. This allows graduates from the community college who hold an Associate Degree to advance to The UWI and gain exemption with credits for some level one courses.

The latest addition to the library education sector in the region is the Bachelor of Science in Library and Information Science offered by the COSTAATT. This

program was developed to “enable library technicians, assistants and aides to advance in the profession” (COSTAATT, 2011, para 4). The program produces graduates who are able to “support, manage and promote library services or work as information science professionals in any organisations” (para. 4). COSTAATT started its program in 2012, and at the time of writing, 10 students had graduated.

COSAATT and Excelsior Community College are not included in this research for the following reasons. The latter trains paraprofessionals who would not be expected to serve as instruction librarians in either the school or academic libraries. The COSTAATT program is new and the graduates would not be in a position to reflect on and evaluate the training.

Reasons for Program Changes

Snape (1972) recognized the dynamism of the information sector and librarianship in particular and two decades before the information explosion notes regardless of the “field of librarianship we care to examine, practitioners are constantly reminded of the problems of change and library educators must just as often alert their students” (p. 126). This change has had significant impact on the education provided to librarians in general and instructional librarians are also affected. There are several factors fueling the change in the training provided to teaching librarians worldwide. ACRL (2015) notes that that the need to rethink the training of library educators is fueled by “the rapidly changing higher education environment, along with the dynamic and often uncertain information ecosystem” (para. 2). Peacock (2001), in support of the idea of changes in the higher education environment, cites the impact of a shift in the “educational paradigm” which has resulted in reforms of graduate curricula generally and placed greater demand on support services such as the library. This has in turn impacted training as “the new information literacy model represents a more sophisticated conceptualization of the librarian’s role and relationship to the client as well as that of content design and delivery” (Peacock, p. 27). She expounds that this change now requires that instruction librarians are “strongly positioned as key educators ... empowered with an educational competence and professional confidence equal to that of their academic peers” (p. 27). This new role demands new knowledge and skills, and the education offered to LIS students should begin to equip them with these.

In examining changes in library education, Walter (2005) focuses on the likely challenges to academic libraries and administrators resulting from changes in scholarly communication, advances in information technology, and new models for professional staffing of academic libraries. From the Nigerian perspective

Anunobi and Ukwoma (2009) identified globalization and technology as the change factors in that country, and state that these demanded the teaching of new skills. Although technology is included in the factors advocated by all the researchers who study changes in library education, Stoffle and Leeder (2005) are of the view that technology in itself is not a “source of change, but a symptom of other changes in the field” (p. 314). Hu (2013) in evaluating the immense impact of technology on LIS education states “education of library and information (LIS) professionals is strongly impacted by IT, because of the current need for changed competencies of professional librarians and information scientists, and the consequent change of educational pedagogies and instructional techniques” (p. 1).

Library and information science education in Europe was impacted by the Bologna Declaration of June 9, 1999. This was a part of the Bologna Process which involved 29 European countries signing the declaration committing their governments to create the European Higher Education Area (European Associations of Institutions in Higher Education, 1999) which shared a system of comparable qualifications across countries. The European Association for Library and Information Education and Research was an outcome of the European Higher Education Area (Johnson, 2013). Based on Johnson’s assessment, the expectations of the founders of the association were largely unfulfilled. He therefore calls for more empirical research to review issues such as the academic level at which education for librarianship is undertaken. However, this declaration had significant impact on the education of librarians in Europe and this was supported by evidence from the Tallinn University which implemented courses under this program (Virkus, 2012).

Corrall (2010) identified four trends that have impacted the role of librarians. These are: convergence of academic services, combining libraries with information technology and other kinds of academic support, awareness of information literacy, and recognition of the teaching role of the librarian. She therefore encourages a proactive stance to these changes, advocating that professional “education for librarians has to anticipate changes and developments in professional tasks, roles and expectations (p. 568). She suggests that this should not be done just at the micro level as it relates to the different library specialties, but also at the macro level.

Library education has changed and is constantly changing in a dynamic information environment. An examination of the factors impacting these changes as provided by researchers has revealed three major change factors. These are: changes in higher education; a demand for information literacy in an increasingly complex information environment; and the impact of information and communication technology on the way information is produced, published, stored, selected, and retrieved. There is a need for library training institutions to prepare librarians who possess the competencies to teach learners to access information independently.

REVIEW OF LITERATURE

UNESCO perceives that the goal of library education is the development of professionals who have the competencies to establish, manage, operate, and evaluate user-oriented systems and services (Large, 1987). This review examines the changes that have occurred in the content, methodology, and qualifications of library faculty. It also examines the effectiveness of the training offered to librarians generally. Although this chapter focuses on education provision for the instructional librarian, lack of literature in this area resulted in the use of information related to the training of librarians generally. In addition, lack of literature from the Caribbean region resulted in a reliance on literature from other countries and reference to international guidelines from IFLA.

Changes in Library Education

ACRL (2008) advocates that librarians need to develop a “more focused set of skills to teach effectively in library instructions program due to the growth in the role of instructions and information literacy” (p. 2) and these could not be facilitated by the programs that previously existed. Changes in library education occurred in the content of the programs, the modes of delivery, and the qualifications of the faculty. This review of literature explores the changes that have occurred in library education and how effective these have been in preparing instruction librarians for their roles.

Content

Edegbo (2011) writes that the most significant change in LIS education worldwide is a change in the curricula. This change does not seem to be as effective as expected as in 2004, Michael Gorman Dean of Library Services at the Henry Madden Library, California State University and past president of the ALA, called for a national LIS curriculum for the United States. He stated that the content of the current curriculum being used for the training of librarians was inadequate. He argued that cataloguing, reference, collection development, and other such core courses considered to be central to library education were no longer core to the training of LIS students but had become elective courses. Ocholla and Bothma (2007) agreed and noted in Eastern and Southern Africa “curricula of many LIS schools currently target the emerging or broader information market” (p. 76), at the expense of traditional library courses.

In a case study of the Sheffield Information School, Corral (2010) found that there has been continued review and renewal of both the content and methods of delivery of the LIS program, underlining the fact that in a dynamic environment both content and pedagogy will have to change to facilitate changing needs. Changes

to the curriculum at Sheffield included addition of new topics and the introduction of elective courses.

The changes in the information environment have resulted in the release of a new set of guidelines for the education of librarians in 2012 by IFLA. These are to serve as “a set of guiding principles of preferred practices [for LIS schools around the world] to use when establishing and running their education programs” (Smith, Hallam & Ghosh, p. 3). These guidelines which provide a framework within which countries will develop their own programs, can be used for program revision and improvement, to design new programs or to serve as a comparative tool against which countries can evaluate their programs. The guidelines articulate that the core elements of the LIS curriculum should include:

1. The information environment, societal impacts of the information society;
2. Information policy and ethics, the history of the field;
3. Information generation, communication, and use;
4. Assessing information needs and designing responsive services;
5. The information transfer process;
6. Information resource management to include organization, processing, retrieval, preservation, and conservation of information in its various presentations and formats;
7. Research, analysis, and interpretation of information;
8. Applications of information and communication technologies to all facets of library and information products and services;
9. Knowledge management;
10. Management of information agencies;
11. Quantitative and qualitative evaluation of outcomes of information and library use; and
12. Awareness of indigenous knowledge paradigms.

individual countries are encouraged to determine the coverage to be given to the elements identified by IFLA based on their local needs.

IFLA also advocates for the inclusion of a general education for librarians which should constitute topics from other disciplines in addition to a practicum which would allow students the opportunity to “appreciate the interplay between professional theories and their application in professional practice” (Smith, Hallam & Ghosh, p. 6). This organization also shares the view advocated by Corral (2010) that regular review of the curriculum is important to ensure continued relevance.

In describing the response of the Sheffield Information School to the shift from training in traditional librarianship in its preparation for academic librarians, Corral (2010) states that the curriculum has been responsive to changes in the

environment, research discoveries, teaching innovations and practitioner feedback. This has resulted in the inclusion of new topics and electives, new qualifications, and the creation of new programs for experienced library professionals who want to enhance their careers. The LIS environment in Israel has also been enriched by the creation of new courses and programs (Shoham, 2001).

Evaluation of LIS curricula has also been taking place internationally. The curricula and qualifications of Eastern and Southern Africa were found to reflect “minimum content, core subjects and credit requirements from LIS education and training internationally” (Ocholla & Bothma, 2007, p. 76). After an evaluation of LIS curricula in Europe as part of the EUCLID project, Kajberg (2008) reports that typically there is a diversity of program structures, levels, course lengths and thematic profiles of curricula. However, he notes that this disparity in curricular content of European LIS programs “does not seem a major problem” (p. 184) as they were reflective of the historical, educational policy and social climate within the individual countries, a position encouraged by IFLA (Smith, Hallam & Ghosh).

In addition to education in the core element of the LIS curriculum, teaching librarians will require additional knowledge and skills to equip them for the teaching role. Walter (2005) suggests where there is lack of adequate information about training programs, an examination of the desired competencies can provide information about program content as training programs are expected to provide trainees with the competencies required for the job. Canadian Association of Research Libraries (2010) outlined the competencies that it believes library educators and “librarians working in an intense research environment” (p. 3) needed. The competencies are listed under the following broad categories: foundational knowledge, interpersonal skills, leadership, and management; collections development; information literacy; research and contributions to the profession; and information technology skills. Under its information literacy competency, it outlines “Learning and teaching – knowledge of learning models and strategies as well as relevant teaching pedagogy and models for the academic environment” (p. 8). This is a clear statement that the instruction librarian is expected to be armed with the requisite teaching skills in addition to core knowledge and skills.

Library associations have also influenced the discussion of the competencies required by the teaching librarian. ACRL developed its “Standards for Proficiencies for Instructional Librarians and Coordinators” in 2008 which sets out proficiencies needed by teaching librarians at the tertiary level. These standards are placed into 12 categories each with detailed core skills that teaching librarians should possess. These categories are:

1. Administrative skills;
2. Assessment and evaluation skills;

3. Communication skills;
4. Curriculum knowledge
5. Information literacy integration skills;
6. Instructional design skills;
7. Leadership skills;
8. Planning skills;
9. Presentation skills;
10. Promotion skills;
11. Subject expertise; and
12. Teaching skills

any program which is intended to train instructional librarians must ensure that it provide these librarians with opportunities to develop the skills and subskills advocated by ACRL. Four of the categories developed by ACRL directly related to the teaching role. These are curriculum knowledge, information literacy integration, instructional design skills and teaching skills.

The place of technology in the LIS curriculum has been examined by Hu (2013) who studied the impact of technology on the content of the curriculum of 14 top LIS schools in the United States. Her findings indicate that in the ideal LIS curriculum, one third or a half of the courses offered should be information technology courses. She explains that these should focus on database and system management, information organization and information services. She proposes the collaboration between LIS schools through shared online information technology courses and that there should be constant updating of competencies of information technology professionals. This constant updating could be done through in-service training.

Mode of Delivery

As the content of LIS programs change, mode of delivery also changes. The delivery of the curriculum should be so structured that it allows for what IFLA refers to as “transferrable skills” (2012, p. 4). In addition, strategies used in teaching and assessment should foster in students the opportunity to develop interpersonal skills, the ability to work in teams, and time and task management skills. Students should also get the chance to develop analytical and problem solving skills. In cases where courses are delivered online, the content, methods of delivery, and quality of the experiences offered should “be comparable to those experiences offered onsite” (IFLA, p. 4). IFLA also advised that in cases where students will take the courses online, they should be informed of the technology requirements beforehand.

Tallin University described the following pedagogical changes that had been made to its program: new pedagogical and didactic changes and approaches; implementation

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of student centred approaches (project based learning) based on constructivist model; attempt to improve and innovate traditional education as well as to provide new and alternative learning opportunities such as e-learning; and implementation of the blended model (Virkus, 2012). Other changes are taking place as Corral (2010) reports that at the Sheffield Information School new methods of delivery and assessment have been developed. LIS institutions in Eastern and Southern Africa have incorporated information communication technology (ICT) in the delivery of the curriculum. Kajberg (2008) notes that European LIS programs have what he describes as “typical” delivery formats, forms of teaching and assessment. These changes provide evidence that the mode of delivery for LIS programs is responsive to changes occurring in education although the changes are different in each location.

Qualification of Staff

LIS faculty is a significant group in LIS education as Fisher, Hallam and Partridge from Australia concluded that staff need to grow and develop (2005) so that they can deliver the quality education and training demanded by the changing environment. Gorman (2004) states that the “most important part of the resolution of the library education problem lies in the nature and type of faculty members in LIS schools” (p. 378). He opines that because many of these individuals work in research universities, they had adopted a practice of engaging in pure research instead of applied research. This may have resulted from lack of training in librarianship and little experience of working in a library. IFLA guidelines state that teaching and research staff should have qualifications comparable to that required of other faculty members (Smith, Hallam & Ghosh, 2012). It takes the position that this qualification should be both professional and academic and should be supplemented by administrative ability and leadership skills, but it does not outline what constitute administrative ability and leadership skills.

In-Service Training

In addition to providing pre-service training, IFLA advocates that LIS programs should be concerned with ongoing professional training for their graduates. This should be facilitated through the provision of “suitable workshops and short courses” (IFLA, 2012, p. 6). The association advises that this can be done in partnership with other agencies. However this is not given much coverage in the LIS literature. The popularity of the workshop as a tool for continuing professional development is supported by Gulbraar (2005).

In attempting to discover how librarians became better teachers, Walter (2005) conducted a survey of over 400 public service librarians housed in research libraries

across the United States. It was discovered that in order to become more effective teachers 36% of the librarians were likely to consult their colleagues. Less than 25% of them were likely to attend in-house workshop, participate in continuing education in the field of education, psychology or instructional design; attend a professional conference; or talk with faculty.

Perceived Effectiveness of Change

Complaints about the lack of readiness of LIS graduates to perform their duties have been rebutted by Stoffle and Leeder (2005) who state that this position represents a misunderstanding of library education. From their perspective, LIS education seeks to provide the graduate with a broad based education for the myriad career paths that they can pursue. The organization which employs this graduate then has the responsibility of providing training. Gorman (2004) sums this up succinctly by stating “education is the realm of the library school, training is the duty of the employing institution” (p. 377).

While it was challenging to find research which provided data about how library educators rated their teaching skills, two studies were found that provided information about the assessment of general knowledge and skills acquired through library education.

In examining the training provided to library and information science professionals in Kenya, Kavulya (2007) conducted a survey of 63 lecturers, library professionals, and employers and discovered that 82.3% of these believed “unless steps are taken to improve the quality of LIS training in Kenya, persons from other fields will be better placed to perform some information functions” (p. 217). In this survey, less than 40% of the respondents felt that the courses and length of “practical attachments” were adequate.

Employing institutions in Canada reported higher levels of satisfaction with the knowledge and skills of Master of Library and Information Science (MLIS) graduates than the graduates themselves. Sixty-four percent of the graduates were satisfied that their programs provided them with the competencies for their jobs and this differs from the 75% of the administrators who reported their satisfaction. In addition, under 63% of the recent graduates were of the view that their training equipped them with general skills and abilities demanded by their jobs. Less than 50% considered their technology skills adequate. The satisfaction with management, leadership, and business skills fared worse as the number of satisfied graduates was 25% and below (University of Alberta, 2005).

A survey of 103 regional graduates of the Department of Library and Information Studies at The UWI revealed that they believe the “curriculum creates graduates who were able to function effectively in a dynamic IT environment”. In addition, 96.1%

of these graduates reported that “as a result of DLIS IT curriculum they were able to discharge duties” related to technology (Brissette, 2009). However, some respondents in this research advocated for additional technology courses to be included in the curriculum. This reveals an ambivalence to the level of technology skills that are needed and could also be a reflection of the rapidly changing information environment and the need to be aggressively upgrading technological skills.

Developing Instructional Competence

Walter (2005) is of the view that since librarians are not provided with formal instructions in teaching, they compensate by developing their skills through self-study, workshops, and short courses. These are usually offered by local, state, and national professional associations. On the job training also provides another option for teaching librarians to achieve this goal. In 1986, a survey of Wisconsin librarians revealed that self-study was the most popular form of continuing education option for librarians who wanted to improve their teaching skills (Mandernack, 1990). A national survey conducted in the United States in 1988-1989 supported the popularity of self-study but also found that on the job training was equally popular in helping librarians to develop pedagogical competence (Albrecht & Baron, 2002).

Another national survey conducted a decade later supported the previous finding that self-study was the method most widely used by teaching librarians to improve their teaching skills and over 80% of them said they learned to teach through on the job training (Albrecht & Baron, 2002). To help teaching librarians develop their instructional competence, the LIS school at the University of Illinois at Urbana-Champaign has become proactive and provides an advanced course in teaching (Cooke & Hensley, 2013). This would ensure that teaching librarians enter the world of work prepared to teach and that they will not have to acquire the basic pedagogical skills through on the job practice.

Library education has been constantly changing and this includes the education provided to instruction librarians. This change is evident at the macro level as in Europe and at the micro level as in the case of Tallin University and Sheffield Information School. Changes are also been observed in the type of courses offered and the content of these courses. One of the significant drivers of this change is technology as it places demands on librarians to acquire new skills to perform in a technology rich environment if they want to stay relevant. Technology has also impacted the mode of delivery of library education, as it provides opportunities for online learning across geographical boundaries.

METHODOLOGY

This research used the mixed-method approach involving “the collection, analysis and integration of quantitative and qualitative data in a single study” (Plano Clarke, Petska & Cresswell cited in Heese-Bibber, 2010, p. 5). Mixed methods enable triangulation (Heese-Bibber, 2010) and should make the findings of this research more valid and reliable. Other benefits of the mixed methods that were applicable to this research were the ability to take advantage of the strengths of both types of research, and the possibility of arriving at “more effective and defined conclusions” as the results of one method would inform the other (Plano Clark & Ivankova, 2016, p. 6).

A questionnaire was used to collect data in March 2016. It was sent to participants electronically and they were asked to respond within one week. The qualitative data was collected from annual reports and course files in these library schools. Participants were assured that the information they provided would be held in confidence and used only for the purpose of this study. The findings were outlined and then analysed based on the research questions.

Population and Sample

The population consisted of 140 school and academic librarians from across the Caribbean. This included 130 school librarians and 10 academic librarians. These librarians were teaching information literacy in schools, colleges, and academic libraries. According to the Krejcie and Morgan (1970) sampling table, when 140 is the population, 103 is the ideal sample. Simple random sampling was used to select the first 103 librarians. A return rate of approximately 44% was achieved.

Data Collection Instrument

The questionnaire consisted of 13 questions divided into three sections. Twelve questions were closed ended question, one was open ended. Questions gathered demographic details, information on the training provided at library schools and effectiveness of the LIS training for developing teaching skills. A section of the instrument consisted of a Likert scale which required participants to rate the various aspects of their training for developing their teaching skills. In addition, a documentary analysis was done to extract data from library schools’ annual reports and course files. Information was gleaned to answer research questions that dealt with: programs and courses offered, and changes to both courses and programs.

DISCUSSION

Content Analysis Data

For this documentary analysis, information was gathered from course outlines, course files, and departmental reports from The Mico University College and The University of the West Indies. The major findings are discussed under the following headings.

Library Education Staff

Information gleaned from the documentary analysis showed faculty from both institutions had qualifications both at masters and doctoral levels. These individuals were educated as librarians and had practised in the field before joining the faculty. This finding was not in keeping with Gorman's (2004) assertion that some library faculty lacked training and experience in librarianship. At one of these institutions, a change in minimum qualification for employment occurred 10 years ago as new faculty were employed only if they had attained or were in the final stages of completing a PhD. At the other institution, this rule did not obtain.

IFLA (2012) advocates that teaching and research staff should have qualification that is both academic and professional, however, this was not so for all members of the teaching staff at one of the institution. To compensate for any deficiency in pedagogical skills, one of these universities offered teaching skills courses to all lecturers without a teaching degree. In addition, workshops and seminars were held regularly to keep faculty up to date with current teaching methods. This approach could be considered ideal as faculty were always engaged in upgrading their professional practice. If lecturers used this facility it was likely to help them to be more responsive to the needs of students.

Library Education Programs in the Caribbean

There had been changes in the programs offered by these institutions over the past two decades. Table 1 displays new programs, existing programs and programs that were discontinued.

The table shows that over the period four of the eleven programs were discontinued, however, three new programs were introduced in place of defunct programs. Of the seven programmes being offered, three were at the undergraduate levels and four were graduate programs. The Mico University College in its teacher training role offered one undergraduate program for the training of teacher librarians. The table shows the dynamism in LIS education in the Caribbean.

Table 1. Programs offered by both training institutions

Programs	Length of Program in Years [Full Time]	No. of Credits	Status of Program	Comments
Bachelor of Education in School Librarianship	3	69	Defunct	
Diploma in Secondary Education (specialising in Library Education)	3	138	Defunct	Replaced by BEd. in Library Education
Bachelor of Arts in Library and Information Studies	3	90	Defunct	Replaced by BA in Information Studies and BA. In Librarianship
Bachelor of Arts in Librarianship	3	90	Now offered	New
Bachelor of Arts in Information Studies	3	90	Now offered	New
Bachelor of Secondary Education (B. Ed.) specializing in Library Education.	4	145	Now offered	
Master of Library Studies (MLS)	2	36	Defunct	Replaced by MLIS
Master of Library and Information Studies	2	36	Now offered	Converted to multi-mode (face to face and online) New courses added
Master of Arts in Library and Information Studies	2	39	Now offered	Converted to multi-mode (face to face and online) Credits increased from 24 to 39
Master of Archives and Records Management	2	36	Now offered	New
MPhil/PhD in Librarianship	5 (Part-time)		Now offered	

1. **Undergraduate Programs:** At the undergraduate level, students enrolled at The UWI were required to take 90 credits to complete a three year degree. Forty-eight of these credits were gained from taking LIS courses and the others from elective courses (from within and outside the faculty), and university foundation courses. This structure afforded students the opportunity to pursue a minor in another discipline thus increasing the opportunities for employment after graduation, and fulfilling the IFLA mandate for the inclusion of a general education for librarians (IFLA, 2012).

At The Mico, students were required to complete 145 credits in four years (full time). Within this structure, they pursued general and professional courses and a double major in library education and another discipline. This second major prepared

the students to teach a subject at the secondary level. These students were employed as teachers and teacher-librarians. This meant they could function as teachers of the subject they were trained in without working as librarians, as teacher-librarians who taught information literacy and operated the school library, or as both teacher and librarian, managing the school library and teaching the other subject for which they had been trained. This latter is the pattern of employment that most frequently exists.

2. **Graduate Programs:** The UWI offered three masters programs. These are the Master of Library and Information Studies (MLIS), the Master of Arts in Library and Information Studies (MALIS) and the Master of Arts in Archives and Records Management (MAARM). The MLIS is the most popular program attracting working individuals from a variety of backgrounds who want to pursue a graduate degree in the field. The content of these programs was highly prescribed confining students to courses within the LIS field. The only exception to this was the opportunity for Master of Arts students to take a course in the Department of History as it was felt that this course would help to prepare them to work in information units such as museums. This measure was instituted since some graduates found employment in organisations for which they had no formal training. However, the take up of this course was limited. The MAARM was therefore developed to ensure that graduates would acquire the skills and competencies needed to work in archives, records management institutions and museums. Programs at the graduate level were also reflecting the addition of new courses (Corrall, 2010).

In 2005 The UWI began the process of establishing a LIS PhD program. It filled the void as there was an absence of a doctoral program in LIS in the region. It should also assist in the training of faculty as the basic requirement for employment as a lecturer at The UWI was a PhD. Absence of a regional program for doctoral studies in LIS resulted in a lack of qualified persons to fill faculty positions hence the dependence on librarians with PhDs in other specialisations, or the employment of personnel from overseas. This program had not produced any graduates at the time of writing.

3. **Practicum:** All programs included a practicum, but the duration of this varied. At The UWI the practicum last for six weeks for all programs and did not include a teaching component since students were being trained as librarians and not as specialists within the field. As a teacher training institution, the practicum offered by The Mico was built on the teaching model. Teacher librarians were placed in school libraries for three months to teach under the supervision of the teacher librarian and an assigned faculty from the library school, and were

assessed by individuals not attached to their university. This was in keeping with the recommendations of IFLA (2012) which advocated for the inclusion of a practicum in the program. This practicum provided students with hands-on experience and helped them to put theory to practice.

4. **Defunct Programs:** Caribbean library education has been impacted by changes in the education system in Jamaica. The change in the education regulations to make a bachelor's degree minimum qualification for individuals to be licensed to teach resulted in phasing out of two programs for training teacher librarians. The Bachelor of Education in School Librarianship was discontinued since it would not provide graduates with the required number of credits needed for licensing, and the Diploma in Secondary Education was replaced with a Bachelor of Secondary Education. ACRL (2015) states that changes in the higher education environment resulted in changes in library education and this was evident. It is important that training institutions adjust the program offerings in response to the trends and developments in their country so as to remain relevant to the students and the education system in general.

The MLS became defunct when the word “information” became a part of the name of the library school that offered this program. The renaming of the library school was in response to changes in the LIS field internationally, and signalled the intention of the regional institution to keep abreast of international trends. A change in name was also an indication of a shift in focus and so the MLIS was introduced in 2000, replacing the MLS. The MALIS was expanded in 2012 through the addition of four courses. Students were therefore required to complete 39 credits instead of 24. These changes facilitated the offering of new courses such as information literacy which is vital to the teaching librarian. These changes in training are supported by Peacock (2001), who stated that shift in the educational paradigm resulted in changes in curriculum.

5. **New Programs:** At the time of writing the first batch of students were admitted into the Bachelors of Arts in Information Studies and the Bachelors of Arts in Librarianship. These two new programs replaced the Bachelor of Arts in Library and Information Studies. The development of these new programs resulted in changes to the traditional library program and included new courses to reflect the technology demands faced by library school graduates. The BA in Information Studies was developed meet the demand in Jamaica for the education of information professional who were capable of working in archives, museums, galleries and documentation centers.

Eleven new courses were created based on the trends in the library and information environment. These courses were a result of upgrading existing courses, mergers, and development of replacement courses in cases where the content of the previous courses was obsolete. For example, the two cataloguing courses were updated to include metadata standards. Two new courses that were not previously offered were also introduced into the program. These changes mirror those described by Corrall (2010) at the Sheffield Information School and shows that the education of librarians in the Caribbean has been responsive to the changing demands of the information environment as is the case in other countries.

6. **Modes of Delivery:** The demand by prospective students for online delivery due to difficulty of traveling away from home for an extended period and the inability to obtain study leave pushed the DLIS to begin offering the graduate studies programs in the online learning mode (Kerr & Stewart, 2014). Additionally, the regional nature of the institution, the distance between the islands, and job and family commitments meant that individuals from other islands were at a disadvantage in terms of acquiring training in the specialisation, hence the high ratio of Jamaicans at the library school when compared to other nationalities. The Bachelor of Arts in Librarianship was expected to go online in the 2017/2018 academic year.
7. **Program Standards:** The library education program at The Mico University College had to meet standards set out by the national accreditation body for tertiary education. This was to ensure that the program met national standards. The UWI as an accredited institution had its own system of rigorous quality assurance, which included an internal quality assurance committee that evaluated the programs on its campuses every five years.

Developing Content and Teaching Skills

Students were given the opportunity to acquire content and skills for the teaching of information literacy (IL) through IL courses and other courses such as research which provided opportunity for the practice of these skills. IL courses were offered by both institutions. At The UWI, these courses were compulsory for some programs or could be taken as electives in other programs. It was therefore possible to complete to acquire a LIS degree without pursuing a course in IL. The teaching of IL was modelled using video presentations and tutorial sessions. Students were also assigned to teach IL lessons individually as well as in groups. The inclusion of IL courses was The UWI's response to developing the teaching skills of the teaching librarian. As a teacher training institution, The Mico fully engaged its students in courses designed

to teach them content and methodology. This would provide them with adequate content and the necessary pedagogical skills to execute their teaching roles.

Technology Courses

There was an increase in the number of technology courses offered by the two universities. At The UWI, technology courses accounted for 25% of the graduate courses and 17% of the courses in the undergraduate programs. Other courses such as metadata had a significant technology component. The Mico implemented major changes when the programme was upgraded from a diploma to an undergraduate degree and this included an increase in the number of technology courses. Hu (2013) discovered technology courses accounted for 25% - 33% of the courses at the top 14 LIS schools in the United States. The number of technology courses offered in the Caribbean is less. Additional research would be needed to determine if the level of technology advocated by Hu is needed based on the work requirements of Caribbean librarians.

Faculty Method of Delivery

Changes in the information sector impacted the methods and modes of delivery used by lecturers. The records showed that special arrangements were made for faculty to be engaged in workshops to upgrade their skills in teaching in the online environment (Kerr & Stewart, 2014). The new mode of delivery exposed students to a new teaching/learning model. This preparation was critical in that lecturers needed to have the ICTs skills to operate in the online environment as well as the knowledge of how to provide teacher immediacy and teacher presence for these students (Stewart, 2016).

An examination of the course outlines revealed that up to 2010 the mode of delivery was primarily lectures with tutorial sessions to complement these. Since then, the teaching mode has changed to include interactive lectures and presentations by students. The interactive lectures would seemed to be the ideal model at this level, and is also suitable for the online students as there were various online tools such as fora that facilitated interaction among lecturers and students. The presentations by students were geared towards developing teaching skills in IL and helped them to develop expertise in performing promotional activities on the job. However, the lecture method, whether interactive or not, would not be suitable for use by librarians in primary and secondary schools, therefore it could not be considered a model for emulation in those contexts.

Library education in the Caribbean has been changing in various ways to meet the needs of students and to keep pace with the rapid changes in LIS. These changes

included change of departmental names, implementation of new programs, the retiring of some courses and programs and the implementation of others, and offering LIS education in multimode. Changes have also been evident in the qualification of faculty and the modes of delivery for programs. Technology, though not always a driver of these changes, played and will continue to play a critical role.

Quantitative Data Analysis

Demographic Data

Forty-five teaching librarians from across the region responded to the questionnaires. Figure 1 shows the period during which these librarians were trained.

Twenty-eight (62%) of the librarians were trained within the past 10 years. Five (11%) obtained one qualification and then returned to study later and were awarded a higher qualification. The data on Figure 1 include those who obtained two qualifications, accounting for the numbers of persons represented being greater than 45. Eighty-four percent of the sample was trained as both librarians and teachers, and this was in keeping with the close relationship between librarianship and teaching as stated by Walter (2005).

The teaching librarians held a number of qualifications ranging from a Diploma in Teaching with a specialization in LIS to graduate degrees. The distribution of the qualifications of the respondents is shown on Figure 2.

Figure 1. Bar chart showing period during which library educators were trained

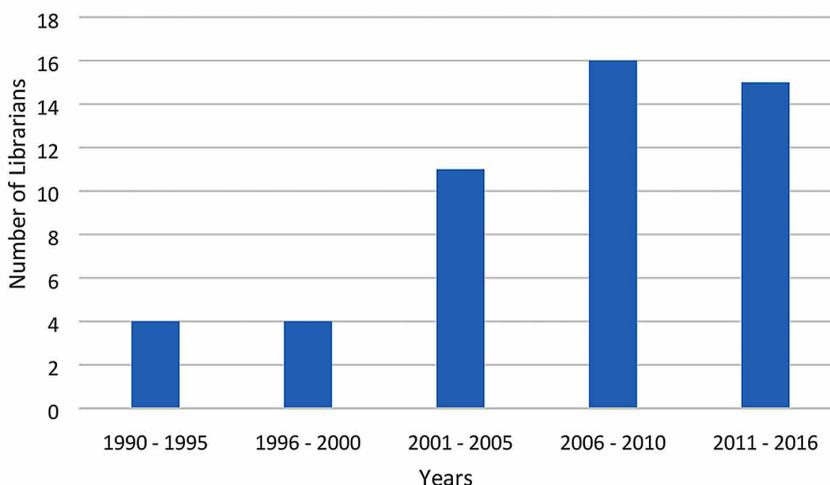
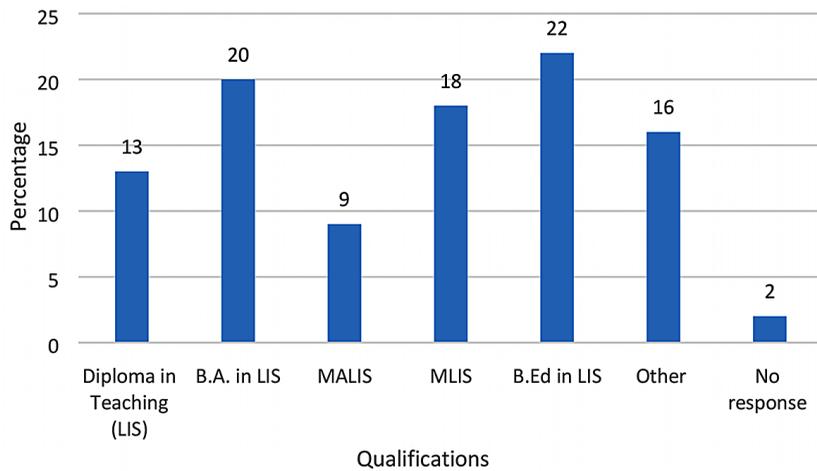


Figure 2. Bar chart showing the highest qualifications for teaching librarians



The majority (42%) of respondents held a bachelor's (either BA in Library and Information Studies or a B.Ed. in School librarianship), while a combined 27% held graduate degrees (either MLIS or MALIS). Of the 16% whose highest qualification was not in Library and Information Studies, 12% had their highest qualification in education but had previous training in librarianship.

Teaching librarians in the Caribbean worked in institutions from the primary to the tertiary level. Seventy-four percent of the respondents worked in the secondary schools whereas only 11% worked in the primary schools and 4% in all age and junior high schools (schools that had grades 1 – 9). This phenomenon is rooted in library history in the Caribbean region which promoted the establishment of libraries in secondary schools more so than in primary schools (Douglas, 1972). Tertiary institutions were significantly fewer than those at the primary and secondary levels and so only 11% of the librarians in this sample worked at the tertiary levels.

Topics Taught

A range of topics were taught in Information Literacy sessions as is shown on Table 2, and there were no substantial differences between what was taught at the different levels.

Eighty-seven percent of the librarians indicated that they taught students how to avoid plagiarism. Understanding plagiarism would be a necessary requirement in the secondary system since students were required do research as part of their school based assessment for Caribbean Secondary School Certificate examination (the regional examinations done at the end of secondary schools). Other topics reportedly taught

Table 2. Topics taught by teaching librarians

Topics	Percentage	Number	
Avoiding plagiarism	87	39	
How to locate information	82	37	
Writing Citation	78	35	
Information Seeking Strategies	73	33	
Evaluation of information	71	32	
Other	47	21	
Note taking	44	20	

by a large percentage of librarians were also relevant to the gathering and writing of students' research for examination at the secondary level. These were: how to locate information (82%), writing citations (78%), and information seeking strategies (73%). It was expected that writing citations would score highly considering that plagiarism was the most widely taught topic and both were interrelated.

Popular topics included in the "Other" category were types of libraries (20%), parts of the book (18%), fiction and non-fiction (13%), and reference sources 11%. These topics were popular because they were taught at the primary level and during the first year of secondary education. The diversity of the items included in the other category indicated a significant variation in what is taught across schools, and this may be a result of the lack of a curriculum for the teaching of library and information skills and the absence of standards for IL. On the one hand, topics related to the teaching of technology were missing from this list, suggesting that for the most part traditional topics were still being taught. On the other hand, it was possible that technology skills were embedded in the other topics being taught such as information seeking strategies.

Adequacy of Training

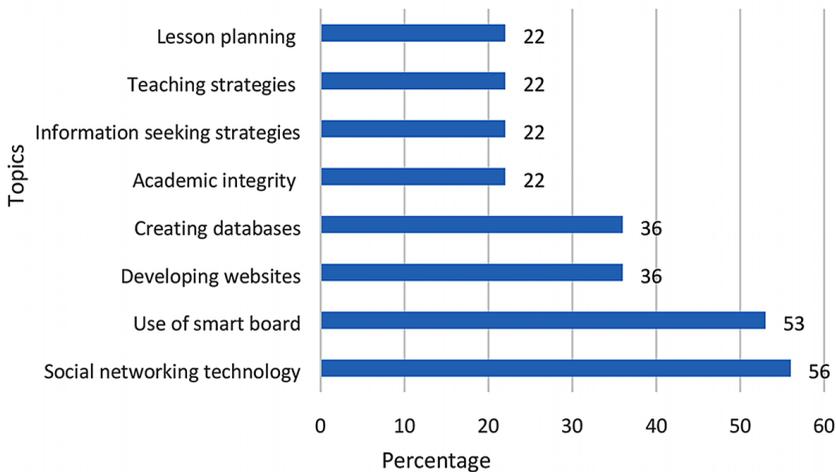
Fifty-six percent of the respondents agreed that the training was adequate for helping them to provide library instructions, but the remaining 44% disagreed. This differed from the findings of Kavulya (2007) that only 40% of the respondents (lecturers, library professionals, and employers) were of the view that courses and length of "practical attachments" were adequate for Nigerian librarians. The findings of this research were more aligned to that of the Future of Human Resources in Canadian

Libraries that reported that 63% of the graduates believed that their training equipped them with the general knowledge and skills required for the job (Ingles et.al, 2005).

Although only 44% (20 participants) gave a “No” response to the item regarding the adequacy of the training some of those who indicated that the training was adequate also responded to the question on what additional training was necessary, accounting for some responses being greater than 44%. The dynamism of the information sector as a result of the effects of information communication technology and the resulting impact on library and information science professionals was clearly evident in the responses to the questions on additional topics they felt they needed training in. The four items related to the use of technology received the most responses as is demonstrated on Figure 3.

How to use social networking technology in education (56%) surfaced as the topic that respondents most desired to be educated on, but the need was just marginally higher than the need for training in the use of the smart board (53%). Thirty six percent of the respondents felt a need for education in the development of websites and the creation of databases. The need for education in traditional topics was not as urgent as these fell below 25% of the respondents. This finding relating to the need for additional technology skills was contrary to that of Brissette (2009) who noted that graduates of The UWI were satisfied with the information technology skills taught to them as part of the program. Two possible explanations could be that the sample used for this research was different from that studied by Brissette, and this sample also included individuals (although in the minority) whose highest

Figure 3. Bar chart showing additional topics in which teaching librarians felt they needed training



qualification was a diploma in secondary education, suggesting that they exited training for over a decade and did not pursue further education.

The need for the development of technology skills seemed to be a manifestation of the rich technology environment. Shoham (2001) reported a “deep need” for courses and workshops for Israeli librarians and information professionals to equip them with skills to work with the new technologies. In that same year, a survey conducted by Rusch-Feja across 41 countries found that two types of training were needed by librarians: training in basic technology skills and advance training for those who had acquired basic training so they could apply information technology to their daily work and improve library offerings and services (2001). Course outlines that were examined showed that students were taught how to develop website and create databases. These were core courses so it could be that insufficient time was spent teaching these and as a result students did not fully grasp the skills so they could create these on their own or they completed training before these skills were included in the programs. The examination of course outlines supported the findings of the need for training in the use of SMART boards as this was not seen in any of the course outlines. As a result of the emphasis on e-learning (Ministry paper no.6) smart boards and other technologies were placed in schools. Librarians needed to know how to operate and manage these resources. This need can also be met through ongoing professional development as advocated by IFLA (2012) and library schools and professional associations have the expertise to lead or contribute significantly to this process.

In response to “Other”, one respondent expressed the need to learn how to make and post instructional videos. Three other responses under this section mentioned the need for additional technology skills. One individual linked the need for technology skills to lesson delivery by stating it would help to “better deliver to students”. Even though the majority of teaching librarians have been educated in the past 10 years, the rapidly evolving technological environment still made education in technology their greatest need. The need for training in ICT skills might explain why these skills are not taught to students. It could be that lack of confidence in their abilities to manage the technology impacted on their motivation and ability to teach.

Developing Teaching Competence

The responses to how participants developed their teaching skills must be considered against the background that the majority (84%) of participants in this research were trained as teachers so they developed teaching expertise either as part of their training as teacher librarians or as teachers since some were trained as teachers before becoming librarians. This should therefore positively impact on their ability to teach. The responses to this question, as is shown on Table 3, demonstrate that they developed their teaching competence in a variety of ways.

Table 3. Ways participants developed their teaching competencies

Strategies for Developing Competencies	Percentage	Numbers
Workshops	42	19
Class presentations	40	18
Education courses in the program	40	18
Observation of others in the workplace	38	17
Viewing videos	26	11
Education courses taken as electives	24	10

The responses to this item were widely spread with only three attracting 40% or more of the responses. These were workshops (42%), class presentation, and education courses in the program (40% each). Workshops were usually conducted by library associations, the education ministry, or by individual institutions. The most popular means for teaching librarians to develop their teaching skills while enrolled in the programs were by taking education courses either as part of their program (40%) or as electives (24%).

IFLA advocates that curriculum delivery should encourage “transferable” skills, but this was not evident in this research based on the low responses to observation of lecturers (27%), which scored lower than observation of others in the workplace. The 38% of the respondents who gathered teaching skills through observation of others in the workplace might be reflective of the finding by Gulbraar (2005) who in a study of Canadian and Norwegian librarians discovered that they learnt by “job shadowing” (p. 70).

In the “Other” section six respondents (13%) indicated that they developed their teaching competence as part of their teacher training. Two individuals (4%) noted the impact of practice. Other ways of developing competence included self-selected methods such as online courses, reading online materials, and self-reflection, and “ACRL immersion”. The workplace assisted with providing annual evaluation for one librarian and this was helpful. One individual also benefited from instructing fifth graders in the public library. Walters (2005) is of the view that when teaching librarians lacked the opportunities to develop their teaching skills in the formal way, they compensated by self-study, workshops and short courses, and this seem to be true in this case. Abrectch and Baron (2002) also cite self-study as an important way of developing skills. Whereas self-study was used by participants in this research, it was not used by the majority of respondents as Walters (2005) found out in his research, and this could be explained by the fact that the majority of these participants had obtained teacher training prior to or while being trained as librarians.

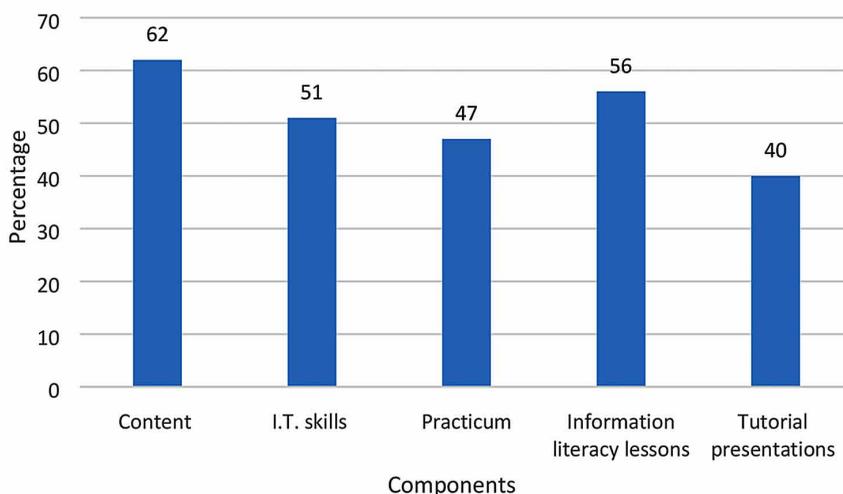
Educating Caribbean Librarians to Provide Library Education

Sixty-seven percent of the participants responded to the item which asked if the LIS training helped in the development of teaching competencies. Forty-two percent indicated that the LIS training assisted them to develop their teaching competence and the remaining 25% indicating that it did not. When asked to state the ways in which the training helped, there were a variety of responses. These included that the program created an awareness of students and learning styles, assisted with lesson planning, helped with the learning of content, provided participants with technology skills, and developed communication, research, and presentation skills. These responses were in keeping with the content seen on the course outlines.

When asked to indicate which components of the training they found most useful, respondents overwhelmingly selected more than one facet of the program as is shown in Figure 4.

The content of the program was most useful to librarians as it garnered responses from 62% of the respondents. Information literacy lessons was the second most useful component of the program for 56% of the respondents. The least useful aspect of the program was the tutorial presentations selected by 40% of the participants. Only 51% of the respondents found the information technology skills useful in their roles as educators and when compared to Brissette's 89% which found the IT skills suitable for the workplace, could suggest that the skills were relevant to other aspects of the librarian's duties but not in the educator role. This 51% is comparable to Hu's

Figure 4. Bar chart showing components of the training that teaching librarians found most useful



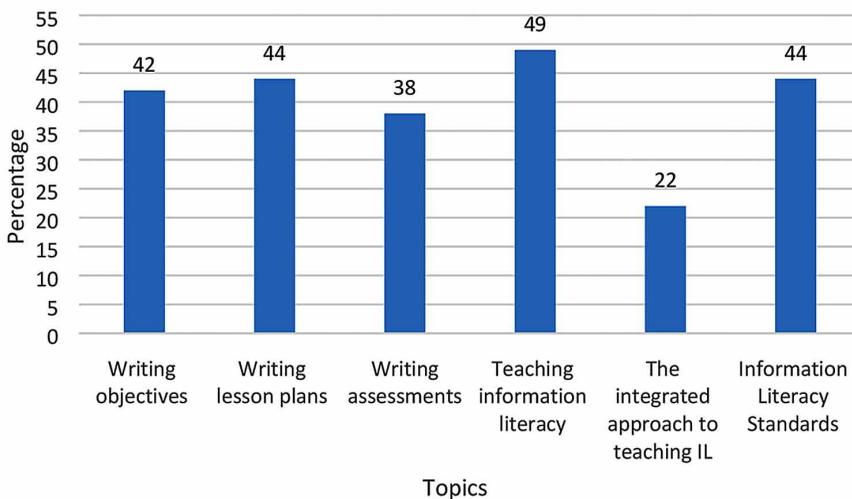
findings, that less than 50% of Canadian MLIS graduates believed that their training equipped them with the requisite technology skills (University of Alberta, 2005). Additionally, it could indicate that these librarians were employed in schools where there were limited technology resources and therefore they had few opportunities to use the skills they were taught.

It is difficult to analyse why the tutorial presentation was the least useful aspect as it was intended to assist students in the presentation of information, so it was clearly not achieving its purpose. This could therefore mean that faculty needed to revisit the role of the tutorial presentations in the programs.

When asked to indicate the topics that were sufficiently covered during their training, the responses indicate low to moderate satisfaction with the items listed as is seen on Figure 5.

Forty-nine percent of the respondents were satisfied that teaching information literacy was adequately covered during their studies. Writing objectives (42%), writing lesson plans (44%), and writing assessment (38%) which were components of planning for library instructions scored moderately and might have implications for the actual delivery of the content. Whereas the Caribbean does not have its own standards for the teaching of information literacy, this scored 44%, and was one of the higher scores in this section. Respondents' satisfaction with the coverage could mean that the areas taught were the ones that they were using in their instruction and they found them adequate for their students.

Figure 5. Bar chart showing librarians' satisfaction with the coverage of various areas



Graduates' Perception of Their Competence and Program Usefulness

A Likert scale used to gather graduates' perception on their competence and the usefulness of various components of the program gathered the responses displayed in Table 4. The rating was calculated out of 5 for the 45 participations who took part in the research. "No responses" were included in the calculation.

In relation to the teaching responsibilities of the librarians, respondents overwhelmingly agreed that all librarians should be required to take at least one information literacy course. This item got the highest rating of 4.66. Following close to this rating was the 4.36 given to the item that librarians should be prepared to teach. This suggested that librarians were of the view that they should be teaching and they needed to be prepared to teach. The statement that library programs should include education courses garnered high support and received a rating of 4.32.

In rating the usefulness of the training in helping to develop instructional competence, the least useful component of the program was the practicum as this scored 2.47. Whereas the librarians who pursued teacher training and training in librarianship separately would not have had a practicum in teaching information literacy, those graduates of The Mico University College and those from The University of the West Indies who pursued the Bachelor of Education in LIS would have done so. This rating was therefore low considering that more than half the sample had pursued programs as teacher-librarians. It is possible that this practicum was not meeting their needs and so this was an additional area for future research. The most

Table 4. Librarian's perception of their competence and the usefulness of LIS training

Statements	Rating
All librarians should be required to pursue at least one information literacy course	4.66
Librarians should be prepared to teach	4.36
Library training courses should include education courses.	4.32
I possess a repertoire of skills and strategies which I use when I teach	3.60
The content of the program was useful in preparing me for my teaching role	3.36
The skills acquired during the program were useful in preparing me for my teaching role	3.30
The overall program was useful in preparing me for my teaching role	3.28
I have adequate knowledge of the content I am required to teach	3.27
The library visits made during the period were useful in preparing me for my teaching role.	3.19
The LIS practicum was useful in preparing me for my teaching role	2.47
In service training offered by library schools help me to hone my teaching competencies	2.37

useful component of the program in developing instructional competence was the content as it received a moderate rating of 3.36.

When asked to provide a rating for the statement that they possessed a repertoire of teaching skills and strategies that they used, librarians gave themselves an average rating of 3.60. This rating should be interpreted against the background that the majority of these librarians were teachers. The rating also suggests that they were confident in their teaching abilities. The in-service training provided by LIS institutions garnered the lowest rating (2.34) in terms of its usefulness in developing teaching competencies. Twenty-three percent of the respondents gave a “Not applicable” response. Fifty-four percent gave it a rating of three and above. This could be suggesting that LIS schools were not offering enough in service training opportunities, librarians were not taking advantage these, or that the training was not meeting their instructional needs. In addition, professional development usually had a cost which might prove prohibitive to schools with tight fiscal policies.

An open-ended question which asked how library schools could better prepare teaching librarians for their roles attracted a variety of responses from 93% of the respondents. The responses were organized into five categories by the researcher so they could be more efficiently discussed. These categories are: program, practicum, partnerships, technology, and syllabus. The suggestions regarding the program were most numerous and fell into two categories: suggestions to include more education courses into the library training and to make the library training more practical instead of theoretical. It was suggested that more hands-on activities would expose trainees to more “real” librarianship. Students’ only opportunity to gain practical experience was through the practicum. Library schools therefore need to look into the feasibility of increasing these practical activities as this would help students to better understand the theory.

One response called for library schools to help trainees develop a teaching philosophy, suggesting that maybe the participant saw the role of the librarian as an extension of the teaching role. Participants were also of the view that library training institutions needed to work more closely with the teacher training institutions to ensure that teaching librarians knew what was happening in education and they were kept abreast of the skills that needed to be taught in schools.

Teaching librarians were of the belief that partnerships needed to be developed with the Jamaica Teachers’ Association (the union representing the majority of teachers in Jamaica), and that there needed to be regular workshops and more on the job support. They also spoke of the need to educate principals and teachers about the importance of the school library and librarians in the education process. The suggestion of a partnership with the teachers’ union is understandable since the teacher librarians are members of the union which is vocal in its representation

of the issues relating to teachers, but there was no such voice to speak on issues specific to teacher librarians.

Graduates felt there was a need to include more technology based courses and that these should be more hands on. The call for additional courses reflects the findings from the literature review. Teaching librarians also felt there was a need to focus on the use of technology as aids in the teaching and learning process, and that this should be integrated in the lesson planning process. This was suggesting the IL courses should include the development of instructional resources which was a reasonable expectation.

Teaching librarians advocated the need for standards for school libraries, and the need for a curriculum for the teaching of library and information skills. One individual expressed that a curriculum would ensure standardization in the content of information skills across the secondary system. The researchers were aware that a school policy was being developed in Jamaica based on mandate given by the Ministry of Education Youth and Information and felt that it should address some of the issues raised by the participants.

FUTURE RESEARCH AND DIRECTIONS

The findings revealed three important areas for further research. An inventory needs to be conducted of the technology skills of teaching librarians and an examination done into the types of professional development that can be implemented to assist them to develop the skills they believe they need. LIS institutions also need to be both proactive and responsive to provide training opportunities to meet these needs in as timely a manner as possible.

The need for LIS programs to become more practical to meet the needs of the librarians in training needs to be examined from a research perspective. The LIS schools need to investigate what areas of the programs can be made more practical and seek opportunities to diversify their programs to make the content and the activities more aligned to the day to day practices of librarians who were on the field. Research also needs to be conducted in to the value of the internship in developing the instructional skills of teacher librarians.

CONCLUSION

This study utilised a mixed method approach to examine the training provided to teaching librarians in the Caribbean. Data were collected through a content analysis and a survey which had a 44% return rate. The summary of the findings are reported

in the following paragraphs. Training is provided to librarians by four institutions in the Caribbean, but only two of those institutions; The UWI and The Mico University College train teaching librarians. There were currently seven programs ranging from the undergraduate to doctoral offered by these institutions.

Changes have occurred at the programs level, and in the content and modes of delivery of the programs. Over the period, two programs have become defunct due to changing requirements of the education system in Jamaica, the country in which the library schools are located, while another two were replaced due to developments in LIS. Four new programs were developed to fill the gap left by two programs that are no longer been offered. In addition to this, new courses have been implemented and the content of other courses have been upgraded to meet the demands of the current job market. Of note was the number of technology courses which have been included. Although these fall below the 25% - 33% suggested by Hu (2013), they still constituted a significant portion of the number of courses in each program. In addition, courses in information literacy have been included in the programs at both graduate and undergraduate levels.

The modes of delivery have also changed over time. The UWI began to offer its graduate program in multimode and this increased its reach to students from across the Caribbean. Changes have been made to the programs that were delivered face to face. The mode of delivery changed to interactive lectures which engaged the available technology. Changes also occurred in the qualifications for library educators in one of the two institutions. The minimum qualification for one institution was a master's degree, but for the other institution it was upgraded to a doctoral degree.

Librarians were of the view that they should be required to pursue at least one information literacy course, they should be prepared to teach, and that library programs should include education courses. They gave a fair rating of the programs in preparing them for their teaching roles. The LIS practicum and the in service training were rated as the least helpful components of the program for this purpose.

Although several technology courses have been implemented, teaching librarians expressed a need for additional training in technology. This may be due to the fact that the technology was emerging so quickly that by the time they graduate, their skills needed to be updated. On the other hand, this could also be suggesting that the response of the library schools might not be swift enough to provide the graduates with the skills that they needed quickly enough. In-service training did not seem to be adequately meeting the needs for upgrading their technology skills.

The majority of librarians in this study were initially trained as teachers, and so they developed their teaching competencies during training. However, teaching competence was also developed through practice, workshops, and other self-selected methods. The teaching librarians also possessed a repertoire of skills and strategies which they engaged when they teach.

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Teaching librarians were actively engaged in providing their patrons with the information they need while simultaneously assisting them to develop the skills needed to be independent seekers and users of this information. The skills and knowledge which they need to do so were changing as rapidly as the information landscape within which they work. Their ability to successfully serve their clients will depend heavily on the education and training they receive and this had to be as dynamic as the environment within which they existed. They also need to be flexible enough to use this education and training as a platform on which to position themselves for lifelong learning.

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KEY TERMS AND DEFINITIONS

All Age School: A traditional school established to provide education to students at the primary level while offering the first cycle (grades 7 – 9) of secondary education.

Anglophone Caribbean: The English speaking territories of the Caribbean which were colonised by the British and which are contributing territories of The University of the West Indies.

Junior High School: An all age school which has been upgraded by the Ministry of Education in Jamaica to provide education for grade 7 – 9 students comparable to that offered in the high school, while still catering to students in grades 1 - 6.

Library Educator: A librarian who performs teaching duties as part of the job requirements.