Caribbean Library Journal is an open access, refereed journal of research and discussion on issues related to all aspects of libraries and librarianship in the Caribbean.
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FOREWORD

Jennifer Joseph, University/Campus Librarian, The University of the West Indies

It is indeed a great pleasure for me to introduce the publication of the Caribbean Library Journal (CLJ), a first for the librarians of The University of the West Indies, the largest regional University of the English-speaking Caribbean. This journal has received the support of all the Campus Librarians of the four campuses of our regional University as well as the Chief Librarian of the University of Trinidad and Tobago. It is anticipated that the publication of the CLJ will have a positive impact and herald that libraries in the Caribbean are a rich source of research and best practices in the field and in the use of technology that has revolutionized information services across the globe.

This online journal is therefore poised to become the main vehicle for the interrogation of ideas and discourse on issues specific to libraries and librarianship in the Caribbean. It will be the main forum for Caribbean nationals in the diaspora to share relevant practices, experiences and perspectives on issues facing the library world; and will provide an additional avenue for our growing number of professionals to publish their research and ideas, thereby contributing to the body of literature on library and information practices.

The introduction of a new journal in any discipline is no easy task and is certainly not for the fainthearted! It entails the development of a sound editorial team and reputable reviewers, soliciting suitable articles and the painstaking task of editing. The gestation period for the CLJ has been long. However, due to the determination and commitment of Lorraine Nero and Frank Soodeen of the Alma Jordan Library, St. Augustine Campus, their clarion call to the professionals of the other campuses and their team of international and regional reviewers, we can now launch this inaugural issue.

A high academic standard is guaranteed as the editors are committed to rigorous, dispassionate and critical evaluation of the articles submitted and the appropriate peer review process.

I say thank you to all the contributors, the editorial team and in particular, to Lorraine and Frank for their hard work and commitment to the process. Special thanks to Lorraine for reviving the 2005 dream and leading its re-awakening!
EDITORIAL

The blowing of the conch shell has various meanings in the Caribbean: it is a clarion call for all cricket supporters when the West Indies Cricket team does battle, it is the trumpet for religious ceremonies and on one island it is the announcement that boats are arriving on shore with fresh fish. Anyone who has attempted to blow the conch shell knows that it is not easy to do so at first try. And even when that first sound is made, it is often a small sound. It requires patience and practice to deliver a sound strong enough to call a community to attention and action. It is on this metaphor of the conch shell that we introduce the first issue of Caribbean Library Journal.

In 2006 a group of librarians at St. Augustine had a dream; a dream to create an online publication that would showcase the scholarship and innovativeness of practitioners in Caribbean library and information studies. In essence, it was our first blowing of the conch shell. We (Frank Soodeen and Lorraine Nero) who were part of the initial team want to acknowledge the librarians who shared the dream in 2006: Rabia Ramlogan, Jennifer Papin Ramcharan (deceased), Gerard Rogers and Niala Dwarika Bhagat. At that time the movement for open access journals was just gaining momentum and debates in the academic community focused on the credibility and sustainability of such publications. Amidst these uncertainties the “dream got deferred”, particularly as the UWI did not have an online open access journal in its publication roster for us to use as a marker of precedence. Today the debate still rages on about the nature of open access journals with a recent article published in Science examining the peer review process in several of these journals. Yet, this continuing debate has not daunted the growth of such publications including several of them in the Caribbean.

Langston Hughes in his poem A Dream Deferred asked “What happens to a dream deferred?” In response to his question Caribbean Library Journal says- “It gets bigger, more confident and better!” The new editorial team draws on the enthusiasm and commitment of librarians across the Caribbean region, supported by a cadre of regional and international reviewers. Confident that the systems we have put in place will provide a resource to information professionals in the Region first and then to teach others of our experiences, we are now ready to deliver the first sound from our conch shell.
The articles in this first issue are primarily on the user services aspect of librarianship. Nelson investigates the possibilities of incorporating text messages into our reference services, demonstrating that we have to find ways of engaging our clients with the popular devices they now use. The experiences of Caribbean libraries can also teach other institutions how to find solutions particularly as resources to deliver our services continue to shrink. In the cases presented by Brathwaite and Dolabaille and George and Robinson, it is significant that both teams are trying to find the means to provide library orientation and information literacy on limited resources and to increasing student populations.

The practice of academic librarianship continues to evolve and the case of the University of Trinidad and Tobago (UTT) Libraries presented by Preddie shows the issues which have to be considered in creating an entrepreneurship library model. As librarians are being asked to support the teaching of entrepreneurship and to also be entrepreneurs, we look to the experiences of institutions like UTT for guidance.

Caribbean Library Journal makes its first sound with this issue. As we continue to generate interest in Caribbean library and information scholarship and to providing access to future issues, we eagerly look forward to growing stronger and bolder.


About the cover

James Hackett, an outstanding visual artist from Trinidad and Tobago captures the essence of this first issue of Caribbean Library Journal with the cover illustration. The vibrant colours create a celebratory atmosphere for the new journal and also reflect the energy of the Editorial Board. The eye cannot help but be drawn to the red conch shell which is a central feature of the art. The Editorial for this inaugural issue draws on the conch
shell to metaphorically describe the journey to the publication of CLJ; and the expectations and hope for future issues.

Hackett has developed a distinctive style in his art and fashion designs and plays with the patterns of lattice and lace to achieve visual appeal. In this illustration, lace is subtly used to form a halo around the head of the character. The visual effect is reminiscent of long playing records, CDs and blu-ray discs; formats on which information has been stored in the last century. The black spiral lines take us even further back in time, creating that scroll effect which links us to the evolution of record keeping and early libraries.
Exploring the Use of Text Messaging to Enhance Reference Services
at The University of the West Indies Mona Campus Library

Karlene Nelson

Abstract
Mobile technology is one of the most phenomenal developments to have taken place in the Jamaican telecommunications industry. The liberalization of this industry has resulted in widespread access to mobile telephones. Jamaicans are today more likely to subscribe to a mobile phone service than a fixed line service. In addition, a number of Jamaicans have gravitated towards the use of mobile telephones because of the innovative service packages offered by leading providers. These packages include free text messages, and bundled minutes among other options. As a result, text messaging has become a common means of communication among many Jamaicans and has also given rise to new ways for libraries to communicate with their patrons. Libraries can now communicate synchronously with patrons providing useful responses to simple queries very quickly. Many libraries therefore, have embraced text messaging to augment existing reference services.

This study examined the determining factors for the use of a text-messaging reference service at The University of the West Indies (UWI), Mona Campus Library. The objectives were: to find out to what extent will the determinants of technology adoption drive patrons to use a text-messaging reference service at the UWI, Mona Campus Library and to find out from patrons about some of the problems they believe they would likely encounter while using a text-messaging reference service at the Library. A questionnaire was used to collect data for this study. The questionnaire contained demographic questions as well as questions that addressed those determinants that were likely to result in patrons’ use of a text-messaging reference service. Respondents were also asked to state some of the likely problems they believe they would encounter using a text-messaging reference service. Of the 300 questionnaires distributed, 199 useable questionnaires were returned, yielding a response rate of 66.33%.

The results imply that perceived usefulness and convenience are the key determinants for patrons’ use of a text-messaging reference service. The findings also reveal that the mean values for perceived ease of use and speed were not so favourable. Likewise, technical difficulties are considered to be major problems that are likely to be encountered by patrons when using a text-messaging reference service. Nevertheless, the results of the survey also show that the majority of the patrons surveyed would use a text-messaging reference service if it were ever to become available at The UWI, Mona Campus Library.

Keywords: Karlene Nelson; Electronic Reference Services (Libraries); The University of the West Indies, Mona, Jamaica; Academic Libraries; Mobile Technologies; Text Messaging Reference Services
Introduction

The use of mobile telephones worldwide grew at a phenomenal rate between the years 2000-2012, moving from less than one billion to six billion users, or three-quarters of the world’s population. This movement has resulted in developing nations having more access to mobile phones than even some developed nations. The factors accounting for this growth among developing nations were the availability of multi-sim card phones, low value charges and mobile payment plans (The World Bank 2012). Jamaica is among the developing nations that saw significant increases in mobile telephones usage.

The liberalization of the telecommunications sector in Jamaica at the turn of the 21st century, and the accompanying affordability of phones have led to widespread access to mobile technology. Prior to the liberalization of the telecommunications sector, most Jamaicans did not own a phone. However, in just a few years this position changed significantly, resulting in most Jamaicans, if not all, owning a mobile phone (Fair Trading Commission and Office of Utilities Regulations 2007). According to The Gleaner, Jamaica ranks high among nations in terms of mobile access, reporting that the country “has about 122 active phones for every 100 people, which equates to one of the highest mobile subscriber densities in the world” (The Gleaner 2012). Jamaican householders today are more likely to subscribe to a mobile telephone service than to a fixed line service. In fact, up to December 2011, there were approximately 2,945,395 cell phone users in Jamaica which equates to a mobile penetration rate of 109%. However, computer based Internet penetration rate for the same period was approximately 4% as indicated by the 118,259 subscriptions to Internet service providers. At the same time there were overall, 1,581,100 Internet users in Jamaica which gives a penetration rate of 55% (Marsh 2012). This means that although many persons did not have an account with an Internet service provider, they still had access to the Internet via their mobile phones or some other mobile device. It is for this reason that Marsh (2012) posited that companies in Jamaica would have a far greater reach in the mobile market than the traditional computer desktop market.

Liberalization has brought several competitors into the Jamaican telecommunications market resulting in a significant reduction in the cost of telephone services. Leading providers such as Digicel and LIME, now offer many innovative service packages which include free text messages and bundled minutes among other options. Most of the plans offered by these telecommunication providers have made text messaging a cost...
efficient, and therefore popular, means of communicating. At the global level, The World Bank report (2012), states that close to 5 trillion text messages were sent in 2012. A North American study (Perez 2010) found that 72% of adult cell phone users send and receive text messages. Similarly, in a study which looked at Jamaicans and mobile technology, it was found that text messaging was popular among 66.7% of the Jamaicans surveyed (Dunn 2007). Mobile technology, such as text messaging, therefore offers new ways of communicating with library patrons. According to Little (2011), “mobile technologies are changing the ways we consume, distribute, and create information.”

The concept of text-messaging reference service (TMRS) is fairly new in libraries. It is worthwhile to study the potential for its application in Caribbean academic libraries and more specifically, The University of the West Indies (UWI) Mona Campus Library. The adoption of TMRS has been widely studied in developed countries but is less explored in the Caribbean context. There are possible benefits of a TMRS at the UWI Mona Campus Library; however questions still remain as to whether patrons will adopt such a reference service.

The article presents the results of a survey conducted at the UWI Mona Campus Library. A questionnaire was deployed to answer the following research questions:

1) To what extent will the determinants of technology adoption influence selected patron’s use of a TMRS?
2) What are some of the problems which the selected patrons believe that they are likely to encounter in using a TMRS at the UWI Mona Campus Library?

Text Messaging and the Librarian
Text messaging originated in the United Kingdom in the 1980s and later spread to the rest of the world. It is also called short messaging service (SMS), and is the practice of sending short messages usually limited to 160 characters via mobile telephones (Encyclopedia Britannica 2012). Many persons see the limited number of characters that a text message can accommodate as a major drawback to sending messages. As a result, a new vocabulary of contracted words especially among young persons has been developed to circumvent this hindrance. What has emerged are shortened words such as UR for “your” or “you’re,” IMHO for “in my humble opinion,” BTW for “by the way,” and CUL8R for “see you later,” as well as the employment of “emoticons,” or “smiley,” to express emotions (Holtgraves 2011).
Progressive librarians must therefore be mindful of this trend of communication among their patrons. According to Batool and Asaghar (2012) librarians have been using text messaging mainly for social interactions with family and friends. However, the changing landscape suggests that the use of text messaging should be incorporated into the librarian’s job related functions. Despite the limitations in using this technology, it is an avenue for librarians to reach their patrons bearing in mind the required brevity in sending text messages. Herman (2007) suggested that in sending text messages, librarians need to be very concise, practice spanning (sending a response via multiple messages) and become familiar with the abbreviations used in texting.

Apart from its use in reference services, Goh and Liew (2009) indicated that librarians could use text messaging for broadcasts to the library’s patrons to promote services such as tours and tutorials, new databases, new books or extended library hours. They suggested it could also be used to send out reminders to individuals or groups of people who may have booked specialised library instruction sessions, rooms and/or equipment.

**Text-Messaging Reference Service**

Libraries are utilizing mobile technology to connect to their users by providing answers to reference queries via text messages. Text-messaging reference service has the ability to enhance the perception of libraries as current and user-oriented. According to Stahr (2009), if a library was to introduce a TMRS, it would demonstrate that “the library is on the cutting edge of technology and is willing and interested in meeting the needs of its users.” Also, introducing text messaging to the library’s existing reference services would result in a public relations boost. A TMRS would allow the library to reach its commuting population. Stahr (2011) found that the combination of telephone, e-mail, online chat, and text-message reference provided strong support for many students who commuted or took online classes. Text-message reference, along with other reference services, is considered essential to the academic support of distance learning. Even in those instances where a different communication medium was needed to complete the reference transaction, the TMRS was able to provide that important first contact between patron and library. In this regard, Kohl and
Keating (2009) described a TMRS as an enhancement of, rather than a replacement for face-to-face, telephone, e-mail, instant messenger or chat reference.

Today, TMRS is well established and several libraries have tapped into this technology. Jetty and Anbu K. (2013) revealed that libraries are using texting to complement other reference services in higher education libraries. Even in instances where in-depth research was required to satisfy a reference query, libraries were using text messaging to alert users of the outcome of their query. In a pilot study conducted by Goh and Liew (2009) where they looked at users’ acceptance of a SMS based cataloguing system, it was found that only 13% of the messages received required library staff to send their responses in two or more messages. This suggests that users are aware of the capabilities of such a system. Breithbach and Prieto (2012) supported this view. In their examination of text messaging via Google voice, they found that very few questions were of a complex nature, requiring multiple sources and/or sophisticated search strategies. They concluded that patrons recognized the limitations of a TMRS and were therefore asking questions that could be easily answered through such service.

Despite the success that some libraries have experienced, there are concerns about a TMRS. Goh and Liew (2009) reported that these concerns included the absence of the face to face interview process, as well as limitations in the number of characters users had to express their query and for library staff to send their responses. Although there are limitations to a TMRS, Stahr (2009) pointed out that these limitations are relatively few and suggested that since text-message reference service provides a relevant instant opportunity to reach users, libraries should consider text messaging for other functions.

**User Perceptions**

The use of any library service will depend on the users’ perception of such service. According to Goh and Liew (2009), users were overly positive about a TMRS. The majority of the users surveyed said the service was easy to use; they experienced no problems using the service and would use it again. Ruppel and Vecchione (2012) also contended that users placed a high value on the ease and convenience of using a TMRS. They also noted that despite this ease of use, users felt that face-to-face reference services are crucial to their academic success. Ruppel and Vecchione (2012) reported that users found it was much easier to learn in face to face
situations, that text messaging lessened interaction with the librarian and that answers were often short and to the point without any elaboration. Chow and Croxton (2012) in considering the information seeking behaviour and reference medium preferences of faculty, staff and students at a university, also found that despite the different options available, when given a choice, the face to face interaction is the first choice of most users seeking reference assistance.

**Determinants of Technology Adoption**

Many factors may positively or negatively influence users’ adoption of mobile technology. These factors include convenience, speed, perceived ease of use, perceived usefulness and facilitating conditions.

*Convenience*

According to Berry, Seiders and Grewal (2002), convenience depends on time and effort. Therefore a product or service is considered convenient when it saves time and effort. A product or service is convenient when it lowers the cognitive, emotional and physical burdens for a user (Chang, Yan and Tseng, 2012). Gupta and Kim (2007) also revealed that perceived convenience is an antecedent factor that affects intention to use.

*Speed*

Speed is of equal importance when considering the adoption of technology. Users in a study carried out by Luo (2011) mentioned that they chose to use a TMRS because of urgent information need. Stahr (2011) found that patrons who used a TMRS were appreciative of the speedy responses to reference queries via this medium. In fact, this study revealed that approximately 10% of the incoming messages received over a four year period were thank you messages from satisfied patrons.

*Perceived Ease of Use, Perceived Usefulness and Intention to Use*

Many researchers have put forward theories to examine the determinants of technology adoption. Most notable among them is Davis (1989) who posited the Technology Acceptance Model (TAM). In this model there are two determinants of technology adoption – perceived ease of use and perceived usefulness. Perceived ease of use is the degree to which a person believes that using a particular information system or information technology would be effortless. Perceived usefulness, on the other hand, is the degree to which
an individual believes that using a particular information system or information technology would enhance his or her job or life performance. Both concepts of perceived ease of use and perceived usefulness will affect attitudes toward an information system; that is, they affect individual’s intention to use and accept an information system (Yong, Li and Carisson 2010). Users will be interested in adopting a technology only if they are comfortable using such technology and if it adds value to their work.

**Facilitating Conditions**

Acceptance of any new technology largely depends upon how the user perceives the technology as well as the presence of facilitating conditions. Facilitating conditions are defined by Venkatesh et al. (2008) as the degree to which an individual believes that organizational and technical infrastructures exist to support the use of the system. There is a significant correlation between facilitating conditions that are in place and the creation of positive attitudes towards the adoption and acceptance of technology (Tarcan, Varol and Toker 2010).

**Mobile Technology at The UWI Mona**

The University of the West Indies (UWI), Mona has already been using mobile technology to communicate with the student population. Among the departments that utilize this method of communication is the UWI Bursary (UWI Mona 2012a). This office uses text messaging to inform students of matters concerning their financial status. The Library has also adopted mobile technology for a number of activities. At present the library uses text messaging to inform patrons about the availability of reserved items, and to communicate with student workers. In addition to text messaging, library patrons are now able to access a number of subscribed databases using their smart phones or other devices.

**Reference Services**

The UWI Mona Campus Library currently provides a range of reference services to its users. These include in-person, telephone, email and e-chat. A virtual reference service was introduced at the UWI Mona Campus Library during the academic year 2009/2010 (UWI Mona 2010). This service provides users with twenty-two hours of live chat reference service. An e-mail reference is also available to patrons twenty four hours per day and seven days per week. The patron may use this form to submit a query to the Library at any time. The turnaround time for e-mail queries is twenty-four hours. The virtual reference service is staffed by librarians
from the Main Library as well as the branch libraries. The UWI Mona Campus Library utilizes the OCLC Questionpoint software for its virtual reference service. This software allows for the filing, tracking and management of web-delivered forms from patrons. It also facilitates the automatic routing of questions to librarians using a request manager.

In 2010, OCLC and Mosio Text a Librarian collaborated to integrate Mosio’s Text a Librarian text-messaging reference software with OCLC’s Questionpoint reference management service in order to provide a comprehensive virtual solution for libraries. According to Jay Jordon, OCLC “users are increasingly relying on mobile technologies, and Questionpoint is committed to providing libraries with the tools they need” (Mosio 2010). A library which subscribes to both software packages is able to receive and respond to patrons’ text messages inside the QuestionPoint interface. The software currently used by the UWI can accommodate text messaging and the Library would only need an upgrade if it should consider adding text messaging.

As mentioned in the 2009/2010 Departmental Reports, the UWI Mona Campus Library is committed to a virtual library concept and has made efforts to publicize its virtual reference service by strategically placing links on different student portals. The UWI Main Library virtual reference has been doing quite well. A user survey of AskMona, the virtual reference service conducted by OCLC over the academic year 2011/2012 sought to determine the quality of the service, its usefulness and ease of use. The survey revealed that patrons were satisfied with all the areas measured. Most of the respondents (94.7%) thought that AskMona was a needed service and should be continued (UWI Mona, 2012b).

**Methodology**

Three hundred questionnaires were distributed to students of the UWI, Mona Campus. Convenience sampling was used because it is quick and it is also a relatively cost-effective method for gathering data. The questionnaire consisted of four parts. The first section contained the demographic questions such as gender, age, year of study and Faculty. The second section looked at those factors that would result in the use of a TMRS. The responses were measured using a five point Likert scale. The third section focused on the intention to adopt a TMRS, and used a three point Likert scale. The final section consisted of an open ended question
which sought to ascertain from the respondents some of the likely problems they believed they would encounter while using a text messaging reference service.

**Findings**

Of the 300 questionnaires distributed, 199 were returned, resulting in 66.33% response rate. Table 1 shows the demographic profile of the respondents.

<table>
<thead>
<tr>
<th>TABLE 1. Demographic Profile of Respondents</th>
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<td>Gender</td>
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<td>20-29</td>
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<td>40-49</td>
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<td>50-59</td>
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<td>60 and over</td>
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<td>Year of Study</td>
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<tr>
<td>1st Year Undergraduate</td>
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<td>2nd Year Undergraduate</td>
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<td>3rd Year Undergraduate</td>
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<td>4th Year Undergraduate</td>
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<td>Postgraduate</td>
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<td>Law</td>
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<td>Science &amp; Technology</td>
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<tr>
<td>Social Sciences</td>
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</table>

The data in table 1 shows that most of the respondents were females (88.9%). This corresponds to the higher female to male ratio of students at The UWI, Mona Campus. The results also reveal that almost half of those who responded (48.7%) were from the 20 to 29 years age-group while 36.7% were between 30 and 39 years
of age, 9.4% between 40 and 49 years of age and 2.5% between 50 and 59 years of age. None of the respondents was above age 60 and only six (3.0%) were below the age of 20. The largest categories of respondents were third year undergraduate students (39.7%) and those pursuing programmes in the Faculty of Humanities and Education (29.2%).

**Survey Statements and Responses**

1) A text-messaging reference service would be a convenient medium for me to get answers.

<table>
<thead>
<tr>
<th>Responses</th>
<th>Age Group and Responses in Percentage %</th>
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<tr>
<td></td>
<td>Below 20</td>
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<tr>
<td>Disagree</td>
<td>0</td>
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<tr>
<td>Undecided</td>
<td>16.7</td>
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<tr>
<td>Agree</td>
<td>0</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>83.3</td>
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<td>Total</td>
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</table>

Convenience is one of the key drivers of technology adoption. The findings revealed that 72.4% of the respondents surveyed believed that a TMRS would be a convenient medium for them to obtain answers to their reference queries. Those strongly agreeing were of the age group 29 and under. These results are not surprising, since the majority of users would gravitate towards a system that lowers the physical burdens for them (Chang, Yang, Tseng, 2012). This is also consistent with the results of a study done by Ruppel and Vecchione (2012) which found that users placed a high value on the convenience of a TMRS.

2) A text-messaging reference service would be easy for me to use to communicate my reference question to a librarian and get assistance.
Table 3 shows that 35.6% of the respondents were not sure if a TMRS would make it easier for them to communicate their reference questions to a librarian and get assistance. Those expressing the greatest level of uncertainty were between 50 and 59 years of age. This may be because many persons in this age group may not be as proficient in the use of such technology. Interestingly, persons between 20 and 39 years of age recorded the second highest level of uncertainty. It is often felt that persons within this age group are usually more competent and comfortable with this kind of technology, therefore this level of uncertainty is unexpected. Notably, many persons (74.4%) viewed TMRS as a convenient means of obtaining answers to their reference queries, yet ease of use was not rated as favourably. Since ease of use as stated is one of the key determinants of adoption of technology, this raises some concerns. Yoon and Kim (2007) argued that convenience of service does not often translate into adoption by users. They noted that adoption will only happen when it is supported by a human network and a strong system built with customer experience in mind. In this regard, the uncertainty expressed here may not be a lack of ability to use the technology, but may be uncertainty with other factors which the respondents feel may pose some hardship for them to use a TMRS. One factor may be that users do not see TMRS as an effective, robust means of communication given the limitations in the number of characters that can be used for messages, thereby resulting in very concise answers without any elaboration. In promoting a TMRS the library should therefore encourage patrons to use the service for short simple factual questions and other reference mediums for longer and more complex queries. In addition, librarians must be prepared to do spanning (sending messages in multiple texts) like Herman (2007) said in order to remove any uneasiness users feel with using such a service.

3) A text-messaging service would enable me to get a response to my reference query more quickly.
TABLE 4. Perceived Speed in Using a Text-Messaging Reference Service

<table>
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A similar result to that relating to ease of use was seen when persons were asked if they believe a TMRS would enable them to get a response to their reference query more quickly. Of the persons surveyed 48.3% were not sure the service would result in a more speedy response to their query. The age group 20-29 years recorded the highest level of uncertainty. Of note, too is that 60% of those in the age group 50-59 years believed that a TMRS would not afford them a speedy response to their reference queries, if any at all. The whole matter of technology reliability may have something to do with the responses to this question. According to Venkatesh et al (2008), if the user does not perceive the technology to have the support infrastructure, this will affect its adoption. Therefore, in implementing any technology based service, the service provider must ensure that all elements are in place to provide a reliable and speedy system.

4) A text-messaging service at the UWI library would be useful.

TABLE 5. Perceived Usefulness of a Text-Messaging Reference Service

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</tbody>
</table>

Although, there was some uncertainty regarding the ease of use and speed of a TMRS, more than fifty percent of the respondents (66.3%) felt that a TMRS would be useful. This evidence is important when considering the implementation of any technology-related services. As Davis (1989) pointed out, perceived usefulness is an
important predictor of technology adoption. When compared to the other factors, perceived usefulness emerged as the best predictor of the respondents’ intention to use a text-messaging service. This is an encouraging indication that a TMRS at UWI Mona Campus Library is worth consideration.

5) **I would use a text-messaging reference service if I am provided with more information about it.**

TABLE 6. Intention to Use a Text-Messaging Reference Service

<table>
<thead>
<tr>
<th>Responses</th>
<th>Age Group and Responses in Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Below 20</td>
</tr>
<tr>
<td>Yes</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Not Sure</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

This question considered the intention to use a TMRS and the results are encouraging. A large number of the respondents (73.4%) indicated that they would use the service if they are provided more information about it. Seven percent of the respondents indicated that they would not use a text-messaging reference service and 19.6% were not sure they would use it. The results correspond to those for perceived usefulness reported by Davis (1989) who indicated that if perceived usefulness of a technology is ranked favourably among respondents, then this will be translated into intention to use. It is therefore imperative that the library provides all the information the users need to help them make the decision to use a TMRS. Doris Small-Helfer (quoted in Cummings, Cummings and Frederiksen 2007) believes that in order for any new service to be successful, it must be promoted since “advertisement of the service would increase the amount of questions that the library gets.” She suggested that placement of logos and buttons for the service on various pages of the library’s website is integral to promotional efforts.

6) **What are some of the problems you are likely to encounter in using a text-messaging reference service?**

TABLE 7. Problems Perceived to be Associated with a Text-Messaging Reference Service

<table>
<thead>
<tr>
<th>Problems</th>
<th>Results %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of sending text messages</td>
<td>18.6</td>
</tr>
<tr>
<td>Problem</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Technical Difficulties</td>
<td>35.2</td>
</tr>
<tr>
<td>Limited hours of Service</td>
<td>7.5</td>
</tr>
<tr>
<td>Limited answer</td>
<td>30.2</td>
</tr>
<tr>
<td>Impersonal nature of service</td>
<td>7.5</td>
</tr>
<tr>
<td>Inability to send and receive text messages</td>
<td>1.0</td>
</tr>
</tbody>
</table>

The responses to the open-ended question presented in Table 7 show the potential problems that those persons surveyed, believe could pose a challenge to the use of a TMRS. The problems identified included: cost of sending text messages, technical difficulties, limited hours of service, shortened answers, impersonal nature of service, and the inability to send and receive text messages. Technical difficulties were deemed to be the major problem that the respondents felt they were likely to encounter while using this service. Ranking second to technical difficulties, was shortened answers. In a number of instances, a user is limited in the number of characters he/she can use while sending text messages and this may be a deterrent for some persons. As pointed out by Venkatesh et al. (2008), facilitating conditions are of utmost importance as this can severely hinder the use of any system. While there may be some things that are outside of a library’s control, a library must try to minimize those elements within its power that may cause hardship to users in accessing its services and resources.

**Conclusion and Recommendations**

This paper has given an account of the factors that would influence patrons of UWI Mona Campus Library use of a TMRS. In this investigation, the aim was to identify the extent to which the determinants of technology adoption would drive patrons to use such a service as well as likely problems they would experience using the service. Evidence from the research revealed that perceived usefulness and convenience are factors that will positively influence the use of a TMRS at the UWI Mona Campus Library. Of note is the fact that the mean values for speed and ease of use were not so favourable. This may reflect the respondents’ uncertainties.
about the reliability of such a service. Notwithstanding, the results imply that the UWI Mona Campus Library’s patrons perceived a TMRS to be useful as well as convenient and are likely to embrace such service if it should become available. The findings therefore suggest that the Library should adopt this innovation. In adopting this technology, the Library must emphasize the benefits through a number of public relations efforts; provide adequate information and clear guidance to its users on the use of this service, and ensure that the service is reliable.

Limitations and Future Research

The findings from this research are useful in advancing knowledge on patrons’ attitudes towards TMRS in libraries especially from a developing country’s perspective. However, there were limitations to this research. First, the research used a convenience sample and secondly the sample size was small. Nevertheless, the empirical evidence can form the basis for future research. In carrying out further research, some questions that could be considered include:

- What patrons use text messaging for?
- How comfortable would patrons be in using a text-messaging reference service given the limitation of the size of messages?
- Would patrons be willing to use the service if it took more than one message to get their query across to the librarian?
- Would there be repeat users if the service is offered?

It is also recommended that since this research focused mainly on text messaging, a broader research should be carried out looking at other aspects of mobile technology use in libraries. In addition, since the sample size of this research was small, a wider cross section of the population which includes the Western Jamaica Campus, could be considered in order to obtain a more generalized view.

References


Library Orientation at The Alma Jordan Library: The Way Forward

Tamara Brathwaite and Arlene Dolabaille

Abstract
This paper describes a project undertaken at The Alma Jordan Library of the St. Augustine Campus of The University of the West Indies to pilot a new approach to Library Orientation (LO) at the start of the academic year 2012-2013.

The pilot project combined three main components: a virtual tour in the form of a narrated PowerPoint presentation, a hands-on session on navigating the Campus Libraries' electronic information portal, UWIlinC, and a questionnaire designed to gather feedback and test retention from participants. The pilot programme was branded and marketed under the acronym, L.I.F.E. - Library Information for Everyone - and was incorporated into a newly rebranded campus-wide First Year Experience for students new to the St. Augustine Campus.

The programme offered library literacy to new and returning undergraduate and postgraduate students. The pilot was designed to replace a month long programme which included physical library tours conducted over two weeks and subsequent information literacy instruction sessions. The L.I.F.E. programme, offered over a two week period, was approximately one hour long and sessions were held five times daily. The feedback from attending students was overwhelmingly positive. The authors, however, detect that there is still room for growth and improvement.

This paper also presents a brief historical overview of the orientation programmes of The Alma Jordan Library, explains why a new programme was proposed, and describes and presents the results of the L.I.F.E. pilot. It ends with a section on lessons learnt; examining the way forward if the orientation programmes at the Library are to be restructured in the future.

Keywords: Tamara Brathwaite; Arlene Dolabaille; The Alma Jordan Library; The University of the West Indies; User Education; Information Literacy; Library Literacy; Library Orientation
Introduction
User education programmes have been an essential service that academic libraries offer to their clients. Though the term ‘user education’ may vary to include terms such as ‘library orientation’, ‘library literacy’, ‘information literacy’ or ‘bibliographic instruction’, the concept is about introducing users to the library as well as educating them on effectively accessing and using a variety of information sources. For the academic library the expected outcome of a user education programme is an information literate user who will be both aware of the physical layout of the library and the services offered, and knowledgeable about the numerous library resources at his/her disposal during his/her academic tenure.

The Alma Jordan Library (AJL), formerly the Main Library of The University of the West Indies (UWI), St. Augustine Campus is the largest library in the St. Augustine Campus Libraries network. The St. Augustine Campus is a member of the regional university, the UWI, that includes the Mona Campus in Jamaica, the Cave Hill Campus in Barbados and a virtual network of campus and non-campus territories referred to as the Open Campus, with its headquarters in Barbados. These four campuses offer a wide range of undergraduate and postgraduate programmes with a student intake that steadily increases each year. At St. Augustine, new student enrolment numbered 4805 in 2009/10, 4552 in 2010/11 and 4963 in 2011/12 (UWI 2013). While each campus is responsible for its own design and delivery of library and information literacy programmes, there has been, in the past year, an effort to standardize information literacy across the four campuses, with discussions led by the University Librarian. In this regard, the emphasis that the AJL places on user education is similar to that demonstrated at other campuses of the UWI.

This paper provides a historical overview of user education programmes deployed over time at the AJL with specific emphasis on the more recent, redesigned user education programme, branded as Library Information For Everyone (L.I.F.E.). It examines data collected from the new programme and suggests approaches for the continuous improvement of orientation programmes in the future.

Literature Review
A library tour is an introduction and orientation to the staff, services and spaces available to library patrons and can be as simple or as complex as librarians determine it to be. The pivotal factor for the type of tour may have more to do with staffing, costs, time and learning outcomes rather than with any particular best practice.
Since most academic libraries offer some form of orientation to students at the beginning of the academic year, there is obviously a benefit in providing this service. These benefits could range from any or all of the following: introducing students to the library, calming library anxiety, demonstrating services and resources, showing physical and virtual spaces and ensuring that students become familiar with staff.

From the literature, it is evident that other academic libraries, like the AJL, are grappling with the issue of formalizing user education. Additionally, ‘library tour’ now appears to be an outmoded term. Over time the library tour concept has evolved, imbibing other aspects – most notably, instruction - and has also been adjectivized by technological developments, like “web library tours” (Hickok 2002) and “multimedia based library orientation” (Madhusudhan and Singh 2010). Current literature is sporadic on defining ‘library tours’, specifically in academic libraries and this is due to the fact that library user education is more popular in academic libraries and the tour component is now part of a larger instruction agenda.

A historical review of the literature has revealed that library tours in academic libraries gained popularity in the 1960s (Du Mont and Schloman 1995), but due to the intensive demand on staff time, alternative methods of introducing new students to the library were developed, leading to the creation of library material to support self-guided tours and other methods of orientation. In the 1970s, Mary Jo Lynch (1974) identified a shift from traditional tours to self-guided tours and those that included technology, which she termed media tours. Never completely out of vogue, the traditional tour with a librarian guiding students through the library remained a staple in the 1980s, enhanced by the addition of instructional elements to those introductory sessions. Mensching (1989) presented findings of research on library tours to support the notion that library instruction, coupled with physical tours, became the preferred method of orientation in the 1980s. The term ‘information literacy’ gained prominence in the 1990s, and library tours were seen as a part of the information literacy session – with some distinguishing it as library literacy, a component of information literacy.

At the turn of the millennium, with the explosion of information and the ubiquity of technology, library orientation took on a new look. The literature is replete with case studies on using technology to enhance and disseminate information to users prior to them even entering the library. According to Hickok (2002), “[h]istorically user education has been achieved through printed guides, maps, conducted tours, etc. With the
advent of the World Wide Web, libraries began transferring these means to electronic form – online guides, maps and tours.” Today with the advent of online tours, multimedia use, interactive maps, visual storytelling, social networks and the easy accessibility of information on multiple devices, many libraries are embracing the opportunities to deploy orientation programmes that bring users to the library pre-armed with what, where and how the library can be of assistance to them. Today a tour of the library is not limited to the walls of the library.

As aforementioned, the methods used to offer library orientation vary. Some methods employ the use of technology while others do not. In a paper on library orientation methods, Stoffle and Bonn (1973), presented an inventory of several methods of library orientation which included a walk-through tour, a self-guided tour and a tour using audio visual material. This research distinguishes tours from instruction. For them instruction was related to teaching offered in classes, a specific library course, point of use methods (increasingly referred to as point of need), handbooks or printed guides and computer-aided instruction. A study done by Oling and Mach (2002) on library tours conducted in 111 Academic and Research Libraries (ARL) in North America updated this research. In two types of academic libraries, public and private, they identified three tour types, similar to Stoffle and Bonn, and six formats. The research distinguished types as distinct from delivery method. The types included guided, offered by a trained library specialist, self-guided which are specifically limited to “self-paced tours” with patrons armed with printed resources, and finally, virtual tours. Oling and Mach (2002) further noted that “guided tours are by far the most popular being offered by 93 percent of the libraries.”

Oling and Mach (2002) further defined audio cassette tours as requiring hand held audio devices, video tours as guides shown on video cassettes and the computerised tour offered at limited access points. The researchers noted that all of the above are time consuming to create, costly to update and seldom used by patrons. However, they pointed out that increasingly virtual tours, tours available on the web, are enjoying popular usage in academic and research libraries, and are often used as part of library instruction. More recently, the use of library orientation videos according to Mikkelsen and Davidson (quoted in Harrington et al. 2011), is being seen as a “successful way to introduce the library to first year students.”

Many writers on the topic have discussed the need to embrace digital technologies in revamping their orientation courses in response to the changes in the information environment. Some programmes are small
scale using current resources to impact the orientation, while others are well budgeted items which require great collaboration to effect. Four examples from the literature of user education programmes that have significantly impacted library orientation are presented below.

According to Izenstark and MacDonald (2008), redesigning their orientation programme at the University of Rhode Island Library required introducing a three part active engagement plan. The passive tour was replaced by a map with fill-in-the-blank components; the catalogue demonstration became a hands-on exploration of the library’s website; and the final activity was replaced by a scavenger hunt. The reported feedback was very positive. The authors acknowledged that despite the negative reviews of scavenger hunts in library literature, they were able to create an exercise that worked for their library and was effective in introducing students to the Library’s resources in an engaging way while using material at their disposal. The programme was well received, reached more students, and had greater impact on positively introducing students to library resources.

Madhusudhan and Singh (2010) reported on a multimedia based library orientation programme designed to supplement library tours. With reference to the current information landscape, a virtual tour was designed at their large college library in New Delhi, India. Its aim was to reduce the burden of librarians having to repeat themselves during physical tours and rather encourage self-learning by new students. Using Macromedia Flash, a 20 minute presentation was developed and rolled out during orientation week. It was enthusiastically received by the staff; and the student population rated the product as excellent in that it complemented the library tours, allowing students the flexibility of accessing it on their own time.

In “Web Library Tours: Using Streaming Videos and Interactive Quizzes,” Hickok (2002) chronicles the development of a library product designed to affect library orientation. The California State Library developed a fully narrated library tour which it hosted on its website to meet its large student population. The streaming video also included JavaScript quizzes to prompt users to fill in their responses to questions based on the video. In choosing this format, Hickok (2002) explained that video streaming had the potential to capture students and technology in a partnership that would benefit the library in its “first step towards its larger goal of information literacy.”

The librarians at Mason Library in Keene State College, New Hampshire, developed a three segment orientation session that used open source applications and visual storytelling. Harrington et al. (2011)
described how using freely available software and library resources to produce an engaging programme appealed to a variety of learning styles and reduced the anxiety of new students. The orientation started with a video tour of the library created using iMovie, followed by a polling method to engage students and solicit feedback called Poll Everywhere and ended with a research “horror” story narrating a student’s research process. The program was hailed as a success in getting the point across that the library is a useful and welcoming place.

The literature demonstrates that both librarians and users respond positively to technology when it is used along with interactive elements to enhance library orientation. It also points out that though time consuming, the impact of implementing these new developments, is positive. Staff is more eager to present the product and help students use the library, the image of the library is improved, leaving users with a very positive outlook of the resources and services, and users are more likely to return to the library.

**History of User Education at The Alma Jordan Library, St. Augustine**

*Library Orientation (LO)*

The Alma Jordan Library was established in 1961 and has been offering user education programmes since 1964. These programmes have targeted mainly new students, but have also included returning students. Clarke (1999) in his article “User Education at the Main Library of the University of the West Indies, St. Augustine: a Historical Chronicle” stated that as early as 1964, there was evidence that the then Vice-Dean of the College of Arts and Science instructed academic staff to send new students to the Deputy Librarian in order to get a tour of the library. This ‘instruction’ however, was not mandatory for students. It was not tied to a ‘for-credit’ or co-curricular course and therefore, attendance was based on the students’ perception of the session’s importance to them. Clarke (1999) also noted that the user education program comprised of a library orientation tour during the first week of the semester, followed by a detailed library instruction session where students learnt how to use the catalogue, locate an item, create a bibliography and discover other library resources. The orientation tours saw a high attendance rate among students – 70%. In 1985, a change was made to this format. Physical tours were replaced by a video presentation, but this was not as effective as the guided tours and was consequently abandoned in 1990. There had been some discussion of introducing self-guided tours due to increasing enrolment figures, noting that this format could have allowed students to learn and explore at their own pace. This idea never materialized and as a result, up until September 2012 the
approach continued to reflect the practice established in 1964, that is, conducting physical library orientation tours and library instruction sessions as two separate programmes.

Library Instruction/Information Literacy (IL)
The earliest evidence of library instruction according to Clarke (1999), was a presentation on library research methods delivered by the Campus Librarian to a group of third year Agronomy students in 1967. At that time, the integration of library instruction as a module into the University’s curriculum as a formalized institutional programme was conceptualized. Up to the late 1990s, ‘library instruction’ was the term used to define teaching students about library skills; this term was replaced by the concept “Information Literacy” (IL). At The Alma Jordan Library, IL training has been delivered using three approaches. The first consists of 1-hour long, generic IL sessions that are scheduled during the third and fourth weeks of the new semester and which are conducted by librarians within the library. The second approach includes those sessions that are delivered (both at the undergraduate and postgraduate levels) by Faculty Liaison Librarians. These sessions are conducted either on the Faculty premises or in the library, and provide more subject-specific library instruction. In the case of undergraduates, IL sessions are part of the University’s foundation courses and Faculty Liaison Librarians are given one or two teaching periods by lecturers or tutors. The third approach to delivering IL by the AJL involved the creation of online tutorials which were created in-house by librarians, and posted on the library’s website (Hosein 2006). These tutorials were also uploaded to MyElearning, the online course delivery platform used on the St. Augustine Campus to facilitate blended teaching and learning.

User Education Programmes up to September 2012
For the purposes of this paper, we will examine library orientation and generic information literacy sessions that were conducted only in the library during the first month of the semester, and discuss how the introduction of a pilot project to replace these separate sessions brought about encouraging results.

Over the past seven years, user education programmes at the AJL remained more or less the same as it was some 40 years ago, with some strides being made in the IL component. Attendance at sessions was not compulsory, unless students were encouraged to attend based on their lecturers’ influence, or as a result of successful marketing strategies adopted by the library. For the first two weeks of the semester, guided Library
Orientation (LO) tours were conducted, followed by a further two weeks of generic IL sessions. These were marketed in several ways: a library booth at the Campus’ Orientation fair for new students, assistance from the Marketing & Communications Department to publicize sessions, orientation brochures placed in students’ registration packages, and notices posted within the library, on the library’s website and around the campus.

The LO tours required prior registration so that numbers in each group were manageable, although if students appeared without registering, and the maximum number for the group had not been reached, they were allowed to attend. LO took the form of a guided physical tour and lasted approximately 40 minutes, with a maximum of 25 students per group. Two librarians were scheduled for each session and if the group comprised of 25 or more students, then it was divided into two. Sessions ran every hour during the day, with one session scheduled in the evening when the late shift librarian was on duty. In an effort to ensure that the same information was disseminated to all students, librarians were given a list of “talking points”- topics to discuss when introducing students to the library. Some of these topics included:

- Library services offered - printing and reprographic facilities, loan entitlements, and opening hours.
- Introduction and demonstration of the Online Public Access Catalogue (OPAC) by the librarian on locating a book using the Library of Congress Classification system.
- Introduction to key areas in the library - the Accounts Unit, the computer laboratories, the loans counter, the course reserve counter, and the Help Desk.
- Brief explanation of the library collection – both print and electronic.

At the end of each session, students were given a library premium. They were also urged to register for one of the upcoming information literacy sessions held in the computer laboratory providing hands-on demonstration on the use of library online and print resources.

**Impetus for Developing a New Programme**

At the AJL, statistics revealed that the library’s user education programme was not reaching the majority of new students. The situation required examination to determine the causes of low attendance at orientation sessions, and what needed to be done to improve on students’ awareness of the library’s services.
A critical examination of the previous iteration led to the following observations about the library orientation sessions.

- The programme which ran for at least three weeks was too long, with statistics indicating highest attendance by students mainly in the first week of the semester. By the third week of the programme, attendance dropped drastically as students focused more on attending classes and completing assignments within their course of study.

- The IL programme continues to be limited by the inadequate training facilities in the library. While there has been an increase in the number of computers in the User Education Centre (UEC) for hands-on searching and navigation of research databases and the library catalogue, the space is too small to cater for larger training groups.

- An internal perception of the orientation programme was that the learning objectives were not well defined and librarians were ambitious in trying to accomplish too much during the time scheduled for a LO session. Therefore, students were being overloaded with information, and retention was not always assured. Additionally, since there was no student evaluation of the orientation tours (with the exception of 2011), an overall assessment and determination of impact could not be undertaken.

The temporary appointment of an Information Literacy Coordinator in April 2012 to the AJL was seen as a positive development in terms of bringing structure to the deployment of any new LO strategy. Prior to the establishment of this position, there was no one person solely responsible for shaping the programmes for user education and information literacy. The role of IL Coordinator included redesigning the content of the orientation programme and improving upon techniques previously adopted.

At the beginning of the academic year 2012-2013, the AJL piloted L.I.F.E., an approach to user education that included the use of virtual tours, practical sessions for searching electronic resources, and the informal testing of participants to assess their level of comprehension of the main IL elements taught. Attendance numbers for LO and IL sessions from 2008/09 – 2011/12 and those of the L.I.F.E. pilot project in 2012/13 are presented below in Table 1:
Table 1 – Library Orientation Student Attendance Statistics

<table>
<thead>
<tr>
<th>Year</th>
<th>Students attending LO programme</th>
<th>Students attending IL programme</th>
<th>Students attending L.I.F.E. programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008/09</td>
<td>365</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>2009/10</td>
<td>632</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>2010/11</td>
<td>447</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>2011/12</td>
<td>502</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>2012/13</td>
<td>-</td>
<td>-</td>
<td>630</td>
</tr>
</tbody>
</table>

From the figures, it is evident that the LO programme had a good attendance rate, while the generic IL sessions were poorly attended. These generic IL sessions being offered in the library were not clearly distinguished from the IL sessions offered in the faculty. Students may have considered them a repeat of what they would have already heard in their structured IL sessions, and perhaps this may have been a reason for the low attendance rate. It is important to note that between 2008 and 2012 students attending the LO programme would have most likely attended the IL sessions. A total number of 630 students attended the new redesigned L.I.F.E. programme in 2012/2013.

Methodology

L.I.F.E. Project

The project combined a virtual tour, a librarian-led hands-on session on navigating the Campus Libraries’ electronic information portal, UWI Libraries Information Connexion (UWInC), and a questionnaire to be completed by the attendees. It was branded Library Information For Everyone and marketed under the acronym L.I.F.E. and was fitted into the newly rebranded First Year Experience programme for students new to the St. Augustine Campus. Knowing what was required was the easiest part of the project; getting it done required a bit more creativity. The preparation of a three part orientation exercise that would last less than an hour and still meet the learning objectives set for students, required a product that was engaging, easy to operate and succinct.

A decision was made to use a narrated PowerPoint presentation for the first part of the L.I.F.E. exercise. The template and pictures of a virtual tour already available on the AJL’s webpage were used as a blueprint.
Pictures were selected, or updated if changes in the library were noted, and a transcript was prepared. The transcript went through several stages of editing to ensure that only salient elements were included. A talent to vocalize the transcript was then identified from staff in the library. The PowerPoint presentation was converted into video using software freely available online, Camstudio and Audacity. The video was created using Camstudio to capture an automated PowerPoint slide show, then voice and royalty-free music were added to the video using Audacity software. After several attempts, multiple screenings and changes, a final version was agreed upon. This process took six weeks.

The second part of the orientation required a hands-on demonstration of the UWIlinC information portal to students. This required less effort as several guides were already available on the topic. It was felt that librarians could follow simple guidelines to demonstrate the use of the software to students. This area was loosely crafted and left to the discretion of librarians with advice on how much time should be devoted to the hands-on session. Talking-points and advice on areas of focus were prepared for librarians engaged in this activity.

The final component was a multiple choice survey administered to students who attended the L.I.F.E. sessions (Appendix I). The survey gathered general demographic data. A question was included for students to identify the type of electronic device that they owned to access the internet. It was felt that in successive surveys the answers to this question could record trends in the profiles of students and assess their level of connectivity, should a Bring Your Own Device (BYOD) method of training be recommended for future offerings. This would be particularly useful as students enter the campus with their own devices and express an interest in using them to access library services. The remaining questions covered all of the major elements of the narrated PowerPoint presentations, in an attempt to gather from participants their retention of the issues expressed, discussed and demonstrated. The survey was also designed to ascertain the attractiveness of the L.I.F.E. session and the last question included a reflective component, requiring students to demonstrate whether they would recommend the session to another student. The survey was prepared online, but printed copies were distributed at the sessions. The responses were subsequently entered into SurveyMonkey for analysis.
Two weeks before the start of the semester, L.I.F.E. was presented to the Head of User Services and pretested on staff members who were also enrolled as students of the UWI, and the librarians. Based on these screenings, several last minute changes were made to the video and questionnaire. Subsequent to these changes, L.I.F.E. was presented to all staff and the talking points were disseminated. The feedback was positive, with several changes suggested for future iterations of the video.

Marketing and Incentive

The Department of Marketing and Communications on the St. Augustine Campus was approached for assistance, and a brochure was created to support the L.I.F.E. campaign. A subsequent bookmark advertising the L.I.F.E. orientation sessions was designed and given to the campus Student Administration personnel in June to be placed in all of the welcome packages of new students and in the Registration Hall. Brochures were placed in every library in the Campus Libraries Network and displayed on notice boards across the campus. Taking advantage of social networking, notices appeared on Twitter, Facebook and UWI’s RSS feeds. The information about the L.I.F.E. sessions was marketed in emails to all staff and on closed circuit television screens on the campus. Finally, during the week before the semester opened, new students were personally invited to attend L.I.F.E. sessions by library personnel who manned the library booth at the Information Village, an expo style fair attended by students new to the St. Augustine campus.

A subsequent roster scheduling librarians to conduct L.I.F.E. sessions was designed, approved and disseminated to staff. The narrated PowerPoint presentation, in video form, was loaded onto the computer in the UEC, a folder which included registration forms, UWilinC handouts, talking points and the print survey were placed in the UEC for the librarians’ attention.

Handouts on rules of the library, telephone numbers of library staff and either pens or UWilinC branded notelets were given to all attending students. At every session, attending students were encouraged to complete the registration form for the chance to win a 64 gigabyte flash drive. This draw was done in October 2012 after the L.I.F.E. sessions had ended. Through a random draw, a new student from the Faculty of Law was selected and awarded the prize. The draw was publicized on Facebook and throughout the Campus
Libraries network. The winning student noted that the three part session and the brand L.I.F.E. provided an excellent introduction to the services of the Library\(^1\).

**Data Analysis**

Statistics for the 2012/13 enrollment indicate that 4,483 new students were admitted to the St. Augustine Campus (UWI 2013). Calculations revealed that at five times a day with thirty persons per session for two weeks, the AJL training centre, at full capacity, could accommodate a total of 1250 students. At the end of the L.I.F.E. sessions, there had been 630 participants, representing 50% of possible attendees, and 15% of all newly recruited students. One of the long term objectives of the L.I.F.E. programme is to use the videos in an online environment to meet a larger population of the new student intake. This would supplement the numbers reached in the actual L.I.F.E. sessions.

During the introduction to the L.I.F.E. session, participants were told about the survey and were requested to complete it at the end of the session. Of the 630 students who attended the sessions, 619 of them attempted to complete the survey, with 591 of them completing the survey (95.5%). This provided an excellent sample size of students who were new to the campus and attended the session.

**Fig. 1 - Gender of Attending Students Showing 68.8% Female and 31.2% Male**

\(^1\) See also tinyurl/bft5249
The pie-chart percentages above correlate with the numbers of female and male students enrolled on the UWI St Augustine Campus. Recent reports indicate that of the approximately 17,000 students currently enrolled at the institution, more than 60 percent are women” (Connelly 2010).

**Fig. 2 – Category of Student**

Of the respondents, new students accounted for 94.6% (578) and returning students 5.4% (33). Most of the respondents were undergraduates 90.7%, while 7.8% were postgraduates, and staff members accounted for 1.5%. In this instance, new staff members were categorised as students for data analysis.

**Fig. 3 – Age Ranges of Students**
Five hundred and twenty two students, or 84.7% of attendees, were between the ages of 15-25; fifty-four students (8.8%) fell into the 26-35 category, and forty or 6.5% of the participants were over 35 years old.

**Fig. 4 – Web Accessible Devices Owned By Students**

The final question in this section quantified the devices students owned. Responses illustrated that all students had at least one device. As previously mentioned, this data would be useful for future iterations of the project, especially if the BYOD model is adopted.

In the second section of the questionnaire, there were 20 multiple choice questions. There was an overall 78.5% correct response rate to the questions in the survey. This was further broken down as follows: 8 questions gained a 90% correct response, 6 gained an 80% correct response, 2 gained a 70% correct response and 4 questions gained a 60% correct response. This result suggests that the participants were able to identify the key elements of the orientation presented in the video and orally by the facilitators.

In response to the final question, “Would you recommend this session to someone else?” the response was overwhelmingly positive. Of the 490 persons who completed the final feedback question: 217 noted that the session was informative, 88 indicated that it was helpful, 11 indicated that it was good, 22 stated that they “now understand how to use the library”, 42 were happy to learn about UWiLinC, and the others appreciated the pace, friendliness of staff, and the opportunity to have hands-on experience. Many expressed relief that they now felt better equipped to use the resources of the AJL; however, one person noted that a physical tour would have been preferred. Five hundred and ninety-one (591) participants attempted this question, and 526 said yes, that they would recommend this session to another student.
Discussion

Results of the survey indicated that the reoriented pilot project was a success; anecdotal feedback from instructors supported this notion. During the two weeks, the use of physical and human resources was optimized to meet approximately the same number of students in a shorter period of time.

The content of the programme was also revised, making the LO more focused and standardized. The 10-minute video encompassed the elements of a physical tour, condensing it into one format and offering it in one space. The active engagement with UWIlinC as a hands-on experience for the students was a new component of the LO. This gave students an opportunity to interact with the library’s online resources in the presence and with the assistance of a librarian.

Additionally, the survey was important to gather feedback from students, something that was not possible before. It was beneficial to gather this data directly after students had seen the video and interacted with a librarian, as it allowed for the capture of immediate responses of participants. Although the survey could have been completed online using an appropriate platform, it was collected on paper, to prevent any glitches with technology and to encourage the participation of all students. All data collected was later entered into SurveyMonkey, an online questionnaire programme and analysed using features of the software. The open ended answers were coded and grouped similarly to the practice used by Houlihan and Click (2012).

The use of a registration form yielded some advantages. Through the form, a record of the number of students attending the sessions could be logged. An immediate observation was that more students attended the morning sessions, in comparison with the afternoon sessions. Additionally, at the end of the L.I.F.E programme, the registration forms were used to randomly select the winner of the incentive. The incentive offered was a motivating factor for students to complete the form fully.

Library administration and staff were receptive to implementing a new LO strategy. Support from various stakeholders resulted in the success of the project. This included support from librarians who contributed to the development of the project, assistance from ancillary staff who designed, printed and distributed handouts, and cooperation from other departments on campus.

This project, however, was not without its fair share of challenges:
• The UEC lab was only outfitted to accommodate 38 students at a time; this limitation affected the numbers of persons that could be hosted in one session.

• Competition for use of the bandwidth during the busy start-of-the-year student registration period affected access to the Campus network, resulting in intermittent disruption of Internet connectivity to the UEC during IL sessions.

• Staff had minimum film production skills, and no access to features-filled editing applications for creating the video, and as a result, the final product was not of the best quality.

• The option of offering a physical tour to cater to students with different learning styles was not possible.

• Entering the data into SurveyMonkey using the completed questionnaires was a time consuming endeavour.

Lessons Learnt
While this pilot was generally successful, there are lessons to be learnt from its development and implementation. Such pointers can be incorporated into the planning of future LO programmes. An important factor highlighted was the need for an expanded training facility, so that a larger number of students can be accommodated. An option, in this regard, would be to deploy other labs in the AJL which could all be used at scheduled times to facilitate simultaneous training.

The Faculty Liaison Librarians played an important role in advocating LO sessions to faculty members as they, in turn, encouraged students to attend. Many students indicated that they were there because their lecturers advised that they should attend. In this regard, Faculty Liaison Librarians were key partners in the development and success of the library orientation programme.

Proper planning is a requirement for producing a quality product. Preparation should begin months in advance and sufficient time should be allocated for continuous review of all aspects of the designed programme. Additionally, the programme needs to be adequately resourced, including gaining the commitment of persons with the requisite skills, and adequate funding to cover the costs of offering an attractive incentive, providing premiums, and producing a professional video.
A review of the survey instrument indicated that additional questions should have been included, in order to provide the library with useful data for the planning and marketing of future LO programmes. Responses to a question on how the students found out about the programme, for example, would have informed the AJL as to the most effective communication tool used. A question on which faculty the student belonged to, may have provided some evidence of the responsiveness by the various faculties to the LO programme.

Conclusion

For many students, a first impression of the library determines the extent to which they will use the library and its resources, whether physically or virtually. The first student/LO experience is particularly significant for an academic library since one of its mandates is to assist in producing an information literate student - a student, who at the end of the user education programme, acquires some of the skills required to become information literate. It is therefore extremely important that the student’s first learning experience in the library be enjoyable, welcoming and meaningful. At the AJL, the critical analysis and restructuring of the orientation programme undertaken during the academic year 2012-2013 was done in an attempt to create a product/service that would provide the student with such an experience.

This paper has given a historical overview of user education programmes, and has, at the same time, demonstrated the essential requirement to create, innovate, and modify LO services to meet the expectations of a changing user population. It is envisaged that the L.I.F.E. pilot project is just a stepping stone in the further development of an orientation programme that is designed to effectively assist in creating an information literate graduate of The University of the West Indies.

References


Appendix 1

The Alma Jordan Library Orientation 2012

Library Survey

Please indicate your answers with a check mark and return the completed questionnaire to the box provided.

<table>
<thead>
<tr>
<th>I am</th>
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<th>I am</th>
<th>I own a</th>
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<tbody>
<tr>
<td>o Male</td>
<td>o A new student</td>
<td>o A Graduate student</td>
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<tr>
<td>o Female</td>
<td>o A returning student</td>
<td>o An Undergraduate</td>
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<td>o Smartphone</td>
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<td></td>
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<td></td>
<td></td>
<td>o Another device used to access the web</td>
</tr>
</tbody>
</table>

1. Where is the Alma Jordan Library located?
   a. At the School of Continuing Studies on Gordon Street
   b. At the Eric Williams Medical Sciences Complex
   c. At the southern end of the St Augustine Campus

2. From Monday to Friday during the Semester, the opening hours at the Alma Jordan Library are:-
   a. 8:30 a.m. - 10:00 p.m.
   b. 8:30 a.m. - 5:00 p.m.
   c. 12 noon – 6:00 p.m.

3. Returning books to the library are done at:-
   a. The Help Desk
   b. The Loans Counter
   c. The floor from which the item was retrieved

4. If you need assistance while using the services at the Alma Jordan Library you can:-
   a. Ask at the Help Desk
   b. Ask a library staff member
   c. All of the above

5. Reserve items are materials that have been placed in the Reserve Collection upon the request of Faculty (True or False)
   a. True
   b. False

6. What is the size of bag that is allowed to enter the library:-
   a. 10cm by 10cm
7. **All borrowing in the library ends:-**
   - a. 10 minutes before the library closes
   - b. 2 hours before the library closes
   - c. When the bell is rung

8. **All monetary transactions in the Library occur:-**
   - a. In STARSS and UEC
   - b. At the Help Desk
   - c. At the Accounts Unit

9. **In the User Education Centre (UEC), patrons can:-**
   - a. Use computers and attend training sessions
   - b. Consume beverages
   - c. Chat with friends and use cell phones

10. **In the West Indiana and Special Collections Division, one can borrow materials written by or about West Indians (True or False)**
    - a. True
    - b. False

11. **In the Humanities Division, located on the third floor, one can find information on:-**
    - a. Architecture
    - b. Physics
    - c. All of the above

12. **In the Social Sciences Division, located on the fourth floor, one can find information on:-**
    - a. Economics
    - b. Law
    - c. All of the above

13. **In the Science and Agriculture Division, located on the second floor, one can find books on:-**
    - a. Microbiology
    - b. Education
    - c. All of the above

14. **In the Engineering Division, located on the first floor, one can find information related to:-**
    - a. Engineering
    - b. The United Nations
    - c. All of the above

15. **The classification directory posted in the Library indicates the location of items on the floors by:-**
    - a. Subject
    - b. Barcode
    - c. Author
16. **Subject liaison librarians work with faculty and students to deliver information services in support of teaching, learning and research (True or False)**
   a. True
   b. False

17. **What is UWIlinC?**
   a. An integrated database of information resources
   b. A listing of books for sale at the UWI Bookshop
   c. A social networking interface for students and faculty

18. **The book deposit chute is used:**
   a. To return CDS
   b. When the Library is closed to return print material
   c. Any time of day

19. **The 24/7 service is available:**
   a. Only in UEC on the third floor
   b. Only in STARRS and the reading room
   c. Only in West Indiana on the second floor

20. **The Alma Jordan Library is:**
   a. Open to all students enrolled in any tertiary level institution in Trinidad and Tobago
   b. Open to the public
   c. Open to all registered graduate & undergraduate students and staff of UWI

Would you recommend this library session to someone? **Yes No** kindly provide a reason for your answer:

______________________________________________________________________________
______________________________________________________________________________

Thank you!
Information Literacy Through E-Learning: A Case Study of Information Literacy (IL) Training to Undergraduates at the University of the West Indies (Mona)

Verna George and Karlene P. Robinson

Abstract

Academic institutions over the years have seen the need to use new technologies to support flexible learning, e-learning being one such service. Since its genesis in 2001, the Mona Information Literacy Unit (MILU) at the University of the West Indies (UWI), Mona Campus Library has used online instruction to allow more students to have access to information literacy training as well as to reduce the number of its face-to-face instructions. However, due to the lack of manpower and space, MILU opted to use e-learning as a strategy for reaching the student population in the second semester of 2008.

The paper highlights the activities of the MILU and analyses data obtained from students’ feedback on online courses. Data was gathered from online activity reports and results of questionnaires administered to over 200 students who participated in three different online lessons given in Our Virtual Learning Environment (OurVLE) in the foundation course FD14A: Writing in the Disciplines. The results show that students generally found the lessons to be user friendly and helpful in assisting them to learn concepts. However, students have to be motivated to use e-learning and it works for those who are self motivated and are comfortable with the technology. It is clear that there is a role for e-learning at The UWI especially in supplementing face-to-face learning. Additionally, while an online course would be useful in reducing face-to-face interactions and librarians’ contact time, unless it is for credit and properly publicized, it would not attract the students.

Keywords: Karlene P. Robinson; Verna George; Information Literacy; E-Learning, The University of the West Indies, Mona, Jamaica; Academic Libraries; Mona Information Literacy Unit.
Introduction

Flexible learning refers to educational systems and technologies that provide learners with increased choice, the option of personalization, and the convenience of self-paced, anywhere, any time learning. Increasingly, academic institutions are employing appropriate information and communications technology to facilitate flexible learning. E-learning is considered part of the suite of flexible learning options that allow students to work outside a classroom setting but, under the guidance of an instructor. Over the past decade, many libraries have been turning to E-learning as an additional means of delivering library orientation and information literacy (IL) training. Academic libraries, in particular, have been adopting the philosophy and technology associated with flexible learning to supplement existing face-to-face IL sessions and physical library tours. This paper highlights the IL activities that were undertaken using e-learning technologies at The University of the West Indies (UWI) Mona Campus Library, located in Jamaica. The paper examines the feedback received from students who participated in the E-Learning IL training, and the lessons learnt during the programme to date.

The Mona Information Literacy Unit (MILU) was established in 2001 on the Mona Campus of The University of the West Indies (UWI) to “co-ordinate and structure the delivery of training courses to the Library’s clients” (Mona Information Literacy Unit 2005). The Unit has the mandate to teach IL to students attending the Mona Campus. The number of students reached in IL sessions grew from 3,600 (2002-3) to 6,021 by 2007. The MILU has had several challenges during its operation and has had to devise ways to fulfil the mandate and meet the needs of an increasing student population. Staffing constraints has been one of these challenges. Initially, the Unit was managed by a Loan and Reference Librarian who also had other responsibilities within the Library. Other members of staff were called upon to assist periodically. For example, Reference/Liaison Librarians and a small core of Training Librarians assisted with teaching large IL groups and Senior Clerical Assistants were trained to conduct some Online Public Access Catalogue (OPAC) sessions.

In 2004, two Librarians and a Clerical Assistant were assigned to the now autonomous Unit to meet the needs of a growing clientele. The Unit draws occasionally on the expertise of twenty other librarians to achieve its objectives. The paucity of manpower and the lack of space mean that the Unit is constantly exploring new and
innovative methods for reaching as many students as possible. E-learning can facilitate this greater thrust and for this reason it was adopted by the MILU in 2008.

Background
Since its inception the MILU has used online instruction to “give access to a greater number of students as well as to reduce the number of face to face instruction sessions” (Mona Information Literacy Unit 2005). The Mona Library’s webpage has links to online presentations created by the Unit, including:

2. *Avoid Plagiarism*: http://myspot.mona.uwi.edu/library/tutorials

Statistics are not available and usage is not monitored, but the librarians’ experience suggests that most students do not use these online presentations, although some level of marketing and promotion of the products is undertaken.

The MILU was physically dislocated early in the second semester of 2007/2008. As a result, there was a challenge to monitor the activities of the Unit and effectively teach the required number of IL sessions. Space to conduct IL sessions has always been a problem for MILU. The Library’s small training room can only accommodate groups of up to 25 students. Larger groups have to be shifted to other venues including the Library’s Multifunctional Room, the World Bank Public Information Centre and/or the Academic Reading Room. Very large groups are taught in the Mona Electronic Reference Centre (MERIC) that accommodates up to 60 students. This is usually a last resort as the IL sessions conducted there, displace students from using the computers in this facility. Due to these physical space challenges, it was therefore important to identify other ways to deliver the content and assess the extent to which students were retaining what was being taught.

Some librarians argued for a major shift to teaching an online stand-alone IL foundation course, much like the one launched by UWI St. Augustine in 2004, IL100-*Foundations of Information Literacy*. Writing out of the St. Augustine Campus Main Library, Hosein (2006) explained that previous IL instruction did not reach most students, and short library orientation sessions (1-1½ hours) provided others with limited exposure. The IL100 course was constructed to be used in its entirety, or to have modules incorporated into other courses with the
anticipated outcome that the librarians “will reach more students than the traditional library instruction.” She reported positive responses to IL100, though, “no meaningful statistics have been collected” (Hosein 2006). Hosein agreed that faculty/library collaboration and embedded IL courses are the ideal. MILU’s guidelines agree with this in principle. MILU recognizes the essential role of collaborative sessions since they enhance student learning, result in a fusion of IL concepts and disciplinary/subject content and engender communication with academic staff to garner support for the IL programme (Mona Information Literacy Unit 2005).

Milne and Lloyd (2007) pointed out that IL programmes are less than effective if students do not see their value reflected in a grade, and if the programmes are divorced (in time or content) from students’ research or coursework. Though they contend that marketing the value of IL programmes to academic staff can be ‘a major challenge,’ IL courses embedded in the curriculum seem to be the preferred approach. Given these discussions, the MILU Librarians felt that e-learning had the potential to accommodate large numbers of learners, is time and cost effective and addresses the space challenge.

**Literature Review**

E-learning may be defined as a form of distance training where ICTs are used along with a wide array of teaching resources to allow interaction and asynchronous communication to take place among learners (Sangra, Vlachopoulos and Cabrera 2012). E-learning is considered to be learning that is facilitated and supported by ICTs where the learner is able to be informed, with or without the input of the tutor. It involves a number of disciplines and may be given a particular emphasis depending on the discipline by which it is defined. Definitions that emphasize technology may deemphasize other characteristics, for example one E-learning Portal (2008) defined e-learning as “the use of technology to deliver learning and training programs.” A similar definition out of Governors State University (2008) states that “E-learning is to take a course online using a modem, wireless or cable connection to access academic course material from a computer, phone, or handheld device.”

Similar definitions focusing on the mode of delivery refer to e-learning as “the delivery of a learning, training or education program by electronic means (Li, Lau and Dharmendran 2009). Liao and Lu (2008) defined it as
education delivered or learning conducted by Web techniques. Other definitions tend to stress the means of communication or the method of instruction, for example González-Videgaray (2007) states “e-learning is learning based on information and communication technologies with pedagogical interaction between students and the content, students and the instructors or among students through the Web.”

Still other definitions emphasize education. Ellis, Ginns and Piggott (2009) define e-learning as “information and communication technologies used to support students to improve their learning.” Jereb and Šmitek (2006) refer to e-learning as “educational processes that utilise information and communications technology to mediate synchronous as well as asynchronous learning and teaching activities.” Despite their varied emphases, what is clear from all these definitions is that a number of disciplines converge to make e-learning possible. Sangra, Vlachopoulos and Cabrera (2012) concluded that any definition for e-learning should include all the disciplines that have an impact on it. Such an inclusive definition of e-learning enables “multiple points of entry into the discussion of e-learning, from its basic components to its application and models” in that far more individuals will see the relevance and will be able to make a greater personal connection and “access different points of the discussion and implementation” (Sangra, Vlachopoulos and Cabrera 2012).

There are as many benefits to e-learning as there are disadvantages. From the learners’ perspective, remote (anytime-anywhere) access is a major convenience, potentially saving time and money. E-learning caters to different learning styles by employing a variety of teaching methods. It encourages self-directed and self-paced learning; students can hone their skills by repetition and can time-out and return to lessons at their convenience. However, some students may lack the motivation, self-discipline, and the necessary technical expertise to benefit from online instruction. The major factor in e-learning is that the student is the key component of the training process because he/she is responsible for managing his/her own learning with the assistance of external teachers in an online environment.

One area in which e-learning has found a place is that of information literacy. IL has been the focus of libraries since 1989 when the American Library Association defined it as “a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (American Library Association 1989). E-learning has successfully been used as a mode of delivery for IL instructions.
E-Learning and Information Literacy

There are a number of factors that are driving libraries to deliver IL training via online means. Among these, is the ongoing need to find effective ways to teach learners to search the Internet. One school of thought posits that it is more effective to employ virtual methods to teach virtual challenges (Yi 2005). In addition, today’s students are computer literate and technologically savvy and embrace this form of learning. Tam and Robertson (2002) have identified three interrelated factors responsible for driving educators and researchers towards online instruction: socioeconomics, demography and of course technology.

A comparative study done by Marcinek et al. (2011) of e-learning and b-learning information literacy programs at the science and technology universities in Estonia, Finland, Latvia and Poland, showed that libraries are not just satisfied in providing users with basic library skill instruction, but they are interested in assisting students with “self-education and overall personal development including IL and ICT upskilling. The authors noted that many academic libraries in their mission statements aim at providing integrated library and information services for patrons and the provision of ‘modern e-courses’ is a ‘natural way of fulfilling their mission.’ It is not surprising that libraries and other information services institutions continue to increase their offerings via e-learning platforms: library induction online courses, embedded IL courses in science modules as well as designing learning materials to support e-learning and e-tutoring.

Elements Needed for Success

To have a successful e-learning programme or environment, several factors must be considered. User satisfaction is an important element in assessing the success of any e-learning effort. The environment for learning is difficult and complicated since the mode of instruction is offered using the Internet and the extent to which students are satisfied with this means of instruction is the extent to which they will continue to use this mode of instruction. Since the inception of this e-learning concept in the 1990’s and despite having a growth rate of 35.6%, there are e-learning efforts that do not succeed (Arbaugh 2002). While much is not known on why users end their online courses, one of the factors accounting for failure is the inability to satisfy users.

Sun et al. (2008) identified thirteen critical factors in six dimensions influencing e-learners satisfaction. Using a stepwise multiple regression analysis to study the data collected via questionnaire, the researchers found that
“Learners’ computer anxiety, instructors’ attitude toward e-learning, e-learning course flexibility, e-learning course quality, perceived usefulness, perceived ease of use, and diversity in assessment” are the main factors affecting user satisfaction. In that research, these seven factors out of thirteen were used to explain the 66.1% of the variance in user satisfaction. The seven factors cannot be ignored when aiming to implement a successful e-learning programme.

Sun et al. (2008) revealed that “course quality” is the most important element in the e-learning environment. Thus online course content ought to be carefully designed technologically, and presented in a timely way along with formative assessment to get the best results. The study also found that instructors’ attitude towards e-learning is very important because they can influence students positively and motivate them. It follows therefore that administrators should carefully select instructors for teaching e-learning courses and ensure there is appropriate training. Just as in a face-to-face environment, if an instructor is not enthusiastic about a course, this can impact negatively on students.

Learners’ anxiety was found to hamper their satisfaction. Sun et al. (2008) also found that students who were not comfortable with the use of computers are not as satisfied with online learning mode. This finding is corroborated by Piccoli, Ahmad and Ives (2001) who indicated that if learners have a positive attitude towards computers, they tend to do better in an e-learning environment. The researchers noted that students should be helped to build their confidence in using computers and suggested that a fundamental computer course could be a prerequisite for students desirous of pursuing online courses.

Methodology

This is an exploratory study of IL training using e-learning at the UWI Mona Library. The study used data available from online activity reports and students’ perceptions captured via questionnaires administered after they used the online lessons. Responses were sought from 290 plus students to the three online lessons given in Our Virtual Learning Environment (OurVLE) in the first year foundation course FD14A: Writing in the Disciplines. These lessons were:

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2The UWI’s Mona Information Technology Services (MITS) provides ICT services on the Mona campus. In July 2004 MITS replaced WebCT with the e-learning Moodle platform. This free open source software (FLOSS) was re-branded OurVLE—Our Virtual Learning Environment (Perue, 2007). However, from the users’ vantage point, access to OurVLE can be problematic: an early 2008 posting on the site news points to “abnormally long load times for various platform resources during high traffic periods. This resulted in session timeouts” (Mona Information Technology Services. OurVLE Administrator, 2008).
• The tutorial, *Using the OPAC: Basic Tips*;
• The lecture/PowerPoint presentation, *Shaping Your Research and Writing*, and
• A 10-point *Multiple Choice Quiz* with answers and feedback designed to complement the tutorial presentation on the OPAC.

Each of these instruments was discussed in terms of the purpose of their design, the findings and recommendations for future e-learning. The significance level used was $\alpha = .05$.

The IL online lessons were mounted for second and third weeks. Some 10 weeks later, MILU sent out 423 questionnaires to elicit students’ feedback on the exercises, the mode of instruction, and to gain comments from the four tutors involved in the online mode. The tutors were asked to administer the questionnaires. The questionnaires asked students to score the three lessons mounted on OurVLE on each of the following statements using a 5-point Likert-type scale, with 5 meaning ‘Strongly agree’.

- The lesson helped me to learn concepts
- I found the lesson easy to use
- The lesson helped me to improve my research/writing skills

A score of 0 indicated that the respondent had not attempted the lesson. Students who did not attempt the quiz were asked to indicate their reasons from a pre-coded list:

- Time constraints
- No access to OurVLE
- Difficulty using OurVLE
- Other [please state]

**Research Questions**

It was also hoped that the data generated from the online system and the questions posed in the questionnaire would assist in evaluating/judging the efficacy of e-learning by answering these three questions:

1. Did the lessons help students in learning the concepts taught?
2. Did students find the lessons easy to use?
3. Did the lessons help students to improve their research/writing skills
The Multiple Choice Quiz

The multiple choice quiz covered students’ understanding of the key areas of searching the OPAC (e.g. author, title and word searches) and, at the same time, was based on the course topics (e.g. alternative energy). The quiz was intended not only to teach facts related to the OPAC, but also broader concepts related to the search process and to enhance critical thinking skills. Rather than merely asking students to identify correct answers, librarians tried to explain search concepts behind the correct answers. To encourage students to become familiar with the features of the OPAC and to increase understanding of general concepts for constructing/conducting an effective search, multiple attempts at the quiz were allowed. Later, and unplanned, the data from the number of attempts was used as a surrogate for level of interest and persistence in mastering the concepts.

Faculty and technical support were essential in completing this exercise. Since the MILU librarians lacked prior training/experience in using OurVLE, a Technical Assistant was employed to provide one-on-one assistance with inputting the quiz into the course container. The MILU librarians also collaborated with the FD14A lecturer who was asked to alert tutors and students about the online lessons to be completed prior to the Library’s face-to-face IL module.

Findings

The FD14A Semester II class had 423 registered students, approximately 75% of whom were female. The OurVLE activity reports showed the number of viewings for each lesson as highlighted in Table 1:

### Table 1: Number of students and times viewed by Presentation

<table>
<thead>
<tr>
<th>Presentation/Lesson/Exercise</th>
<th>No. of students viewing</th>
<th>Times viewed</th>
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<tbody>
<tr>
<td>OPAC</td>
<td>202</td>
<td>564</td>
</tr>
<tr>
<td>Using the OPAC: Basic Tips PPT</td>
<td>238</td>
<td>564</td>
</tr>
<tr>
<td>Shaping Your Research and Writing PPT</td>
<td>289</td>
<td>716</td>
</tr>
</tbody>
</table>
The results show that more students attempted the OPAC multiple choice quiz than used the OPAC. Did some students simply guess answers? Or instead some students accessed the OPAC from the Library’s webpage which was in contravention of the OurVLE quiz instructions: “In order for you to successfully complete this quiz you are required: NOT to view other webpages/sites whilst performing this quiz.” The numbers suggest that students viewing the quiz can be grouped as – those who used OPAC and viewed the Basic Tips, those who did Shaping Your Research and Writing and Multiple Choice OPAC Quiz, and those who did not do any.

Findings on the Multiple Choice OPAC Quiz

From the OurVLE activity report, 271 students (64.1% of the class) made a total of 585 attempts at the quiz (as distinct from simply viewing it). Figure 1 shows the results when we omitted ‘attempts’ in which students scored 0 and/or left the quiz ‘open’. There were 31 cases which suggest students were starting then abandoning the quiz without actually attempting a question. Of the 240 remaining students actually attempting the quiz, 43% made only one attempt and 24% two attempts. The number of attempts was an indicator of persistence. An intended consequence of repeated access is that the student’s learning is enhanced.
The first and final mean quiz scores for those making one visit was 7.23 showing that persons were generally answering the questions correctly at first attempt. For those making two visits, the final mean score was 7.96 compared to a first mean score of 5.98. As expected, mean scores increased with number of visits. What was more important was that the final scores were much more bunched than first scores, with a majority scoring ‘10’ (Figure 2). Regardless of where they began, students who persisted tended to continue with the quiz until they had ‘won’.

First and final scores were positively and significantly correlated \( (r = .393) \) and there was also a positive correlation between number of visits and final score \( (r = .377) \).

When first and final scores were compared further, Table 2 shows that roughly 50% of first scores were seven or more; just under 50% of final scores were nine or more. This suggests that learning did take place among students who attempted the quiz more than once. This is supported by Marcinek et al. (2011) who noted that students taught by e-learning modes perform just as well as students taught by any other method of delivery.

**Table 2: Percentage of persons by score out of 10, first and final score**

<table>
<thead>
<tr>
<th>SCORE OUT OF 10</th>
<th>FIRST SCORE %</th>
<th>FINAL SCORE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>2</td>
<td>3.3</td>
<td>0.4</td>
</tr>
<tr>
<td>3</td>
<td>11.7</td>
<td>1.7</td>
</tr>
<tr>
<td>4</td>
<td>12.5</td>
<td>5.4</td>
</tr>
</tbody>
</table>
Of the 137 who made more than one visit, only 4 persons (about 3%) had final scores lower than the first. Nine attempts, 7%, saw no change in score. The rest of the final scores were increased with more attempts. Just over four out of 10 students, 42%, decided that, after one try, their scores were acceptable enough to preclude further attempts. With 50% of the students scoring six or under after their first attempt, a higher repeat rate was expected, especially since repeated attempts resulted in improved grades.

An examination of time spent on the quiz showed some very short visits which suggested students were being ‘bumped’ from the system. There were some very extended times (lasting five days or more!), and sessions which were left ‘open.’ The latter two instances were attributed to failure to log off. Times greater than 125 minutes were omitted for analysis. The distribution by length of stay is shown in Figure 3. Each student making 1 visit spent on average 21 minutes in total on the quiz; those making two visits spent about 39 minutes. This was the longest time spent to do the quiz outside of the anomalies mentioned above. These results suggest that, in setting tests, we should be aware that students may be operating within tight schedules. Facing competing demands on their time, they seem to prefer to spend the time available in a minimum number of visits. In addition, they will not spend more time than is deemed ‘profitable.’ It must also be noted that not all students may be comfortable with the use of computers. As Piccoli, Ahmad and Ives, (2001) demonstrated, if learners have a positive attitude towards computers, in that they are not put off by the complex nature of computers, they would be willing to use it in their learning.
Some data in Figure 3 are counterintuitive and point to some errors in how data were recorded. One person made 9 visits and, based on the data file, the times of these visits totaled 7.2 minutes. This is very unlikely. It is also unlikely that the person who made 8 visits would have stayed on the quiz for about the same length of time as the person who made 3 visits, unless students had decided they were going to spend about only half an hour on the quiz.

**Gender Differences**

Because respondents to the quiz were entirely self-selected, the data could indicate level and type of interest in e-learning by gender. One hypothesis was that male leaning towards ICT would have led to their ‘over-representation’ among the quiz takers. A converse hypothesis was that performance of males on this voluntary exercise would mirror their under-representation at the UWI (Bailey 2003) and therefore they would not choose e-learning. Anecdotal evidence is that, in inner city communities in particular, studying is a feminine activity. For example, in an inner-city housing project that offered economic training to unemployed beneficiaries, ‘... 80% of those [who took] up opportunities for training and employment were women... many [men] were hard to reach because of their socialization: it would have been embarrassing for men to be seen attending classes’ (Leslie 2007). Perhaps a similar cultural restriction would be at work here: quizzes are for females.

Of the 240 respondents, 45 or roughly 19% were male, but this was not significantly different from the expected distribution in the class population ($\chi^2 = 4.33$). Based on these results, e-learning might be an equally
effective tool for males as for females. So the outcome was that neither hypothesis was supported by the data.

When all 240 respondents were included, the mean number of visits by women, 2.28, was significantly higher than the mean for men, 1.73. Men scored marginally higher on their first attempt than women, 6.62 compared to 6.11, but this was reversed when the final scores were compared, 7.91 to 7.99. The differences were not significant. The pattern was repeated when only persons making multiple visits were included. As observed previously, some students (84% of whom were female) left the quiz without signing off, the OurVLE log recorded several times exceeding 3 days. These times were excluded in calculating length of stay on the quiz. When only persons recording 125 minutes or less were included, somewhat counter-intuitively, the mean length of stay for men, 31.7 minutes, was higher than that for women, 26.7, though not significantly so. Similarly, the number of visits by gender was relatively the same with no significant differences, although no male visited the quiz more than 4 times (Fig. 4).

![Fig. 4: Percent of visitors by number of visits and gender](image)

When measured by number of visits, both genders did poorly. The majority in each gender category made only one visit despite first scores that would suggest they should repeat the quiz. But both genders were similar in that, once a student decided to improve his/her score, he/she tended to persist until scoring 10. E-learning works for those who are self-selected. The evidence from the quiz is cautionary: it does not seem able to attract those who may not have a strong initial interest.
Students’ Feedback via Questionnaire

Of the 423 questionnaires, 163 (39%) were returned and only one of four tutors provided feedback. This rate of return could have been due to the questionnaire being administered during the last week of teaching for Semester II when lecturers and tutors were entering in-course grades or finalizing examination papers and students were more likely to be absent from classes.

Results of Questionnaire

Figure 5 indicates that of the 163 students completing the questionnaire, 56% rated the lesson highly (5 or 4) in terms of learning concepts of OPAC searching. That the percent was not higher might have been because, by Semester II, some students already knew how to do basic OPAC searches; still, some of the concepts included in the lesson (e.g. the difference between ‘browse’ and ‘search’) were very likely new to them. Approximately the same proportion, 57%, rated the lesson 5 or 4 for ease of use.

While just over 50% rated the lesson highly in helping improve their ‘Research/writing skills’, this was not significantly lower than 57% (z = 1.8).
Figure 6 also showed that the one hundred and fifty-two students who completed the questionnaire said they attempted the OPAC Quiz. However, from OurVLE activity reports, the actual number answering the quiz was 241. In terms of learning the concepts, 32% rated this exercise highly (i.e., 5 or 4). For ease of use, 47% gave high ratings. In terms of improving research/writing skills, 31.5% rated 5 or 4.

A total of 152 of the 163 students as indicated by Figure 7 viewed the PowerPoint lesson *Shaping Your Research and Writing*. Figure 7 shows that 52% found this presentation very easy to use or follow. Forty-three percent gave scores of 5 or 4 in terms of helping them learn concepts and, an almost identical number, 44%, rated it highly in terms of improving their writing and research skills \( (z = 1.97) \). Ease of use, though scored
highly by a relatively small 52%, was the strong point of this lesson. Fourteen students, 9%, had not viewed the presentation.

Comparison of Lessons

Students’ responses to each lesson were compared and presented in Fig. 8.

![Fig. 8: Percent of respondents scoring exercises 4 or 5](image)

Significantly more students, about 56%, felt that the PowerPoint presentation, *Using the OPAC: Basic Tips*, was of greater help to them in learning concepts than *Shaping your Writing and Research* (42%) or the multiple choice quiz (31%). This was not unexpected. The 45-slide PowerPoint tutorial, originally intended for freshmen missing out on the face-to-face OPAC training, proceeds systematically through topics such as “Search topic – Brainstorming” through various types of search—e.g., “Keywords (vs. Subject headings)”. It includes many illustrations and examples, and information is presented more ‘directly’ than in *Shaping your Writing and Research* in which the concepts are more abstract, or the quiz, where information has to be applied.

The exercises received their highest scores for ease of use. *Using the OPAC: Basic Tips* was regarded as easiest to use while *Shaping Your Writing and Research* followed with a score of 52% to *Using the OPAC*, 57%. However, ‘Ease of use’ may be somewhat ambiguous. Did it mean easy to manipulate the software or easy to ‘go through the questions’? Like other PowerPoint presentation lessons, the one used for this study required little manipulation other than clicking from slide to slide. It called on students’ reading and comprehension
skills, some brainstorming in the case of *Shaping Your Writing*, and some reflection. But the question remains: why did the PowerPoint presentation not receive a higher score?

Consistent with the other exercises, the quiz was awarded a low score. In this case, the 47% of persons giving the Quiz a score of 4 or 5 was significantly lower than the figures for the other two. This might have been unexpected. Normally, quizzes are straightforward and are usually designed without distractions. Ease of use ought to have scored a much higher percentage.

The Quiz required manipulating the OPAC (using the link on OurVLE) simultaneously with the questions. Users needed to save regularly (with the "Save without submitting" button) and to "Submit all and finish" on completing the quiz. Further, they were warned, “Failure to adhere to these instructions may result in the system failing to recognize your responses, hence you may obtain a grade of zero.” Some of the zeroes discarded from final quiz results may be attributable to persons finding the process too time consuming and therefore, failed to heed instructions. The quiz also required higher level thinking skills for devising the best search strategies. The responses to the different types of lessons would suggest that there should be a mix of approaches and levels of difficulty in e-learning aids.

More students, about 51%, rated *Using the OPAC: Basic Tips* over the *Multiple Choice Quiz*, 31%, and *Shaping Your Writing and Research*, 44%, in improving their research/writing skills. That might have been partly a halo effect of the comparative ease of use. Or the more positive response may be partly a result of easier recall of this more structured lesson (compared to the other two more abstract lessons), especially since the questionnaire came so long after actual practice. Also, students might have recalled more easily specific OPAC-searching techniques learned and used subsequently.

There is an overall point to be made. The ‘best’ score awarded in all the exercises was about 56% and the lowest was 31%. As measures of delight or satisfaction with the lessons, these are unsatisfactory. In the current lexicon, there was no ‘Wow’ response, suggesting that, for the population examined high expectations for e-learning may have to be tempered.
Failure to attempt lessons

The main reason given by students who did not do the lessons was ‘time constraints’. Some were not aware of the lessons, suggesting poor publicity. Others mentioned being handicapped by technical problems such as expired passwords or late registration for the course. A few indicated they decided not to do the quiz because they were commuting students or had only two courses to complete for graduation.

Lecturers cannot cater for every student’s difficulty. However, they should take into account students’ schedules, their facility (or lack thereof) with technology and a variety of blocks that would counter involvement in e-learning (Sun et al. 2008). MILU librarians must also ask whether flexible/blended learning (a mix of online and face-to-face) is the better approach to impart IL skills to students. If the drawbacks suggested above are real, can a stand-alone IL course, by e-learning mode only, be successful at UWI?

Tutor’s Response

Only one tutor (of four) responded to the evaluation sheet. She had publicized OurVLE exercises to her students prior to the Library session. She felt that both modes of teaching had their place but that face-to-face sessions allowed for greater interaction, feedback and clarification of concepts. The quiz, she thought, forced students to be more aware of the Library’s resources and their location. She agreed that “The quiz called for a greater level of hands-on engagement … than the tips for [facilitating] better retention” (McKenzie 2008).

While Shaping Your Research and Writing could be accessed remotely by students at any time or place, in the tutor’s opinion it could not replace face-to-face presentations where students could get concepts explained. She argued that ‘the previous library lecture on the same topic … was more instructive and informative than the OurVLE presentation.’ However, she felt that both modes should be used together since repetition would reinforce concepts. The value of e-learning, she concluded, might lie in its use as an alternative means of access/learning for students unable to attend a face-to-face session.

Limitations

Perhaps more students might have viewed the lessons and quiz had MILU interacted directly with students, or been more aggressive in selling the value of the lessons to the lecturers/tutors of these students. Also, the rate of return of questionnaires might have been higher, and evaluation more accurate, had questionnaires
been distributed during classes immediately after the IL Library session. On the other hand, it might be argued that if the lessons had made a significant impression, the time lag would not be a major factor.

**Recommendations**

In general, students gave the online lessons a fairly positive rating, indicating they found the lessons to be user friendly, helpful in assisting them to learn concepts and to a lesser extent, contributing to the improvement of their writing and research skills. They rated those lessons requiring them to follow a set of steps more highly than the Multiple Choice Quiz which required them to be actively engaged in the learning process. Multiple attempts at the quiz indicated persistence, a desire to improve the mark and perhaps competitiveness, some self-driven potential that can be utilized in e-learning.

Emerging from this study, several extrinsic factors seem necessary for successful e-learning:

1. It should not be a major challenge to get our tutors/lecturers to buy into e-learning as they are already using this mode and, in fact, proposed that we use it in this case. While we recognize the role of lecturers/tutors in promoting e-learning by reason of greater interaction with students, MILU needs its own marketing campaign. Although, we are operating in a culture where face-to-face learning is still the norm, there is still use for email (through Campus Pipeline) and faculty notice boards as well as lobbying lecturers one-on-one and at Faculty board meetings. Students are already accustomed to e-learning in many UWI courses but the challenge is how to motivate more students to participate in ‘library’ lessons online.

The quality of e-learning offered is most crucial. The challenge is to make the lessons interesting, fun-filled - much like computer games - and easy to use. Students, like instructors, have many competing uses for their time. By ‘keeping it short and simple’, librarians can compete favourably for students’ limited time. Social networks like blogs and chat can also be used to encourage interaction and get instant feedback.

It is vital for top management to also buy into the programme by ensuring that the required time and money is invested into its success. Measurement will help to evaluate whether the teaching objectives are met, but statistics can also sensitize the University and library administration about the value of e-learning. Further studies, with a control group and more structured assessment, would help to explore the issue.
2. Technical challenges can be frustrating. Some of our constituents may have opted out of the e-lessons because of technical problems. Among the challenges constituents faced are, decreased response time (when multiple users access the same lessons at the same time) and decreased response time due to ‘bandwidth limitations.’ The latter could have had an effect when opening graphics, especially since the PowerPoint presentations that were used in the research had several images. Students without Internet access at home may have had little time to spare for extra work on campus; some may have had limited computer skills. It would have been useful to get students comments on this.

There is a need to incorporate video and other rich graphic media in our e-learning lessons to improve the quality of the learning experiences and to capture students’ interest. However, compatibility and other issues with media players and browsers would have to be ironed out. At present, although there is a small in-house systems department, assistance from the Campus IT support team, Mona Information Technology System (MITS) is not always provided. There may be challenges in implementation.³

3. Training is essential for the librarians in areas such as: pedagogy and e-learning theory, how best to interact with students online, developing basic graphic design skills, and gathering data from the software for timely feedback. In order to complement this, sufficient time must be devoted to creating content that would stimulate learning.

Conclusion

E-learning is not a panacea. It should be used when we deem it most appropriate for a particular learning outcome. It should employ good pedagogy. Appropriately used, e-learning can provide clear benefits for students, teachers, lecturers, instructors and the educational institutions involved. By providing the

³ The MITS’ educational technology unit, Instruction Support Systems (ISS), was set up “to lead and facilitate the transformation of The UWI into an institution where multiple modes of teaching-learning, assessment of learning, and research, both low-tech and high-tech are commonly, appropriately, and effectively used.” Specifically, the ISS trains faculty, students and support staff in “Instruction Design, Course Website Development, Video Conferencing, DVD Authoring, Mass duplication and inter-conversion of CD, DVD and VHS tapes, Training of faculty and students, Multimedia Design and Modifications to OurVLE” (“eLearning: Almost at the Speed of Thought,” 2005). We are grateful to MITS for support and requisite training in development of the lessons and when we needed to gather data from the software for analysis.
opportunity for self-paced learning, students can own much of their learning. Convenience is also a plus; they can save time and money. For teachers, there is consistency of delivery, ease of updating material and ability to reach a wider audience. However, all this is negated if students do not show up for or ‘walk out’ of an e-learning classroom.

What will keep them in the e-classroom? This study seems to suggest that some students are self-motivated and competitive and will learn regardless of the mode of delivery. Those who are less so inclined will have to be induced to participate. The general response to our online lessons was unremarkable; we need to examine how to deliver, according to Rosenberg (Insights 2005) “stuff that they want, that they need, that’s valuable.” For this to happen, lessons have to be ‘just in time’, learning objectives must be clearly stated and, in light of competing demands on students’ time, extrinsic value may have to be ascribed in marks/grades, for, as Aldrich (Insights 2005) states “... if you care, the learner... will care.” Planned assessment and feedback will help improve what we offer.

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Towards Academic Library Support for Entrepreneurship: A Blueprint for Reinventing our Role

Martha Ingrid Preddie

Abstract

The entrepreneurial model of university education is present in many higher education institutions globally. When the University of Trinidad and Tobago (UTT) was established in 2004 this model was applied. As one of the main support networks that aid in the delivery of teaching and the conduct of research, UTT Libraries has to go beyond the provision of traditional collection development, bibliographic instruction, reference work and document delivery services, in order to help the University to achieve its entrepreneurial mission. This paper provides a blueprint for UTT Libraries to reengineer services and improve staff competencies to fulfil the university’s mission.

Keywords: Martha Ingrid Preddie; Academic Libraries; Entrepreneurship; Libraries; Library Planning; University of Trinidad and Tobago.
Introduction

An entrepreneurial university can be described as a “model that incorporates the additional role of the commercialization of knowledge and active contribution to the development of private enterprises in the local and regional economy” (Wong, Ho and Singh 2007). The University of Trinidad and Tobago (UTT) is the first entrepreneurial university in Trinidad and Tobago. The University’s entrepreneurial focus is manifested through its programme offerings and the myriad activities in which it is engaged. To help UTT achieve its mission, UTT Libraries is mandated to deliver more than the provision of information support through the traditional collection development, bibliographic instruction, reference and document delivery services. UTT Libraries needs to provide services that are akin to those offered by libraries that support business schools with an entrepreneurial focus. Opportunities exist for UTT Libraries to engage in strategic initiatives to support the entrepreneurial mission of the University. This paper provides a blueprint that can be used for how UTT Libraries could proceed in this regard. The proposed initiatives include the revision of the Libraries’ mission statement, provision of support through business-focused information resources, restructuring of the Libraries’ information literacy programmes, and development of revenue generating products and services along with community outreach activities. The paper also presents the educational requirements, as well as the competencies and skills that will be required of library staff, to enable them to shift to the entrepreneurial paradigm. This blueprint could serve as a model for other Caribbean academic libraries that may be aspiring to support their institutions’ entrepreneurial endeavours.

UTT’s Entrepreneurial Thrust

Founded in 2004, the mission of UTT is:

To be an entrepreneurial university designed to discover and develop entrepreneurs, commercialise research and development, and spawn companies for wealth generation and sustainable job creation towards the equitable enhancement of the quality of life of all individuals, families and communities of the Republic of Trinidad and Tobago and the Caribbean. (University of Trinidad and Tobago 2013)

UTT’s teaching and research programme offerings include: engineering, health sciences and biomedical engineering, education, nautical science and maritime operations, sports, performing arts, fashion, visual arts, agriculture, animal science, food technology, and security and public safety. At present, several programmes include an entrepreneurial component in their courses and some of these are featured in Table 1.
**TABLE 1: UTT Entrepreneurship Courses Offered in Programmes**

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>LEVELS AND SPECIALISATION</th>
<th>ENTREPRENEURSHIP COURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animation Studies</td>
<td>Diploma in Animation Studies</td>
<td>Animation, Entrepreneurship and Marketing</td>
</tr>
<tr>
<td>Sport Studies</td>
<td>Bachelor of Science (Management)</td>
<td>Sport Entrepreneurship</td>
</tr>
<tr>
<td>Sport Studies</td>
<td>Executive Master’s</td>
<td>Sport Business Leadership</td>
</tr>
<tr>
<td>Sport Studies</td>
<td>Executive Master’s</td>
<td>Sports Marketing</td>
</tr>
<tr>
<td>Biomedical Engineering</td>
<td>Bachelor of Applied Science</td>
<td>Entrepreneurship, Management and Business Practices</td>
</tr>
<tr>
<td>Carnival Studies</td>
<td>Master of Arts</td>
<td>Caribbean Carnival and Culture Proseminar in Ethnomusicology</td>
</tr>
<tr>
<td>Performing Arts*</td>
<td>Bachelor of Fine Arts</td>
<td>Cultural Entrepreneurship Entertainment Industry Business Seminar Teaching Artist Training Residency in Community Arts</td>
</tr>
<tr>
<td>Fashion Design</td>
<td>Bachelor of Fine Arts and Diploma in Fashion Management</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Maritime Studies</td>
<td>Master of Science in Maritime Management and Bachelor of Science in Nautical Science/Maritime Operations</td>
<td>Business Practices and Entrepreneurship</td>
</tr>
<tr>
<td>Food Science and Technology</td>
<td>Bachelor of Science</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Animal Science and Technology</td>
<td>Bachelor of Science</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Crop Science and Technology</td>
<td>Bachelor of Science</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Information and Communications Technology</td>
<td>Bachelor of Applied Science and Master of Science</td>
<td>Entrepreneurship, Management and Business Practices</td>
</tr>
<tr>
<td>Education</td>
<td>Bachelor of Education</td>
<td>Entrepreneurial Studies</td>
</tr>
<tr>
<td>Manufacturing and Design Engineering</td>
<td>Bachelor of Applied Science</td>
<td>Entrepreneurship, Management and Business Practices</td>
</tr>
<tr>
<td>Process Engineering</td>
<td>Bachelor of Applied Science and Master of Engineering (MEng)</td>
<td>Entrepreneurship, Management and Business Practices</td>
</tr>
<tr>
<td>Petroleum Engineering</td>
<td>Bachelor of Applied Science, and Master of Engineering (MEng)</td>
<td>Business Practices and Entrepreneurship</td>
</tr>
</tbody>
</table>
Entrepreneurship is also a component of all Ensemble Development Courses III-VI. Students are also exposed to entrepreneurship in practice through the Co-op/Internship programme that pairs students with practitioners.

The taught Master’s programme in Environmental Science and Management, while not having a specific entrepreneurial module, offers career courses namely Environmental Impact Assessment, Environmental Monitoring, and Quantitative and Qualitative Risk Assessment. These courses are all areas in which individuals can undertake to pursue a career either as an employee or become self-employed in their own consultancy business. Additionally, students are taught Economics, Law and Policy and Organizational Environmental Management. These comprise some of the business and management fundamentals that are needed to become successful managers and entrepreneurs. Similarly, students pursuing the Visual Communications Design Diploma programme are exposed to the principles of entrepreneurship through courses in Marketing, Finance and Design and in their portfolio preparation.

In keeping with UTT’s mission, innovation and entrepreneurship in education are highly evident in the Centre for Education programmes. In 2006, the University embarked on teacher training, leading to the award of the Bachelor of Education (B. Ed.) degree. This degree prepares trainees to teach in both the primary and secondary school systems of Trinidad and Tobago. One of the specializations offered is Agriculture Science and the syllabus for this specialization was developed against the background of UTT’s entrepreneurial mission. It fits the model described by Wong, Ho and Singh (2007) as it was developed in the context of the need to reduce the country’s high food import bill and to address the aging and decreasing farming population, the decline in the number of students pursuing the Caribbean Examination Council’s (CXC) Agriculture course of studies, and the prospect of the introduction of Agriculture Science at the Caribbean Advanced Proficiency Examination (CAPE) level. From the inception of this programme it was decided that entrepreneurship was central to accomplishing this formidable task and that the final “product” would be “an entrepreneur who could teach agriculture” (Davis, Wilson and Hospedales 2012).

To date the outcomes of the Bachelor of Education (Agricultural Specialization) degree include novel ways of preparing curricula, the inclusion of the international Global Learning and Observations to Benefit the
Environment (GLOBE) programme\textsuperscript{4} into the curriculum, the growing of food, the undertaking of urban and peri-urban agricultural practices, and the establishment of agriculture based businesses by students.

The University’s entrepreneurial thrust is also evident in the annual Business IDEAS and Business Plan competitions where faculty, staff and students are encouraged to submit ideas that can spawn new business ventures. A novel facet of the IDEAS competition is the Master’s/PhD Research Innovation and Commercialization Initiative (RIC). Introduced in 2013, RIC will facilitate and support the generation of ideas for businesses based on the research of students graduating with higher degrees. RIC aspires to stimulate and support a spirit of technology innovation and enterprise among UTT’s graduate researchers. The initiative encourages graduate students to consider commercialization of their research in order to create economic and social value, beyond the academic requirements of their degrees. Plans are also afoot to develop university spin-offs, whereby UTT will partner with past students to set up businesses, partially funded by the University, as a means of investment in entrepreneurial ventures.

In order to educate the university community about entrepreneurship, UTT also hosts an annual *Entrepreneurship Knowledge Series*, comprising face to face and online workshops on business related topics. In 2013 the workshops included:

- An Introduction to Grant Writing
- Developing and Submitting Winning Ideas: IDEAS Competition 2013
- Negotiating Grant Agreements: Legal and Contractual Aspects
- Successfully Managing Research Projects

In September 2012, UTT hosted a three-day entrepreneurial conference titled “*The Role of Universities in Entrepreneurship for Socio-Economic Development: UTT’s Response.*” The conference was aimed at showcasing the University to its stakeholders and the national community in order to provide them with a better understanding of UTT’s innovative and entrepreneurial activities, and to seek their buy in, as it strives to fulfil its mission. At the conference, presentations in the sub-theme of cultural entrepreneurship examined the opportunities available in Arts and Culture for economic development and nation building. Innovation and

\textsuperscript{4} The GLOBE Programme which began in 1995 is “a world-wide hands on programme, primary and secondary school-based science and education program” which “promotes and supports students, teachers and scientists to collaborate on inquiry-based investigations of the environment and the Earth system…” [http://www.globe.gov/about-globe](http://www.globe.gov/about-globe)
Entrepreneurship, through the use of technology, were depicted in work conducted in the Information and Communications Technology (ICT) programmes. Demonstrations included the use of biometrics and haptics technology for security verification, which can be used in a variety of settings where user identity verification is required e.g. in the banking industry.

Innovative research activities in progress at UTT which would benefit the agricultural sector were also featured. These included the breeding of multi-purpose hot peppers and the extraction of their fixed oil (capsaicinoids) for pharmaceutical use; the incorporation of cassava into animal feed rations; the generation of indigenous protein sources (Tricanthera and Moringa) for ruminants, and the enhancement of the shelf life, taste and appearance of sugar cane juice. These initiatives have the potential to produce economic gains for the national and Caribbean agricultural sectors, on account of the cost competitiveness which can be derived from savings in animal feed, or from the generation of income from the sale of new or enhanced products, as in the case of peppers and cane juice.

Other presentations featured entrepreneurial and innovative research activities related to the energy and public utilities sectors. In terms of the latter, 2012 doctoral graduate, Franklin Ali’s ground breaking research on the use of the Management Operator Model for Postal Reforms in Trinidad and Tobago and four other countries (Ali 2012), culminated in a redesign of the Model to facilitate sustainable postal reforms in developing countries. Since the public utilities sectors in Trinidad and Tobago and other developing countries are typically challenged to provide high quality service, and more often experience unprofitability and continued erosion of market shares, the Model has potential applicability to other public utility services. Ali’s (2012) research typifies the outcome expected of doctoral studies at entrepreneurial universities, in that they provide valued information for solving socio-economic problems.

UTT is also increasing its scholarly publications on entrepreneurship and has published *Entrepreneurship in Trinidad and Tobago: The Black Experience* by Selwyn Ryan (2012). This book explores the history of black entrepreneurship in the country from the Pre-Emancipation Era to the Post-Independence Era. It is a noteworthy publication as it fills a gap in the history of entrepreneurship in Trinidad and Tobago. Ryan’s work presents a comprehensive treatise and distinguishes itself from his previous work (Ryan and Stewart 1994) on
the subject through its examination of black entrepreneurs and their competitors (the Syrians, Chinese, Indians and Portuguese) during the period 1870s to 1950s. He examines factors such as the impact of ethnicity, family networks, access to funding by financial institutions and interest in formal education on the development of entrepreneurship among blacks. Ryan posits that the lack of supportive ethnic and family networks, the difficulties experienced by black people in procuring funding from banks and money lenders, and the priority given by blacks to formal education, as a means of achieving socio-economic success, have had an adverse effect on the growth of entrepreneurship among blacks. Notwithstanding this, Ryan concedes that the number of black or coloured persons who formed part of the business elite in the early 20th century was more numerous than previously believed, and presents a chapter about the entrepreneurial undertakings of such persons.

**UTT Libraries**

The University of Trinidad and Tobago Library system comprises a network of eight libraries, geographically dispersed throughout Trinidad and a nascent collection at the University’s teaching location in Tobago. The UTT Libraries’ current mission is to “create a customer-driven information environment that provides materials, services and instruction to support the teaching, learning and research activities of the University and promotes information literacy and lifelong learning.” (University of Trinidad and Tobago Libraries 2011)

The UTT Libraries offers a range of services usually available in academic libraries: circulation, interlibrary loan and document delivery, reference, photocopying, library orientation and information literacy training. The collections comprise print and electronic resources that support the teaching, learning and research needs of the University. The UTT Libraries’ print and multimedia collection consists of 69,538 items. Though relatively small compared to other university libraries in the Caribbean, this collection contains over 2,200 volumes on entrepreneurship. The libraries also provide access to databases that cover information on entrepreneurship in specific subject areas as listed in Table 2.
<table>
<thead>
<tr>
<th>DATABASE</th>
<th>SUBJECT COVERAGE</th>
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<tbody>
<tr>
<td>Academic Search Complete</td>
<td>Multidisciplinary</td>
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<tr>
<td>Business Source Complete</td>
<td>Business</td>
</tr>
<tr>
<td>CAB Direct</td>
<td>Agriculture, Biosciences, Food Production Technologies</td>
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<tr>
<td>Caribbean Literature</td>
<td>Entrepreneurship in the Caribbean and the Americas</td>
</tr>
<tr>
<td>Environment Complete</td>
<td>Energy, Environmental Sciences, Environmental Technology, Marine Sciences, Pollution and Waste Management, Urban Planning</td>
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<td>ERIC</td>
<td>Education</td>
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<tr>
<td>InfoTrac Custom Fashion</td>
<td>Clothing Industry, Fashion</td>
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<tr>
<td>Library, Information Science and Technology Abstracts with Full Text</td>
<td>Library Science</td>
</tr>
<tr>
<td>MEDLINE with Full Text</td>
<td>Health Administration, Health Sciences Education and Health Services, Social Entrepreneurship, Medicine, Biomedical Engineering</td>
</tr>
<tr>
<td>Newspaper Source</td>
<td>Multidisciplinary</td>
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<td>One Petro</td>
<td>Petroleum Industry</td>
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<tr>
<td>Oxford Music Online</td>
<td>Music</td>
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<td>ProQuest Dissertations and Theses</td>
<td>Multidisciplinary</td>
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<td>ProQuest Engineering</td>
<td>Engineering</td>
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<td>ProQuest Entrepreneurship*</td>
<td>Entrepreneurship</td>
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<tr>
<td>Science Direct</td>
<td>Multidisciplinary</td>
</tr>
<tr>
<td>SPORT Discus with Full Text</td>
<td>Education,,Sports and Sports Medicine Leisure Services and Tourism</td>
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</tbody>
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Literature Review

The shaping of the UTT Libraries along the lines of the entrepreneurship model has to also reflect best practices taking place in similar institutions. A review of the literature on library support at business schools with entrepreneurial programmes and at entrepreneurial universities indicates a new role of entrepreneurial outreach for academic librarians in these environments. This role is manifested through various strategies.

At the University of Toronto, an entrepreneurial university, librarians have been providing a market intelligence service to a non-profit organization that offers services to start-up companies (Fitzgerald, Anderson and Kula 2010). Similarly public and academic librarians in rural communities in Michigan have teamed up and used information resources and their professional skills to conduct research, analyze data, and generate reports, as a means of fulfilling the information and knowledge needs of local entrepreneurs and their business coaches (Leavitt, Hamilton-Pennell and Fails 2010). Business librarians at the University of Alabama have supported the university’s community oriented entrepreneurial research network by selecting information resources for partner organizations, and providing train the trainer sessions to enable partner staff to train entrepreneurs on how to use library resources. Additionally, they developed and maintained a publicly accessible business website (Pike et al. 2010). In a similar initiative, the business and economics librarian at the University of Toledo in Ohio, has assisted a local economic development organization in establishing a library collection of market research and business education materials, to meet the needs of small businessmen including entrepreneurs. In this regard, the librarian served as a collection development expert consultant, while also fulfilling the University’s mission of assisting the community with local economic development (Martin 2010). In like manner, the Management & Economics Library at Purdue University, Indiana, has collaborated with Purdue Extension to provide entrepreneurial information to the community, via dedicated computers at off-campus Extension office locations (Kirkwood 2010). Purdue Extension is an entity...
that provides the residents of Indiana with educational programmes and research based information in the spheres of agriculture and natural resources, health and human services, youth, economic and community development, with the aim of improving peoples’ lives and their employment opportunities (Purdue University 2013).

Librarians have also partnered with teaching faculty to provide course-integrated library instruction for entrepreneurship and business courses at the point of need, with resulting benefits of having students spend more time analyzing information than on finding it (Campbell and Cook 2010 and Chung 2010). At the same time as they collaborate to find and use information, students develop team building skills that would serve them well as future businesspersons, (Chung 2010). Likewise, at Birmingham Southern College in Alabama, business professors and librarians teamed up to impart skills in effectively searching and evaluating business information, to undergraduate students pursuing an introductory business course (Mc Innis Bowers et al. 2009).

Although not in the context of library support at business schools with entrepreneurial programmes or at entrepreneurial universities, a unique approach to supporting entrepreneurs was undertaken by Library and Information Science students at the University of Syracuse. These students received a grant and embarked on an initiative called BOOST (Bolstering Original Opportunity and Self through Technology). Students in this project provided training in Outlook, Excel and Searching for Information on the Internet to displaced homemakers, women who had been out of the workplace for an extended period of time, while tending to their families. Due to a variety of reasons these women had found themselves without income, and needed technology related training to assist them in returning to the workforce, either as employees or as entrepreneurs (Dischiave and Posner 2010).

**Strategic Initiatives For UTT Libraries**

Opportunities exist for UTT Libraries to engage in strategic initiatives to support more fully the entrepreneurial mission of the University. These initiatives are outlined in the context of a proposed new mission statement as follows:

*To create a customer-driven information environment that provides library collections, services, staff and facilities that support the teaching, learning, research, innovation and entrepreneurial activities of the University. To this end UTT Libraries shall provide innovative services and comprehensive access to information, for the benefit of the staff and students at the University and the wider community.*

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This new mission introduces the ideas of entrepreneurship and innovation to the statement, while aligning it to the wider mission of the university. It therefore means that the services and resources of the Libraries would also have to be realigned to fulfil this mission.

Provision of Business-Focused Information Resources

While the library databases identified previously provide comprehensive access to information on entrepreneurship there is still a need for additional information resources including those related to the local environment. Information in the categories listed below would serve to enhance UTT Libraries’ information support for entrepreneurship:

- Setting up and registering of local businesses (including legal and taxation requirements)
- Marketing of business enterprises
- Product and service trends
- E-Commerce
- Funding sources/organizations supporting entrepreneurs (including governmental, private sector and international agencies)
- Intellectual Property (patents, trademarks, etc.)
- Continuing education opportunities for entrepreneurs
- Business competitions (locally, regionally and internationally)
- Business directories

In support of the provision of business focused information resources UTT Libraries needs to consider acquiring Standards and Poor’s NetAdvantage. This database could be useful to the UTT community because it is a comprehensive source of business and investment information including industry surveys and company analyses globally. One of the entrepreneurship and innovation “faculty champions” at the University has already recommended that a Standard and Poor’s database be purchased.

To further market the concept of entrepreneurship and the resources to support the research, teaching and study of it, the Libraries’ website has to be re-examined. One immediate suggestion is to include a page dedicated to resources on entrepreneurship and innovation on the Libraries’ website. The website can be further enhanced based on feedback and research queries received in this area.
Restructuring of Information Literacy Programmes

Information literacy programmes are provided by all campus libraries. Library staff provides training in: the use of the online public access catalogue and subject specific databases; the use of citation manuals, and how to avoid plagiarism. In the 2008/2009 academic year, library staff developed and taught a 3-credit information literacy course for diploma students at the Eastern Caribbean Institute of Agriculture and Forestry (ECIAF) campus; however this course was discontinued due to timetable constraints. For the past two years the new strategy adopted to replace this service was to embed information literacy skills into existing courses. Initially this started as a pilot project with students enrolled in the Diploma in Agriculture and the Diploma in Animal Health, Production and Veterinary Public Health. For the 2012/2013 academic year the development of these skills has been embedded into the Effective Communication, Teamwork and People Development course offered to BSc students in Animal Science and Technology, Crop Science and Technology as well as Food Science and Technology.

Similarly, in academic year 2012/2013 Information Literacy was also embedded into the Action Research course offered to undergraduate third year students pursuing the Bachelor of Education programmes at the Valsayn and Corinth campuses, under the concept of “UTT Library as a Research Tool” (Ransome 2013). The course modules were used by faculty and library staff to introduce students to primary and secondary sources of information. Students were also shown how to access the UTT Libraries’ website, how to construct database search strategies and how to evaluate other websites. Instruction in the American Psychological Association (APA) referencing and the use of RefWorks bibliographic management programme were also provided. An assessment of the achievement of learning outcomes was conducted through the library generated homework assignments that were given to students, to reinforce what was taught and gauge information retention.

The initiatives undertaken by these campus libraries present a model for embedding information literacy skills into entrepreneurial courses at the University where library staff would focus on co-teaching in these courses. This would require librarians to familiarize themselves with the content of such course offerings and to collaborate with faculty to identify where information literacy skills development can be embedded. Assignments that involve conducting market research and competitor analyses, assessing business problems
and determining feasible solutions are but a few activities where librarians can seize the opportunity to develop student competencies in identifying information needs, selecting appropriate sources of information, developing search strategies for database searching, evaluating information, synthesizing information and presenting their research outcomes. The specific strategies utilized by librarians would depend on the matriculation level of students, their previous exposure to library instruction, the learning objectives of the specific entrepreneurial course, and the types of assignments planned by the faculty member. In addition to face to face activities, self-paced online tutorials can be utilized.

Revenue Generation

The UTT Libraries can also explore the provision of fee-based products and services to entrepreneurs and companies such as:

- Business-related information searches
- Access to library services and resources, online and in library
- Training in database searching
- Loans of print and electronic books
- Business-related current awareness bulletins
- Business-related Selective Dissemination of Information service
- Business-related surveys

The proposed initiative of conducting business-related surveys requires a tripartite approach involving a partnership with members of faculty, librarians and UTT’s Business Development and Marketing Unit (BDMU). In this regard, the librarians have the competencies to create, market and disseminate electronic surveys. As the business arm of the University, the BDMU is in a position to market the service to potential customers - companies and entrepreneurs, (including those in small and micro enterprises), while the cooperation of faculty would be needed for questionnaire design, analysis of survey findings and in the compilation of survey reports.

It is envisaged that these revenue generating products and services would be beneficial to companies in the sports, agri-business, ICT, fashion, security, animation, visual arts, animal sciences, engineering, marine services, education and performing arts sectors, areas which the UTT Libraries’ print and electronic collections currently support. UTT alumni, particularly those who have graduated from the Industrial Innovation,
Entrepreneurship and Management programme and those who are self-employed/business owners could be targeted directly through UTT’s student services graduate tracer surveys.

The revenue generated from these activities could be used to subsidise the purchase of information resources including databases, and the cost of staff training and development activities.

**Community Outreach Services**

The community outreach services which UTT Libraries could undertake in support of the University’s mission are as follows:

- The establishment of an oral history project to record the life and business activities of entrepreneurs in Trinidad and Tobago. The recording of the histories of female entrepreneurs should be a separate area of focus.
- The provision of and access to the oral histories in digital format on the UTT Libraries’ website.
- The development of a series of public seminars comprising dialogue sessions with local entrepreneurs.
- The promotion of business information resources to the wider community.

In addition, partnerships could be established with governmental agencies such as the Ministry of Labour and Small and Micro Enterprise Development (MLSMED) and the National Entrepreneurship Development Company Limited (NEDCO) to promote business information resources in the community. This initiative would be aimed at providing training to entrepreneurs in small and micro enterprises, in the use of business related information resources and assisting them to overcome information deficiencies. Solving the problem of information deficiencies has been identified as one of the aims of the national Business Incubator Programme established by the MLSMED with the objectives of improving economic development in communities, and encouraging the establishment of competitive and inventive small and micro enterprises throughout the country. The National Integrated Business Incubation System (IBIS), an entity created under this programme, is mandated to partner with educational institutions to provide support services (NEDCO 2013). The provision of information support services by UTT Libraries would serve to assist the University in its contribution to this governmental programme, in keeping with UTT’s mission.
**New Requirements for Library Staff**

It is foreseen that the shift to the entrepreneurial paradigm would require library staff to commit to the idea that UTT Libraries can assume a proactive role in support of the University’s entrepreneurial mission. Efforts would be made to achieve commitment through the following:

- The holding of a series of consultations with library staff where the proposed initiatives would be presented by the Chief University Librarian. The aim of these consultations would be to keep staff updated, give them the opportunity to expand on the ideas presented, to propose other ideas, and to identify resources needed to actualize the strategic initiatives.

- The holding of similar consultations with faculty members and the Students Guild in order to communicate UTT Libraries’ intent and to solicit their views on how the library can provide support for the entrepreneurial thrust.

- Integration of the ideas emanating from the above mentioned stakeholder consultations into UTT Libraries’ strategic plan.

Library management has successfully utilized this consultative approach previously to achieve library staff’s engagement in other initiatives. It is anticipated that this approach would meet with similar success, given the enthusiasm with which staff embraced previous opportunities to participate in new endeavours.

The adoption of this entrepreneurial paradigm would require library staff to have an increased knowledge and understanding of business studies and entrepreneurship. This could be achieved by the following means:

- Recruitment of librarians and paraprofessional staff with academic qualifications, subject expertise or working experience in industry, business, technology and environmental sciences. The field of Environmental Sciences is becoming an area of increasing focus by UTT. Nationally, this area of study has the potential to spur the development of green industries and enterprises that are more committed to environmental preservation and environmentally friendly products and business operations. Staff with expertise in this subject background would be an asset.

- Support for librarians pursuing higher education programmes such as MBAs and the UTT’s Master of Science in Industrial Innovation, Entrepreneurship and Management.

- Support for Library staff to audit entrepreneurial courses offered by the University.
• Attendance of librarians at business development and entrepreneurship seminars and conferences offered by educational, governmental and business agencies.

• Staff participation in internships at libraries in North America that provide entrepreneurial outreach services to universities, the business community and the public.

• Training of library staff in the utilization of business research resources.

Library staff would need to improve their networking skills to enable them to establish more effective relationships with faculty, students and the business community. To facilitate this, networking, the provision of marketing and communications skills training are warranted.

The expected outcomes of the retraining programme would be librarians who are flexible, innovative and entrepreneurial in outlook. Such librarians would be inclined to take risks and develop new services and methods for the delivery of existing services. The Chief University Librarian is prepared to support librarians as they embark on this new path and to provide the requisite staff training and resources to make this possible. Continuing education is an important component of the programme, as librarians must be willing to learn and quickly grasp new subject areas, by liaising with faculty and reading the literature on business and entrepreneurship, to educate themselves.

Proactive networking is another method which is highly recommended for librarians to use in becoming an integral part of the entrepreneurship drive at the University. They should seize the opportunity to become more proactive in their interactions with faculty, not only through the formal means they currently utilise such as attending meetings, but also by volunteering on committees, and participating in faculty and student events. Librarians would need to build stronger relationships with faculty and students by walking the “shop floor,” that is, by meeting individually with faculty members and Student Guild representatives to ascertain the projects and activities that they are involved in and the help they need, and by taking action to assist them, even if their needs are not directly library related. The following is an example of this type of approach.

At the ECIAF campus of UTT, the Campus Librarian partnered with faculty and the Student Guild to produce a Visiting Speakers Programme aimed at educating students about finance and leadership. Part one titled
Finance 101 introduced students to financial instruments in the business and non-business sectors, as well as the associated legal requirements and conditions that accompany these financial instruments. The visiting speakers who addressed students included senior executives of top businesses in Trinidad and Tobago such as Neal and Massy Food Distribution Unit, the Agricultural Development Bank and the Unit Trust Corporation, as well as a final year student of the Hugh Wooding Law School, University of the West Indies, St. Augustine. Part two titled Ethics, Values and Leadership was facilitated by the Chief Executive Officer of IBD Global Group, a business solutions organization, and Mr. David Muhammad, sociologist, motivational speaker, radio announcer and Tobago Representative of Minister Louis Farrakhan and The Nation of Islam. These sessions were well attended by faculty and students and positive feedback was received (Pryce 2013, 5-6). Innovative ventures such as these are likely to redound to UTT Libraries as positive social and political capital.

Conclusion

Trinidad and Tobago has several tertiary level institutions including three universities- The University of the West Indies, St. Augustine campus, the University of Trinidad and Tobago, and the University of the Southern Caribbean. The University of Trinidad and Tobago is the only university in the country with a stated entrepreneurial mission. In the nine years of its existence UTT has forged ahead steadfastly pursuing its mission. The University’s entrepreneurial thrust is evident in its programme offerings and supporting activities. A review of the literature on library support at business schools with entrepreneurial programmes and at entrepreneurial universities, suggests that opportunities exist for UTT Libraries to engage in strategic initiatives to support the entrepreneurial mission of the University. The new proposed mission for the UTT Libraries coupled with proposals for the provision of business-focused information resources, the restructuring of the Libraries’ information literacy programmes, the development of revenue generating products and services and targeted community outreach services, would enable the Libraries to assist the University in its quest to achieve its mission. Moreover, the proposed initiatives have the potential not only to reduce library costs due to income realised from the revenue generating activities, but also to increase UTT Libraries’ visibility and favour and ultimately position it as an integral stakeholder, in the fulfilment of the University’s entrepreneurial mission.
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BOOK REVIEWS


The authors of *Describing Electronic, Digital, and Other Media Using AACR2 and RDA* have achieved with this work their stated goal of providing a source of useful information and ideas for persons cataloguing or in their words, “creating descriptive records” for digital and non-tangible resources (p. xiii).

Mary Beth Weber and Fay Angela Austin’s How-to manual provides the user with multiple guidelines and relevant examples to make it easier to transition from the Anglo-American Cataloguing Rules, Second Edition (AACR2) to Resource Description and Access (RDA) for resource description. Whether the user is an experienced cataloguer, a cautious occasional cataloguer or a timid novice, the manual aims to make the transition as seamless as possible. With this practical resource, Weber who had written two previous works on the cataloguing of non-print resources (1993 and 2002) along with her Rutgers colleague Austin, provide yet another very timely work as many libraries begin the transition to the new cataloguing standard.

The book gives examples of resources catalogued using both RDA and AACR2 side by side so that the user can compare the required elements in each standard and note the similarities and differences. For the newbie cataloguer, juxtaposing the records done using the different standards allows for the acquisition of foundational background knowledge; and for the more experienced cataloguer this serves as a means of highlighting the need for the new cataloguing standard. RDA was created because AACR2 could no longer accommodate the descriptions required for new and emerging technologies. This book then is primed to demonstrate why RDA is relevant to the needs of the cataloguer working in this new electronically charged environment.

The organization of the book chapters facilitates the ready reference ideal. There is an introductory chapter which speaks to the future of resource description and which details essential information required for creating descriptive records using RDA following the Functional Requirements for Bibliographic Records (FRBR) model. It gives an overview of the FRBR model and shows its relationship to RDA.

Chapter one provides an explanation of ‘essential background’ elements needed in describing the Work Expression Manifestation and Item (WEMI) concept in RDA. This chapter identifies and discusses core elements specific to the...
cataloguing of non-book resources. It is here too that the metadata schemas to be used in the book, the three most commonly used formats - MAchine Readable Cataloguing (MARC), Metadata Object Description Schema (MODS) and Dublin Core (DC) - are introduced and explained. Beginning with Chapter one and in each subsequent chapter are provided, in the margins, examples which illustrate concepts being discussed. Also found in the margins are Authors’ Note and the Quick Tip which give additional guidelines, factual information and pointers to the cataloguer to augment that provided, to offer clarification and advice on treatment of the resource being discussed.

The next eight chapters each treat a different resource – cartographic materials (excluding globes), sound recordings, videos, electronic resources, electronic integrating resources, microforms and multimedia mixed kits and materials. While Weber and Austin note that the book does not address printed music, also noticeably absent is the treatment of electronic serials. This limitation however does not detract from the strength of the book. Useful illustrations are well tagged and are coupled with sample MARC, DC and MODS descriptive records.

Each chapter concludes with sources of additional information in a section called ‘Resources for Catalogers’. These resources include articles, websites, email lists, webcasts, conferences among others mentioned. The FISO checklists (referring to the Find, Identify, Select and Obtain concept of FRBR) are meant to remind the cataloguer that the purpose of resource description is to aid the user’s access to the needed resources. As a supplement to the book, there is also a companion website and an accompanying CD-ROM. These are two very useful tools which advance the ready reference agenda of the work.

This is one of the first published practical works to guide cataloguers in the transition to RDA. For persons cataloguing non-print materials using RDA, *Describing Electronic, Digital, and Other Media Using AACR2 and RDA* is timely and well placed to be a go to manual.

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*Boy from Tacarigua* is the fascinating autobiography of Garth Lyder who was born in Trinidad in 1914. Although originally from the capital, Port of Spain, where he lived up to age fifteen, Lyder describes himself as a boy from Tacarigua because the subsequent period there was truly the formative years in his life. And what a long and remarkable life he had. Lyder wrote this book when he was ninety-seven.

Lyder’s life can be divided into three parts: his early years in Trinidad up to 1938; his time in England up to 1950; and his subsequent career with the airline British West Indies Airways (BWIA) following his return home. Lyder was born into a staunch Methodist family. When he was six, his father died, leaving his mother to raise the family under difficult financial circumstances. One of the poignant reminiscences he shares is the family gathering where his mother was told - not asked - that her children would be shared among the extended family; this was to ease the strain on her, as she was now a single parent. Defiantly, she refused. Lyder attended Tranquility Intermediate, and then Trinidad New College in Belmont, run by none other than C.L.R. James. After school, he began working with Alstons, one of the large business establishments in Port of Spain. The ease with which he, being white, secured a job there reflects the advantages of class and ethnicity in Trinidad and Tobago. In his youth, Lyder developed a keen interest in aviation. So, in 1938, he left for England to study engineering and to learn to fly. In 1941, he joined the Royal Air Force, serving as a bomber pilot in the 180th Squadron, was shot down over Normandy in 1944, and was imprisoned in Germany until the arrival of the Russians in 1945.

Even if the book had been limited to Lyder’s wartime exploits, it would still be enthralling; but unlike other books written by ex-servicemen and women from the Caribbean, *Boy from Tacarigua* covers more than the painful years of conflict. It is the story of an amazing life and a significant contribution to the history of aviation in Trinidad and Tobago. Lyder flew with the local aviation pioneer, Mikey Cipriani, whom he first met in 1932 at the newly established Piarco Aerodrome. He also discusses the many foreign pilots whom he met on stopovers in Trinidad in the 1930s. As previously mentioned, he was a wartime pilot in Britain. After the war, he even flew in the Berlin airlift. Fortunately, for us, Lyder also documented the twenty-four years he spent as a pilot with BWIA. To date, his is the only detailed account by a member of the airline’s staff. We therefore owe Lyder a debt of gratitude for having, at that late stage of his life, recorded his rich life for posterity.

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The objective of *The Cybrarian’s Web* is to serve as an important research tool while offering useful coaching to librarians and information professionals who wish to exploit the prospective of Web 2.0 technologies. It is not only important for individuals in the library profession but also for persons with an ardent interest in learning about new technologies and innovations. Web 2.0 tools emphasize sharing and include blogs; wikis; Really Simple Syndication feeds (RSS); user-added reviews, ratings and summaries; instant messaging; podcasts and vodcasts; folksonomies; social bookmarking; social networking sites; streaming audio and video; community photo sharing and book services. The author offers five benefits that can be derived by libraries using Web 2.0 tools. These include “delivery of highly customized, value-added services to tech-savvy clients, overcoming economic turmoil by integrating Web 2.0 driven services into the library’s economic recovery efforts, building alliances with patrons and improving communications with staff, instant implementation and democratization of the web, and survival in a competitive landscape.”

The author was challenged in selecting the resources to include in the text since her main objective was to provide the reader with exhaustive coverage of each resource, providing the reader with as much information as possible about structure, content, and usefulness. The selection of the resources was based mainly on independent review and the personal analysis of the author. Other factors also impacted on the selection of the resources for inclusion in the text. These included relevance of the features, function, and organization of the resource; the popularity and reputation of the resource; the longevity, reviews and technical support of the site.

The publication was organized alphabetically as an A-Z list of selected Web 2.0 technologies which made readability and functionality for the users easier. Each chapter is independent of the other, which allows the reader to go directly to the material of interest. Included in each chapter are screenshots, thus the reader is able to visualize the features of the resource. Each entry is structured as follows: name of the resource; description of the application; the URL of the website; a short overview of the site which includes its origin, development and functions; features of the website generally set out to give the reader a summary of the main features of the resource, functionality, design and usage; “how cybrarians can use this resource” provides the information about the importance of this resource to information professionals (the main objective of the book); the For Your Information (FYI) allows the reader to find interesting information about the resource.
On reading about the resource someone entering the field of information management may wonder about the importance of the resources outlined, however, each tool aims at adding a new dimension to the field and allows professionals to keep abreast of the latest web technologies. This text provides an interesting beginner’s guide for practical applications of Web 2.0 tools in libraries and it allows the reader to discover a vast amount of resources that are unknown and can be important for libraries in this technology driven age. *The Cybrarian’s web* has the potential to assist librarians in their daily tasks as well as to enhance the delivery of reference services for library users. It was interesting how the author also emphasized the role of the librarian in using the web technology by the term “cybrarian” which illustrates the importance of cyberspace to libraries and the information profession.

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Arlene Dolabaille served as Circulation & Access Services Librarian at The Alma Jordan Library of The University of the West Indies, St. Augustine Campus from 2009 -2013. Prior to this, she has held positions in the UWI Campus Libraries as Acquisitions Librarian at the Medical Sciences Library, Faculty of Medical Sciences and as a Cataloguer at The Alma Jordan Library. She graduated with an MLIS degree from Syracuse University, New York. She has published and presented conference papers on document delivery and serials management and has a keen interest in electronic resources.

Verna E. George has had a long distinguished career in Librarianship. Now retired, she once served as Deputy Campus Librarian of the UWI Mona Campus Library (2010-2012) and Coordinator of Mona Information Literacy Unit (2006-2008). Mrs. George is the author of several articles and poems. Her poems have appeared in many literary magazines including The Caribbean Writer, Calabash, and Caribbean Writing Today. She has also won awards for her poetry including the Jamaica Observer’s Annual Arts Magazine Awards and medals in the Jamaica Cultural Development Corporation National Literary Arts Competition.

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Karlene P. Robinson is a Senior Librarian and graduate of the University of the West Indies, Mona Jamaica. She has been teaching Information Literacy since 2008 and is the Coordinator of the Mona Information Literacy Unit (MILU) at the UWI Library at the Mona Campus since 2010 and Head of the Science Branch Library since January 2013. Mrs. Robinson is a trained teacher and the author of several articles and textbooks, the most popular being Carlong’s: CSEC Principles of Business with SBA Study Guide and Exercises.
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