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Preface

The *Journal of Arts Science and Technology (JAST)* is the flagship journal of the University of Technology, Jamaica. Its publication is in keeping with one of the objects of the University of Technology Act: to “preserve, advance, and disseminate knowledge through teaching, scholarship and research . . . and to make available the results of such . . . to promote wisdom and understanding.”

This is a Special Issue of *JAST* comprising the proceedings of the College Libraries Information Network (COLINET) 12th Biennial Symposium that was held from October 6–7, 2022.

The Editorial Board and Management Committee of *JAST* are pleased to partner with the symposium organizers to publish this Special Issue.

Paul W. Ivey, PhD
Editor-in-Chief

Editorial

The College Libraries Information Network (COLINET) Biennial Symposium is the longest-running academic librarian research-based symposium in Jamaica. Its 12th staging was held from October 6–7, 2022, at the Jamaica Pegasus Hotel, Kingston, Jamaica. The symposium was held under the theme, “*Resilient Libraries: Repositioning, Pivoting, Teaching and Learning.*” This facilitated the gathering and meeting of the minds of library and information professionals across Jamaica, at a time when the world was emerging from the shadows of the COVID-19 pandemic restrictions. The symposium provided academic librarians from most of the nation’s tertiary-level institutions to network and discuss library and information science practices and training.

This Special Issue of the *Journal of Arts, Science and Technology (JAST)* contains a selection of full papers developed from presentations made at the symposium and subsequently peer-reviewed by experts across the island. The papers selected fall under the symposium’s general areas of interest: Repositioning Libraries Within Institutions: Charting A New Course; Teaching and Learning – Information Literacy Cooperation and Methods; Pivoting Library Services – Rebranding and Initiating New Services; and Librarians (Libraries) C.A.N. – Cope, Adjust and Navigate Challenging Times.

The articles featured in this Special Issue of JAST reflect the research and practice of academic librarians in Jamaica. The papers describe how libraries at the tertiary level of our education system were able to pivot and navigate the challenges of COVID-19 while providing information services to institutional stakeholders.

In the first paper, titled ‘**Library Resilience: Creative Responses to COVID-19 at Jamaica’s Leading Private University**’ the author describes how an academic library was able to respond in a health crisis and details how it supported the institution’s online teaching and learning programme during the period of lockdown. Additionally, it provides insights and practical solutions that can be used during health crisis situations.

‘Implementing Design Thinking to Teach Information Literacy: A Case Study at a Leading Academic Library in Jamaica’ is the second article in this volume of *JAST*. It discusses how design thinking can improve collaboration between faculty and librarians within universities. The authors report initiatives resulting from design thinking processes that led to sustainable library outreach services and improved usage of library resources.

The third article in this special issue is **‘The Digital Humanities in the Caribbean: The Role of the Academic Librarian’** and it focuses on an emerging trend in academic libraries worldwide and proposes that libraries in Jamaica should expand its reach in research, particularly in the Digital Humanities. The authors advocate for the creation of Digital Humanities programmes within libraries. They also provided the steps involved in such a creation and the associated benefits, which will ensure that libraries continue to evolve.

The fourth paper, **‘Research and Publication Output of Librarians in a Professional Network in Jamaica,’** investigates the publication output of COLINET librarians. It is the product of an extensive literature review of their research output over the past twenty years. The paper recommends strategies to encourage and increase research within the COLINET library community. The authors aim to nurture and advance a culture of research and publication by academic librarians.

The final paper featured in this Special Issue of *JAST* is **‘Repositioning Libraries within Institutions: Charting a New Course’**. The COVID-19 pandemic resulted in several institutional challenges worldwide, and libraries were not exempt from these. This paper highlights some of the challenges experienced by academic libraries in Jamaica. It puts forward some strategies that libraries used to reposition themselves within institutions to meet the needs of all stakeholders during the pandemic.

I express my sincerest gratitude to all involved in making COLINET’s 12th Biennial Symposium a success. Thanks to our network members for their support and attendance. Special thanks to our sponsors for their financial support – without which the Symposium would not have been possible: The University of Technology, Jamaica, LexisNexis, Proquest/ExLibris, SAGE, EBSCO, Emerald Publishing, ITMS Group and Wolters Kluwer.

I also express gratitude to the Editorial Board and Management Committee of *JAST* for their enthusiastic consent to publish this Special Issue. My hope is that you will find this Special Issue of *JAST* interesting and informative.

Kerry-Ann Rodney-Wellington,
Guest Editor

FEATURE ARTICLES

Library Resilience: Creative Responses To COVID-19 at Jamaica's Leading Private University

NATALEE KNIGHT
Northern Caribbean University

Abstract

Libraries, since their existence, have always had to face disruptions like natural and man-made disasters, rapid advances in technology, economic downturns, and even pandemics, affecting the level of service they provide. A library's ability to survive such phenomena is of utmost importance and is worth noting and sharing. This paper highlights and shares the experience of librarians at the Hiram S. Walters Resource Centre at Northern Caribbean University, Jamaica, in navigating the COVID-19 pandemic. Specifically, the paper describes the library's response to the crisis, and details how the library supported the university's full online teaching and learning from March 16, 2020, to well beyond the lifting of the stay-at-home order by the Government of Jamaica, via newly explored initiatives such as online patron self-registration, document delivery, acquisition of digitisation equipment, website redesign, quarantining of books, creation of "how to" videos, and revision of the library's circulation policy. The paper is scaffolded on a combination of the author's personal experience working at the Hiram S. Walters Resource Centre and interviews with the Director of Library Services and librarians representing each campus of the university. The paper finds that the drive for survival in a crisis stimulates the inventive use of ordinary resources that might otherwise be ignored or discarded. The paper highlights strategies employed by the Hiram S. Walters Resource Centre, considerations of what can be developed and improved for the future, and includes

recommendations for successfully navigating a public health crisis. Overall, this paper provides insights and practical solutions in responding to a global health crisis that may be helpful at other libraries in similar circumstances.

Keywords: Northern Caribbean University; COVID-19; Library Resilience

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Introduction

On March 10, 2020, the Government of Jamaica announced the first case of COVID-19 on the island (Ministry of Health & Wellness Jamaica, 2020). By the following day, March 11, 2020, the World Health Organization declared COVID-19 a pandemic. COVID-19 is an infectious disease caused by the SARS-CoV-2 virus (World Health Organization [WHO], 2022). It spreads mainly between people in close contact with each other, such as at a conversational distance. The virus can spread from an infected person's mouth or nose in small liquid particles when they cough, sneeze, speak, sing or breathe. The virus can also spread in poorly ventilated and/or crowded indoor settings where people spend longer periods together. People may also become infected when touching their eyes, nose or mouth after touching surfaces or objects contaminated by the virus (WHO, 2022).

COVID-19 came and disrupted virtually every aspect of business. It changed practically every aspect of our lives almost overnight and how we operate (Rafiq et al., 2021; Tsekea & Chigwada, 2021). As the COVID-19 pandemic spread around the world, it precipitated lockdowns and restrictions by governments to contain its further spread (Ganslmeier et al., 2022). Restrictions aimed at reducing infections have obliged libraries to put a hold on in-person access and services and make much greater use of digital tools to engage with users (International Federation of Library Associations and Institutions [IFLA], 2020). Higher education institutions took measures to continue their academic programmes, most moving to e-learning and remote teaching as per the recommendation of the UNESCO (2020a, 2020b).

Northern Caribbean University (NCU), a private Seventh-day Adventist, liberal-arts institution, offering undergraduate and graduate programmes in the sciences, religion, business and education, with campuses at Mandeville, Kingston, Montego Bay and St. Ann's Bay, was well into the Spring 2020 semester when

Jamaica was informed that due to the COVID-19 pandemic, all non-essential businesses had to close and staff was to work from home where possible. This included educational institutions and, by extension, libraries. This was on March 17, 2020, a week after the first case of the virus in Jamaica was announced. By April 22, 2020, mask-wearing became mandatory in Jamaica, and on May 31, 2020, work-from-home orders ended (Harris, 2021).

The COVID-19 pandemic and the measures taken to limit it have had a major impact on libraries and the communities they serve (IFLA, 2020). This disaster wreaked havoc and caused sudden permanent change, but a big part of survival, according to Corrigan (2008), is to focus on the positives and look for the strength that can be found in adversity. In other words, it helps to keep librarians and staff looking forward in a continual search for ideas about the optimum ways that the library might emerge from its challenging circumstances (Corrigan, 2008).

Disasters and other disruptions are not new to libraries. They have faced natural and man-made disasters like flood, earthquake, fire, war, obsolete technology, global health crises and economic downturns. One notable example of how libraries faced and survived a disruption is that of overcoming the economic woes of the Great Depression. The Great Depression refers to the worldwide economic downturn that originated in the United States; it began in 1929 and lasted until about 1939 (Romer & Pells, 2022). This disruptive period had libraries facing budget cuts and reductions in acquisitions, services, hours, and staff; in tandem with increased pressure for library access, service, and materials (Quinlan, 2008). To survive, they carefully selected library materials and took advantage of any opportunity for cost reductions. Libraries held book drives and implemented gift and bookplate programmes. They even created or expanded in-house binderies and repair departments. According to Quinlan (2008), many libraries drastically cut their maintenance and supply budgets and curtailed their printing and publishing budgets. Some libraries reduced their insurance policies to save money. Salaries were cut on average by 10 to 20 percent, expected salary increases were eliminated, and hiring freezes were implemented rather than terminating staff. Quinlan (2008) found that staff worked compressed time to maintain coverage while service hours were reduced. He found that special services and programmes were eliminated, centralised, or consolidated, and staff members were retrained to take on new duties. Also, record-keeping, cataloguing, and acquisition processes were streamlined to free up staff to do other work. Quinlan (2008) found that one library, the Louisville Public Library, implemented self-checkout, which is still a desired service for many libraries today.

Indeed, libraries have been facing crises, from natural and manmade disasters to pandemics, and have found inventive ways of surviving. This paper highlights the experience of the staff at the Hiram S. Walters Resource Centre in surviving the COVID-19 pandemic, how they adapted to the changes necessary to ensure survival, and the lessons learned that may be found useful in future public health crises. The following three (3) questions guided the research:

Research Questions

1. What were the experiences of the Director of Library Services and librarians from each campus of Northern Caribbean University in navigating the challenges posed by the COVID-19 pandemic?
2. How did the Hiram S. Walters Resource Centre demonstrate adaptability in response to the sudden shift to online teaching and learning during the COVID-19 pandemic?
3. Based on the experience of the Hiram S. Walters Resource Centre, what recommendations can be made to enhance preparedness for future public health crises?

Literature Review

With the COVID-19 pandemic now in the “New Normal” stage, much has been written about the disease and the response of academic libraries to it. A search of the literature revealed that academic libraries globally responded to COVID-19 based on their different situations; some remained open with modified services, while others were closed.

In the United States, according to Hinchliffe and Wolff-Eisenberg (2020), academic libraries changed their service model or closed completely to provide for increased social distance and staff and user safety in response to the COVID-19 pandemic. Specifically, they closed, decreased hours, restricted access, limited services and expanded remote work. As institutions moved from less decisive or interim steps towards online-only instruction, Hinchliffe and Wolff-Eisenberg (2020) found that libraries aligned their services and forwent certain activities. It was not business as usual. They also found that libraries were responding to a range of complexities as well as various campus mandates and policy frameworks that were enabling and others that were not.

In all European countries, libraries were partially closed due to the emer-

gence of the COVID-19 pandemic, although in different ways and with different means of implementation, such as working from home, and skeleton staff in library buildings, virtual services (European Bureau of Library, Information and Documentation Associations [EBLIDA], 2020). Libraries in this region were continuously re-designed during the COVID-19 phase with new ways of working. Homeworking was heavily practiced and access to digital resources rose spectacularly (EBLIDA, 2020). Home delivery services, for instance, were often initiated with book packages to be picked up at the door. New services directly related to the COVID-19 disruption included: 1) Centralised access to COVID-19-related health information produced by governmental authorities; 2) COVID-19 support services like 'Community Call' delivered via phone, text, email and through platforms; 3) Use of social media to offer story time, through Facebook groups and YouTube channels or also for library exchange and (re)use of digital products; 4) Advanced social services for the elderly and vulnerable on lockdown, such as phone calls, storytelling, also food delivery where necessary; and 5) The provision of face masks for healthcare workers through 3D printers (EBLIDA, 2020).

In Asia, the response was similar. Guo et al. (2020) found that academic libraries had to be closed due to the postponement of the start of the spring 2020 semester by all Chinese universities. In response to the COVID-19 pandemic, these libraries also suspended book-returning service. Ninety-one percent (91%) of them stopped counting borrowed books as overdue during the period when the libraries were closed. These libraries initiated virtual reference service via telephone, email, WeChat, QQ or QQ groups and other methods reachable 24/7. Also, many of these academic libraries launched a series of free resource introductions that included multimedia academic resources, online education platforms, and e-books (Guo et al., 2020).

In Africa, activities in academic libraries varied in response to the COVID-19 pandemic. In the 36 states of Nigeria, for example, Jayshree (2020) found that academic libraries were totally all closed by March 2020, with the staff in the technical units working from home. Where feasible, they provided online library services. Many quickly subscribed to open-access materials such as those offered by publishers and educational facilities locally and abroad. Private university libraries on the other hand, as found by Jayshree (2020), remained reasonably functional given the circumstances, but they offered reduced services. Physical contact was avoided, with only 25% of the usual number of clients and staff having temporary physical access.

The public academic libraries offered services to patrons informally through

text messages, Facebook posts and WhatsApp chats, in collaboration with some special libraries and non-governmental organisations (NGOs). Webinars, workshops, conferences and seminars for staff were conducted via remote conferencing platforms. Sensitisation campaigns and information literacy programmes were also carried out individually or collaboratively with NGOs (Jayshree, 2020).

In the Caribbean, the response of academic libraries to the COVID-19 pandemic was similar to that of the other regions. In Jamaica, for example, all institutions and libraries were closed by March 23, 2020, due to the government's imposition of a stay-at-home order for non-essential workers (Harris, 2021). Most tertiary institutions moved teaching and learning online and asked students to immediately vacate the campuses except for foreign students who were allowed to remain until travel arrangements were made for them (Harris, 2021; Pryce et al., 2021).

A closer look at the Caribbean literature revealed that several COVID-19 health and safety protocols were implemented during the period such as hand sanitising, masking, temperature checking, social distancing, rearranging of physical space, adjustment to library hours, sanitation stations, scheduled deep cleaning of the physical space, continuous cleaning after usage, flexibility of loan period for materials, increased engagement through social media platforms, and quarantining returned materials (Harris, 2021; Pryce et al., 2021). Support services offered included virtual reference service, curbside pickup and drop-off of library books, online library instruction, on-demand library instruction sessions, digitisation service, online database training, as well as tablet and laptop loans (Harris, 2021; Pryce et al., 2021). Fines were suspended by some libraries, websites were enhanced, additional e-resources acquired, resources digitised, online work hours were introduced, and Plexiglas was installed at the circulation desk (Harris, 2021; Pryce et al., 2021). To avoid job cuts, there was staff rotation, staggering of shifts, redesignation deployment and redeployment (Harris, 2021; Pryce et al., 2021). After the Government of Jamaica ended the stay-at-home order on May 31, 2020, most academic libraries re-opened but mainly to library staff, with special arrangements for user access (Harris, 2021).

The COVID-19 pandemic challenged higher education institutions worldwide, but they responded boldly by seeking alternative ways of continuing to serve. In line with such responses, researchers like Anyanwu et al. (2020) and Rafiq et al. (2021) have suggested several initiatives that can be put in place to help academic libraries survive a public health crisis like the COVID-19 pandemic and continue service in a safe environment (as shown in Table 1). Among other things,

they suggested that academic libraries can establish document delivery services, selective dissemination of information and interlibrary lending services delivered through email, telephone chat, text messages and the use of social media; rewrite library policies and realign practices for the new circumstances to serve the patrons; and re-prioritise library budgets to increase the use of e-resources and e-services. Anyanwu et al. (2020) and Rafiq et al. (2021) also suggested that academic libraries can review the library's web presence; help to improve the information and digital literacy skills of the users and counter fake news; and allow library staff to work from home as much as possible to minimise having direct contacts with library users and other staff of the library. In addition, they suggested that academic libraries can provide digital literacy training to users in the effective utilisation of digital information sources provided by libraries; convert physical library resources to digital to provide adequate access to digital contents; encourage students to bring their own devices and provide students with work environments that are not prone to the COVID-19 pandemic; obtain personal protective equipment for employees on the front lines; and rearrange the seating facilities in the library to enable social distancing by creating 2-metres spaces between users .

The literature showed that worldwide, academic libraries responses to the COVID-19 pandemic were similar yet varied due to their local situations. Most shifted from delivering service on-site to delivering digital services online (Mbambo-Thata, 2021). Based on their different circumstances, some libraries broadly maintained a full service (such as lending print resources, having spaces for research, teaching information literacy, consultation among other services) while others were completely closed (IFLA, 2020) as directed by their parent institutions or government. All the documented experiences and recommendations provide some direction for academic libraries in surviving any health crisis that may emerge in the future.

Methodology

The research approach used is a combination of the author's personal experience working at the Hiram S. Walters Resource Centre and interviews with the Director of Library Services and four librarians representing each campus of the university. The interview method was selected as it enables the collection of detailed information and facilitates instantaneous clarifications if needed (Sahu & Singh, 2021). The interviews were conducted over a one-week period using an

Table 1: Selected Recommendations for Academic Libraries to Survive a Public Health Crisis

Focus Areas	Recommendations
Services	<ul style="list-style-type: none"> • Increase access to digital services and resources to provide for the information needs of users. • Prepare library resources, services, systems, and staff to effectively help online students. • Explore open-access databases to enhance e-resources for patrons. • Provide “one-spot” access to all library resources and try to buy or build new systems for such purposes. • Establish document delivery services, selective dissemination of information and interlibrary lending services delivered through email, telephone chat, text messages and social media. • Provide translation services and repackage information materials to suit the local needs of the users. • Provide bibliotherapy services for users that help to relieve boredom caused by lockdown, hunger and loss of loved ones. • Provide digital marketing services and online entertainment services to users.
Staffing	<ul style="list-style-type: none"> • Work from home as much as possible to direct contact with library users and other library staff. The assigned staff should be provided with the required support, such as internet facilities. • Utilise online helpdesks via WhatsApp, SMS via phone, email and other related ICT devices.
Technology	<ul style="list-style-type: none"> • Re-prioritise library budgets to increase e-resources and e-services resources and services. • Expand the broadband network and infrastructure to facilitate the migration to online teaching and learning and access to electronic resources. • Review the library’s web presence. Gauge the use of the library portals and re-design/revamp the library’s web pages. • Initiate digitisation initiatives and provide online access to content in digital formats. • Automate library services to fast-track library processes and promote social distancing among the library staff. • Lobby the government to increase and prioritise investment in digital transformation and bridge the digital divide between rural and urban areas. • Adopt and use automated door openings in the library to reduce direct contact between users. • Use voice commands in elevators to reduce human interactions.

Table 1: Selected Recommendations for Academic Libraries to Survive a Public Health Crisis (*cont’d*)

Focus Areas	Recommendations
Safety and sanitation	<ul style="list-style-type: none"> • Obtain personal protective equipment for employees on the front lines. • Rearrange the seating facilities in the library to accommodate 2 meters apart from user to user to enable social distancing among library users. • Encourage students to bring their own devices. • Utilise artificial intelligence (AI) surveillance technology applications to monitor access to services by patrons. • Use robots to sanitise books and non-book resources in the library.
Training	<ul style="list-style-type: none"> • Provide information and digital literacy training for users to help to counter fake news and information. • Develop an aggressive marketing plan that includes webinars, enhanced webpages and social media to engage faculty and students and ensure that the library’s online resources are fully used. • Develop a technology training plan to prepare staff to operate video conferencing tools.
Policies	<ul style="list-style-type: none"> • Develop a library disaster risk-management policy that includes readiness for the onset of a health crisis.
	<ul style="list-style-type: none"> • Rewrite library policies and realign practices for the new circumstances to serve the patrons.

Note. Sources include Rafiq et al. (2021), Anyanwu et al. (2020), Bashorun et al. (2021), and Pryce et al. (2021).

interview schedule containing eight open-ended questions covering the areas of services, staffing, technology, safety and sanitation, training and policies.

Results and Discussion

From the interviews with the Director of Library Services and librarians at the extension campuses of Northern Caribbean University (NCU) and based on the researcher’s personal experience working at the Hiram S. Walters Resource Centre, the response of the library during the COVID-19 pandemic was found to be similar to that of other academic libraries in Jamaica and even in other regions globally. The responses from all campuses (Mandeville, Kingston, Montego Bay, and St. Ann’s Bay) were grouped according to services, staffing, technology, safety and sanitation, training, and policies.

Services

Regarding services, it was found that the library on all campuses of Northern Caribbean University moved from face-to-face to online operations on March 10, 2020, when the Government of Jamaica announced the first case of COVID-19 on the island. Only in a few cases, as stated by the Director of Library Services, “special accommodation [was made] for students who needed internet [access] and a physical space to complete final exams”. This switch to online teaching and learning was to ensure the safety of staff members and patrons, as was also the case at other academic libraries in Jamaica and in other regions (EBLIDA, 2020; Guo et al., 2020; Harris, 2021; Hinchliffe & Wolff-Eisenberg, 2020; Jayshree, 2020; Pryce et al., 2021). Patron self-registration was also introduced via the library website to limit face-to-face contact with users. By clicking on the “Register With Us” tab, patrons can register themselves with the library.

Students who had library material were given an extended time to use them, while a book amnesty was introduced to waive library fines as much as possible (due to the stay-at-home orders). Such adjustments to loan periods were made to offer more flexibility with the circulation of physical resources as was being done at other academic libraries in Jamaica and in other regions (Guo et al., 2020; Harris, 2021; Pryce et al., 2021). All changes made to library services were communicated to patrons via various channels.

Research assistance continued online on all campuses via email and WhatsApp during the lockdown and in person when the libraries re-opened, in a similar fashion as reference services offered by other academic libraries in Jamaica and other regions that revamped or expanded their services (Guo et al., 2020; Harris, 2021; Pryce et al., 2021). The virtual reference desk/library email saw a significant increase in traffic while the library continued to facilitate patrons who desired to use the Wi-Fi in the physical facilities to attend classes and exams online. Document delivery service was also offered on all campuses, where scanned sections of physical books and online articles were emailed to patrons. This was also done at other academic libraries in Jamaica and other regions (EBLIDA, 2020; Harris, 2021; Pryce et al., 2021).

Staffing

Staff on all campuses worked from home initially as directed by the Government of Jamaica and NCU administration. Soon after, some staff members were furloughed due to the economic shock experienced by the university when fewer

students were able or willing to continue their studies. However, this was not the case for most academic libraries in Jamaica. Instead, staff rotation, staggering of shifts, redesignation deployment, and redeployment were instituted (Harris, 2021; Pryce et al., 2021). In the re-opening stage of the pandemic, furloughed staff members were recalled on adjusted service hours, with a mix of remote and physical hours.

Technology

Regarding technology, online resources were found to be the main focus, as the demand for print resources inevitably declined due to the shift from face-to-face teaching and learning to online. This was common among the libraries in Jamaica (Harris, 2021; Pryce et al., 2021). Trial databases and open-source resources were therefore acquired to provide access to more online information, like was happening in libraries in Asia and Africa (Guo et al., 2020; Jayshree, 2020).

Digitisation equipment and software were acquired for the main campus, and staff members were trained to digitise NCU archival material at the library. Full use was made of desktop computers, laptops and a newly acquired smartphone to train and communicate with patrons and staff members on all campuses. The use of Zoom, Google Meet and Blackboard Collaborate platforms for library presentations and training increased significantly. In terms of social media, the library's Facebook, Instagram, YouTube and LinkedIn pages were optimised, as a result of which, according to the Director of Library Services, "Patrons had the additional advantage of interacting with the library's more streamlined and intentional social media channels". The library's website was also redesigned and updated for greater appeal and functionality, as done at other libraries in Jamaica and other parts of the world (Anyanwu et al., 2020, Bashorun et al., 2021; Pryce et al., 2021; Rafiq et al., 2021).

Safety and Sanitation

To ensure the safety of patrons and staff, mask-wearing became a requirement as per directives from the Government of Jamaica and NCU administration. Temperature checks were done upon entering the compound on the main campus and upon entering the library on some of the other campuses. Hand sanitisation was also a requirement upon entering the library on all campuses, as was the case at other libraries in Jamaica (Harris, 2021; Pryce et al., 2021). To ensure cost-effective compliance for both patrons and library staff, bulk hand sanitiser was provided

in recycled pump bottles placed at a sanitisation station near the entrance of the library, at the circulation desk and in all the offices.

On the main campus, patron IDs were no longer handled by workers at the circulation desk, and physical distancing adjustments were made to patron seating and the queue area at the circulation desk. Self-access to lockers was also initiated on the main campus where students signed in their bags and put them away themselves in the lockers. High-touch areas were regularly sanitised by the janitorial staff, and tables and chairs were cleaned by student workers after each use.

Quarantining of books was initiated at other libraries globally (Guo et al., 2020; Harris, 2021; Hinchliffe & Wolff-Eisenberg, 2020; Jayshree, 2020; Pryce et al., 2021). Returned books were placed in a recycled carton box repurposed as a drop box and remained quarantined for three (3) to seven (7) days before they were cleaned and returned to the stacks. Cleaning involved spraying with Lysol during the quarantine period and wiping afterwards with a soft cloth dampened with soap and water. A COVID-19 display with information from the Ministry of Health and Wellness Jamaica was also mounted to inform patrons about the virus.

Training

Several researchers writing on the impact of the pandemic on academic libraries indicated that library training was necessary for both patrons and staff (EBLIDA, 2020; Guo et al., 2020; Harris, 2021; Hinchliffe & Wolff-Eisenberg, 2020; Jayshree, 2020; Pryce et al., 2021). This was evident as patrons who started their academic career in 2020 were not oriented to operate within the library's physical space. Additionally, they were acclimated to using online only services to acquire the information they needed to complete tasks. . Hence, library orientation focused on the function and use of all online scholarly databases, the online catalogue, online library registration and features of the social media platforms. Other areas of training included information literacy and citation styles (APA, MLA etc.). Training was delivered remotely in collaboration with database providers and librarians on all the NCU campuses. In addition, various "how to" videos were published on the library's YouTube channel (for self-paced learning) demonstrating how to use the library's various resources and services.

Staff required training in managing physical resources and computer hardware (e.g., laptops) in a pandemic situation while maintaining the safety of staff and patrons when using physical spaces and delivering value-added services remotely. Such training was delivered via workshops and webinars from various electronic

resource service providers, public health specialists, and library associations and networks locally and internationally. The NCU administration also facilitated training for faculty and staff members on best practices in higher education during the pandemic. Other sources of training came from articles and blogs circulated among librarians to share ideas and innovations in the field to demonstrate how to effectively assist clients during the pandemic.

Policies

Policies were also found to be very important for the library during the COVID-19 pandemic, as discovered by researchers such as Anyanwu et al. (2020), Bashorun et al. (2021), Pryce et al., (2021) and Rafiq et al. (2021). Some policies needed to be created, while others needed to be revised. Appropriate policies were needed in the areas of sanitisation, circulation and work schedules. Policies were implemented on sanitisation equipment (e.g., laptops, copiers and scanners). Policies were also put in place to restrict access to selected library spaces for safety and sanitisation purposes. The pre-COVID policies pertaining to the circulation of physical resources, use of electronic devices, and fines were impacted by the pandemic, and adjustments had to be made, according to the Director of Library Services, to “facilitate patrons who were no longer on the campus to have physical access to the library, while maintaining quality control as library administrators”. A change in the loan policy, for example, was necessary to allow patrons longer time to keep library material (Guo et al., 2020; Harris, 2021; Hinchliffe & Wolff-Eisenberg, 2020; Jayshree, 2020; Pryce et al., 2021). The library's circulation policy was revised to lengthen the loan period of 2-week and overnight books. Staff work schedules were also impacted by the pandemic. However, the work-from-home policy implemented by the NCU HR department addressed the issue.

These findings show that the library's response to the COVID-19 pandemic was similar to that of other academic libraries in Jamaica and even globally, but with some variation based on local circumstances. The findings also show that the drive for survival during the pandemic stimulated inventive use of ordinary resources such as recycled carton boxes, empty bottles and free online resources that might otherwise be discarded or ignored.

Conclusion and Recommendations

COVID-19 disrupted almost every aspect of library business and changed our lives overnight. It was indeed a difficult period for the Hiram S. Walters Resource Centre and other academic libraries in Jamaica and across the world. However, remaining positive was the first step for many, and converting the challenges into opportunities helped the library community to survive. Despite the difficulties, the library staff at NCU managed to make the best of the difficult circumstances and did what could be done to provide continued service to patrons. There were some positives that emerged from the pandemic disruption for the Hiram S. Walters Resource Centre.

According to the Director of Library Services:

The pandemic hastened the implementation of several actions such, as online library registration, enabled greater use of and comfort with remote communication channels, and prodded the library to invest in a dedicated smartphone and mobile number for easier access for patrons.

The following recommendations may be useful to the Hiram S. Walters Resource Centre. They aim to improve the library's current situation and its chance of survival should another global health crisis arise.

1. Adjust the budgetary allocations for e-resources and e-services to serve users in a hybrid teaching and learning environment.
2. Lobby the institution for continued flexible work arrangements so staff can work from home when necessary to maintain safe workspaces.
3. Adopt automated door openings in the library to reduce the direct contact between users.
4. Develop a programme to regularly train staff in managing physical and online resources in disruptive situations and delivering value-added services in hybrid mode.
5. Develop a library disaster risk-management policy that includes readiness for health crises and other natural and man-made disasters.

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Implementing Design Thinking to Teach Information Literacy: A Case Study at a Leading Academic Library in Jamaica

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Abstract

The importance of information literacy (IL) instruction in today's data-driven society cannot be over-emphasised. University students are faced with the challenge of navigating this dynamic information ecosystem to achieve academic success. Considering this, the onus now rests upon academic libraries to embrace creative ways, such as design thinking, to engage faculty and administrators of university communities to meet this challenge faced by the library's major users – students. Collaboration between Faculty members and Librarians at all levels provides a necessary approach for information literacy to be taught in an integrated way to students through their foundation courses. However, the cooperation necessary to include information literacy in the curriculum of universities in the Caribbean is not an automatic praxis. In response to this, the process of design thinking was implemented at the University of Technology, Jamaica (UTech, Ja.) – the country's leading public university – by creating new ways and redesigning long-standing methods to collaborate with the faculty to underscore the importance of information literacy to student learning and achievement. The following initiatives were implemented: faculty liaisons, a library link-up programme, orientation sessions, social media, and faculty-to-faculty testimonials. Faculty members were receptive to the different ways in which they were engaged for collaboration, and this led to a deeper engagement between library and faculty that resulted in improved student awareness and usage of library resources.

Keywords: Information Literacy, Design Thinking, University of Technology, Jamaica

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Introduction

This article focuses on a project implemented at the Calvin McKain Library (CML), University of Technology, Jamaica, to attract more faculty and students to its spaces and resources through information literacy training to students while collaborating with faculty. A team of librarians led by the head of its outreach programme used the design thinking process to explore the current issues surrounding the use and access to the resources and to identify ways in which the CML might better support its clientele. This article seeks to highlight the advantages of using the design thinking methodology to understand the needs of students and faculty served by the CML, to discuss the results of this approach, and to highlight how this approach improved the use of space and access to resources. This process took place over several months including the summer – from April 2018 to March 2019. The team learnt that deans of faculties were more responsive to library orientation requests when they were contacted individually, in addition to follow-up calls or emails sent. The faculty members were more responsive to the library information literacy session requests when programme directors or coordinators were involved in the collaborative arrangements promoted by the library. The combination of these two (2) factors provided a basis for the CML team to plan for the academic year 2018–2019, by targeting heads of faculties and programme coordinators. In addition to a few other methods were employed to achieve the original goal of using the space and accessing the CML resources. The authors believe that this paper will benefit other institutions that are looking for a novel approach to understanding and solving issues related to the use of library spaces and accessing resources.

The wider focus of the Calvin McKain Library project is on increasing the use of the library spaces and resources; a discernible trend that is present at the University of Technology, Jamaica. The trend is intertwined with the need for faculty and students at all levels to maximise the institution's resources for their teaching and learning needs. The University of Technology, Jamaica is a publicly funded institution with several campuses across the island– Arthur Wint Drive,

Kingston; Slipe Pen Road, Kingston; Dome Street and Barnett Street in Montego Bay, St. James – each with its own library service point. The main campus in Papine, St. Andrew hosts the main library and an additional service point at the Faculty of the Built Environment. The University’s annual report for 2019/2020 indicated that student enrolment was 12,595 (UTech, Ja, 2020).

Whereas many of the students at the university are high school graduates with a minimum of five (5) Caribbean Secondary Examination Council (CSEC) passes, many attended institutions with library resources and few (if any) online resources. The 2020/2021 Library and Information Association (LIAJA) School Section report indicated that during the period of the COVID-19 pandemic, one of its major goals was to get buy-in from secondary school administrators to acquire and use online services and resources in their institutions’ libraries (LIAJA, 2021). This as a testament to the lack of the necessary information-seeking and information-utilisation skills that many students who matriculate at the University of Technology, Jamaica, possess. Therefore, given this reality, the Calvin McKain Library was challenged and motivated to implement initiatives to develop students’ information-seeking and information literacy skills.

Despite the demonstrated commitment of both the institution and the library to provide adequate library services and resources at all the campuses, the Outreach Librarian and her team recognised that there were gaps in the library’s understanding of the student population that it served. Hence, there is a lack of awareness of the initiatives to implement to meet the needs of its clientele. To address these gaps, the team developed a few questions to explore:

- Research Question 1: Who are the students at the University of Technology, Jamaica and what library challenges do they face?
- Research Question 2: How can the library partner with faculty to focus on student success?
- Research Question 3: Given that research indicates that library use influences student success, how can the Calvin McKain Library support or enhance student success?

Literature Review

There is a plethora of research on higher education devoted to identifying challenges faced by students and programmes developed to foster student success. The authors’ work at the Calvin McKain Library focused on how the library can help support students with little information literacy skills when entering the

university. Some challenges reported in the literature are library anxiety, where students feel intimidated by the library because they lack relevant information literacy skills, inadequate library foundation from previous institutions, and ignorance of the capabilities of the library (McPherson, 2015); Google is seen as a starting point for research for students that they regarded as more convenient than accessing library resources (Young, 2013); and academic adjustment for students leaving secondary schools to university, where the better the interaction with the learning environment the more likely that the student will succeed (van Rooji et al, 2018).

The library literature addressing the information literacy needs of students in academic environments is extensive (Kerr & Lewis, 2020; Stewart & Bravo, 2013; White & Nicholas, 2015). Nevertheless, several key articles have sought to define information literacy and its importance to the academic success of students in universities (Association of College and Research Libraries [ACRL], 2015; Chartered Institute of Library Information Professionals [CILIP], 2018). However, ACRL defines information literacy as the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning (2015, p.3). This definition reflects the fluidity of the education ecosystem in which the 21st-century learner now needs to operate and thrive in an information-rich world.

The world is inundated daily by new information, as more persons take on the task of writing about matters of interest to them. Many times, the editorial phase of the work is not done as there are many software and web tools available for self-publishing. Ware et al. (2015), in a report accounting for the publication industry, stated that on a yearly basis, there are approximately 2.5 million English-language peer-reviewed documents published; in addition to that, there is self-publishing using web tools and a growing book publishing industry in both print and electronic formats. This validates the need for students to become information literate.

Additionally, the education system has moved away from the 'banking system' and now requires students to be independent learners (Swanson, 2014). In the banking system, educators were seen as depositors of information in the minds of their students. Whereas in the 21st century, students are expected to be actively involved in their learning (ACRL, 2015). For students to be able to make a noteworthy contribution to their learning in this era, they need skills associated with information literacy: establishing the need for information, locating

and accessing the information required, evaluating them for their quality, then extracting the relevant information from the sources found and utilise them in an appropriate manner in order to create new knowledge. These skills must be intentionally taught within the classroom setting.

Researchers recommend that integrating information literacy within the course of study is optimal for retention of the concepts (Shelley-Robinson, 2006). The integration approach requires collaboration between faculty and librarians for the planning and execution of classes. In this way, students will be able to associate being information literate with their academic success. Faculty-librarian collaboration to teach information literacy within educational institutions provide students with the necessary information literacy competencies for mastery of subject content and academic success. As well as providing them with an awareness of the vast amount of information available to them outside of those found on the World Wide Web (Pham et al., 2014).

Additionally, faculty-librarian collaborations benefit the library, as they provide avenues for the library to showcase its resources to students thereby increasing its resource usage statistics through resources and services that are accessed and usedable to them. In this manner information literacy collaborative sessions with faculty not only bring awareness of the resources to the students being taught, but also to the faculty members involved in the activities. This increases the use of resources and places the library as an essential partner within the community (Bernard et al. 2015).

To gain insight into the needs of the students at the University of Technology, Jamaica and to devise new ways to foster their academic success, the library's outreach team used the design thinking methodology, which Razzouk and Shute (2012) define as "an analytic and creative process that engages a person in opportunities to experiment, create and prototype models, gather feedback, and redesign" (p. 330). On the other hand, Coates and Thompson (2020) define design thinking as ". . . an iterative process in which we seek to understand the user, challenge assumptions, and redefine problems in an attempt to identify alternative strategies and solutions. It is a solution-based approach to solving problems" (p.11).

Design thinking involves a series of steps (1. Empathise, 2. Define, 3. Ideate, 4. Prototype and 5. Test) which is centred on the person. It encourages institutions to focus on the persons they are creating programmes for, which in turn leads to better products and services. Design thinking can be used in academic libraries to solve complex library issues (Bartlett, 2018); assist in creating information literacy initiatives, especially in the ever-changing information world (Fosmire,

2016); and can be used by librarians to develop new innovative library products and services (McGowan, 2019). There is a growing body of research that focuses on service design in academic libraries (Marquez & Downey, 2015). However, there is currently a dearth of research in the Caribbean that specifically focuses on the application of design thinking in academic libraries.

Methodology

The case study method was employed to carry out the investigation. A case study is a method of using qualitative approach to research (Creswell (2014). This method was well suited for the research as case studies can be limited to a single entity, a type of situation, a character trait, a classroom, a programme, and so forth (Lichtman, 2013). The sources employed to collect the data were: structured interviews and documents such as emails, testimonials and reports. Specifically, the head of the division for outreach and two other librarians were interviewed. These individuals were selected because of their involvement with the library's information literacy programme. The data was then analysed and presented based on the steps in the design thinking process.

Limitations

This case study focused on one academic institution, aimed at creating an awareness of how a library can use design thinking to bolster its IL efforts and create a stronger faculty-library partnership. The students' perception of the collaborative work of faculty and librarian was not considered in this research.

Steps in the Design Thinking Process

Empathiz: Understanding the Challenge

The students who enter the University of Technology come from various secondary and post-secondary institutions. Secondary schools with trained librarians offer some amount of library training for the lower school – grades 7 and 8. Some information literacy training is done at the senior level – grades 11–13, this is based solely on the teachers' request. The upper school training would generally surround the students doing in-text citations and referencing for School-Based Assessments purposes. Many of these secondary and post-secondary school

libraries do not have a large collection or have access to online databases. Additionally, concepts used at the tertiary level, such as ‘peer-review’, ‘journal articles’, ‘commentaries’, ‘plagiarism’, ‘copyright’, ‘keywords’, ‘OPAC’ and so forth, become quite intimidating to new students. Thus, students sometimes are at a loss on how to overcome these seemingly big concepts (Dobozy and Gross, 2010).

Define: Collaborating with Faculty to Teach Information Literacy

For students to complete assigned tasks efficiently and effectively, they need to be able to navigate the resources of the library and any other resources that are available to them. For this to be accomplished in a meaningful way, the library and faculty need to collaborate to integrate information literacy within the courses. This will afford the students the necessary training and assessment to incorporate what they have learned. In the case of the Calvin McKain Library, the Outreach Librarian initiated multiple conversations to get lecturers on board. This initiative was supported by other library liaisons personnel.

Ideate: brainstorming for Solutions

To engage students in information literacy instructions, the library had a register at its circulation desk, and students were invited to sign up for sessions. Promotional activities for these sessions included posting flyers on faculty, dormitory and cafeteria notice boards. These attempts were not successful. At this point, the library’s outreach department devised multiple initiatives to address the problem. This approach of brainstorming is a critical element of design thinking which involves devising many options and failing “early and often” before a solution (s) is reached (Stara, 2016). While some library/faculty partnerships existed to assist students, this collaboration was somewhat fragmented. In the first instance, only third (3rd) year students pursuing their research methodology module were required to participate in the information literacy sessions. However, some lecturers (especially part-time ones) did not engage in the process.

The following represents the strategies that emerged from the brainstorming exercise:

- Strengthen the advocacy role of the faculty liaison librarian
- Deepen Academic Writing partnerships
- Library/Faculty Orientation
- Library Link-Up
- Faculty Testimonials

Prototype and Testing

According to Bartlett (2018), design thinking involves rapid prototyping, which involves a continuous cycle of implementing and refining solutions to address the problem. An outline of the measures prototyped and later adopted is presented below.

1. ***Strengthening Faculty Liaison Librarians Advocacy:*** A librarian was assigned to each faculty; therefore, the library had a representative on monthly faculty board meetings that provided a seat at the table when discussing academic matters. This allowed for the timely sharing of information regarding library resources and opportunities for partnership in information literacy instruction. Having an active liaison librarian programme resulted in invitations to student capstone research workshops, where the librarians were asked to make information literacy presentations. The liaison librarian initiative was also influential in securing an invitation for the library to participate in the teaching of the literature searching component of the online Research Methodology module for the Doctor of Pharmacy programme, which is for distance learners. In addition, the library was invited to participate in research seminars designed for faculty members.
2. ***Increase Library/Faculty Orientation Programme:*** To introduce information literacy to students as they began their university experience, the library approached each faculty dean months before orientation to secure a slot on their respective orientation calendars. This process required patience and determination as the outreach coordinator was sometimes referred to different faculty members before approval was granted. The library would then have to ensure reminders were sent to further secure the opportunity to meet with 1st-year students during their orientation exercises. In response to this small window of opportunity to engage with the students, the librarians prepared a special orientation presentation highlighting key services and information literacy instruction availability.

It is important to note that after the daunting task of securing a space in the first instance, in subsequent years, it became less challenging and faculty initiated contact with the library not only for orientation sessions but to make special presentations to different groups of students.

3. ***Library Link-Up:*** This initiative was born out of the realisation that 15 minutes at faculty orientations were grossly lacking if the goal of improving information literacy for our students was to be achieved. The library outreach

coordinator again approached faculty to identify days suitable for setting up a booth to interact directly with students in their space. Library Link-Up had mixed results but was very successful in some cases, especially when a database vendor was invited in addition to the library's presentation. In other instances, the space was inconvenient for a booth of this nature and the librarian had to improvise by giving a brief presentation.

4. **Faculty Testimonials:** Faculty members who show a keen interest in using the library's resources were identified, and their feedback and recommendations were solicited. Select testimonials were used to create posters for display on Research Day in the library. It was also discovered that these faculty members encouraged their students to use the library's resources, pointing them to the library as their first source of authoritative information instead of Google. This unlocks the wealth of resources to students and even fellow colleagues who would have otherwise ignored the library and perceived it as unimportant. Thus, further positively contributing to the information literacy collaborative goal.
5. **Deepen Academic Writing Partners:** As a result of the earlier stated third (3rd) year research methodology literature instruction sessions, the library's popularity as an information literacy partner grew. This resulted in a deeper library/faculty partnership for a university-wide module called Academic Writing. The library has experienced a surge in requests from faculty for information literacy instruction for 1st year and other students sitting the Academic Writing and the Research Methods modules. This presented a distinct opportunity to interact with many students on a level that can improve their information literacy competencies.

Outcomes of the Testing of the Interventions

The initiatives were very rewarding as the number of sessions increased over a three (3) year period. In one year, 1,680 students received instruction, and in the following year, this number increased to 2384. Additionally, there was notable increases in the usage of at least three (3) electronic resources. In one case, searching increased by more than 100% within a year. Furthermore, faculty-library interaction continues to strengthen as even during the slower summer period, lecturers were increasingly requesting information literacy instruction for their students.

Additionally, as a result of design thinking in the Calvin McKain library prior to April 2020, we were able to secure a significant boon for information literacy

instruction within the University during the COVID-19 pandemic. The programme director for Academic Writing 1 made it mandatory for all first-year students to participate in the library's information literacy sessions during a specified period. We had thirty-two (32) sessions and gave instructions to over 2250 students. These sessions were scheduled on the timetable for the academic writing classes. This was to ensure that all first-year students were equipped with the necessary skills to use the resources available throughout the University, especially as a large percentage of classes were online.

Conclusion

As society's information landscape continues to evolve, the need for information literacy training is increasingly important. While it is true that launching and maintaining successful information literacy programmes within tertiary institutions can be challenging, if librarians and faculty members collaborate in employing design thinking in their planning and execution, innovation and creativity can be unearthed. This design thinking approach can result in more targeted information literacy initiatives and outlines a process that allows testing and tweaking activities to improve information literacy's overall impact in tertiary institutions.

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The Digital Humanities in the Caribbean

The Role of the Academic Librarian

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Abstract

Digital Humanities uses computational technologies and methods mainly to assist in humanities research. Digital Humanities projects often involve the use of archival collections, information/knowledge organisation and the utilisation of emerging technologies. Traditionally, libraries have played an essential role in teaching and learning, aiding students in information literacy and ensuring that faculty has full and easy access to materials. This paper proposes that the academic library must expand its reach in research, particularly regarding the Humanities. As libraries position themselves within an ever-changing paradigm, the questions emerge: How do they utilise the lessons and principles of Digital Humanities to augment, modify and enhance strategies and processes as they impact research within universities? What are the tools needed to implement Digital Humanities? What are the methods for implementation? What are the key benefits of Digital Humanities to the academic library? Additionally, this paper will explore how the academic library in the Caribbean can partner with faculty members in facilitating their research beyond locating needed resources and act as partners in the process. It will propose the creation of a Digital Humanities program outlining the steps involved, the benefits to be accrued from such a program, and the inevitable challenges involved and how best they can be overcome. Two things are evident and will be discussed at length, that the role of the academic library cannot remain static, and that Digital Humanities is one way to ensure that the necessary changes occur.

Keywords: Digital Humanities; Academic Librarians; Caribbean Libraries

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Introduction

Despite its importance within the higher education environment with the services it provides, the academic library still struggles against invisibility and often finds itself justifying its existence, providing defensive arguments that challenge the perception that with the evolution of the internet, and all that it entails, i.e. increased connectedness between people, data and the ability to quickly provide needed information, the library, in its traditional format is fighting irrelevance. One could write entire articles arguing for and against the definition of traditional within the academic library context. What would be the point? Those who work within the university system fully embrace the necessity and nature of change and far from seeking to fight its inevitability, instead prefer to embrace it and therefore utilise the positive outcomes that may result. For example, at the University of the West Indies, the Main Library, for some years, has embarked on a path of what has been dubbed ‘futureproofing’. By definition, futureproofing is designed to continue to operate effectively as time passes (Rehman et al., 2017). Within the context of the library, it means that policies and necessary technologies are implemented to ensure that the services provided are well-organised and always accessible to both students and faculty. For example, in recent years, the installation and, as of 2021, the upgrade of the integrated library system has ensured that users have been provided with the most effective methods to search and retrieve scholarly materials. UWILinC, as it is named, connects through an Ex-Libris interface, a software company that “. . . offers cloud-based solutions . . . help institutions improve, library impact, research outcomes and student engagement” (<https://exlibrisgroup.com>) providing access to databases, books and journals, often full-text. In short, the library’s reference service, in performing the most traditional and fundamental roles, uses emerging and evolving technology, therefore defying those who declare that the advent of Google and similar search engines have rendered the academic library obsolete and that they are merely providing space for students to study. Nevertheless, the battle continues, and academic libraries must find ways to thrive and effectively provide services to clients within the academic environment. Enter the Digital Humanities.

Literature Review

If we examine Digital Humanities at its most basic level, we can, as Kirschenbau did in the 2012 edition of *Debates in the Digital Humanities*, use the definition provided by Wikipedia: “The Digital Humanities, also known as humanities computing, is a field of study, research, teaching and invention concerned with the intersection of computing and the disciplines of the humanities.” However, if there is to be a nuanced discussion, one must acknowledge that a settled definition does not yet exist to cover this ever-expanding discipline. Kirschenbaum himself goes on to state that the Digital Humanities is also essentially a social undertaking often involving the creation of networks where persons share research, often collaborating on a variety of projects (2012). More broadly, Digital Humanities is defined as “. . . asking what it means to be a human being in the networked information age . . . asking and answering research questions that cannot be reduced to a single genre, medium, discipline or institution. It is a global, trans-historical, trans-media approach to knowledge and meaning making . . .” (Gardiner & Musto, 2015, p.4) Patrick Svensson (2010) adds that this includes how the humanities may evolve through their engagement with technology, media, and computational methods. What, then, do libraries offer to those academic community members involved in the Digital Humanities?

Libraries can nurture Digital Humanities work (Poole, 2017). Collaboration is an integral aspect of the Digital Humanities and is considered a core value in the discipline (Wong, 669). Wong (2016) also points out that there is a connection between the humanities and libraries (p.670). They both collect, organise, and preserve resources essential to study and research. Also, they are both in that place where questions are consistently being asked about their value and contribution to scholarly endeavours. Sula (2013) points out that in recent years, this connection has grown and in noting these wonders, as others have done, if the library can function as a space for the various components that form a part of a Digital Humanities project. Showers (2012) expands upon this rumination by identifying five specific areas where the work of Digital Humanities and libraries overlap: managing data, embedded librarianship, digitisation and curation, and discovery and dissemination. Managing data, where libraries support the data management infrastructure or provide services to researchers, offering tips on best practices. Libraries also typically organise and repurpose data which can lead to further analysis. Critically, libraries can enhance collaboration by better understanding the needs of researchers and ensuring that the right (often tailor-made) support

is provided. The idea of the embedded librarian who traditionally works closely with faculty in their courses, assisting students in locating resources, etc., can be utilised within Digital Humanities, ensuring immediate support while building and maintaining a knowledge base of research practice leading to relevant and appropriate support.

Today's academic libraries are well-versed in digitisation and curation. While much of the data will be generated by the researchers themselves, librarians are uniquely positioned to provide the necessary expertise and infrastructure. Academic libraries, particularly those with unique collections, are committed to preservation and increased access and are well-informed and prepared to deal with most, if not all, aspects of digital preservation. Again, libraries can provide guidance on standards and best practices. Discovery and dissemination are areas where, yet again, academic libraries are uniquely positioned to assist researchers in identifying useful content across academia. Powers (2012) also see this as one avenue to increased dissemination of scholarly output either through campus-based publishing or advising on metadata, which will enable dissemination and discovery across various platforms, tracking impact, i.e., altimetric. Wong (2016) offers an even more detailed view of how Digital Humanities can evolve with the direct support of libraries. Again, emphasising the collaborative nature of the discipline, she posits that there are very specific services that libraries can offer which will enhance the quality of and perhaps increase the research output of those involved: project and facilities management, technical support, and consultations are some of the major services that libraries can offer. In the pedagogical arena, libraries can facilitate the offering of short courses, training events such as seminars, conferences, and lectures, as well, as fellowship and internship opportunities which are designed to support project development and teaching and also facilitate students being assigned to specific projects and awarded academic credit, pay or both.

However, as much as we discuss the benefits that may accrue should libraries commit fully to the support of Digital Humanities, the challenges involved need to be examined. Although it has been pointed out in various instances that academic libraries can offer uniquely tailored services to researchers immersed in the Digital Humanities, the reverse is also true. Libraries often encounter several challenges to their participation in Digital Humanities projects. In 2013, Posner listed training opportunities as one of the major challenges facing librarians at one time. The problem now, however, is not one of scarcity of options but one where the librarian is challenged to find the time to pursue the myriads of choices

being offered. Ensuring relevancy with regards to areas of focus presents another challenge. She also points out that many of the skill sets required when embarking on a Digital Humanities project are often a combination of ‘hard’ and ‘soft’ skills, e.g. engaging in various aspects of project management. Another barrier for academic librarians who wish to increase their engagement in Digital Humanities is the simple fact that many libraries are underfunded, therefore understaffed, and are consequently overburdened (Posner, 2013).

With many librarians assigned to various tasks, obliged to achieve multiple objectives within very tight timelines, persuading them to take on additional responsibilities often results in a seriously resistant attitude. Finally, Posner points to yet another obstacle – the lack of authority to organise the resources that will be required for Digital Humanities projects. Corraling time from individuals with specialised skills, authorising payments for those services in addition to needed equipment, and identifying and evaluating a variety of resources are just some of the moving parts necessary to ensure a successful outcome. Very few academic libraries possess all the component parts, and very few librarians either possess the needed authority or are willing to repeat the cycle of persuasion and justification involved in every proposed individual project.

The discussion thus far has focused primarily on the librarians’ involvement in Digital Humanities through the lens of service to the academic community. Munoz (2012) presents the idea that a librarian’s presence in the field should be that of a creator. He states that “framing Digital Humanities in libraries as a service to be provided and consequently centering the focus of the discussion on faculty members or others outside the library seem likely to stall rather than foster libraries engagement with Digital Humanities. Digital Humanities is not a service, and libraries will be more successful at generating engagement with Digital Humanities if they focus on helping librarians lead their own Digital Humanities initiatives and projects. Digital Humanities involves research, building things, and participating in communities, both online and off.” He argues that conceptualising and building a service dedicated to Digital Humanities from scratch is extremely difficult and advocates that libraries build specific services which may evolve through experimentation and discovery, e.g., developing a process for evaluating and selecting from proposed projects, thereby avoiding duplications.

Digital Humanities and the Academic Librarian

Before we discuss which road the Caribbean academic librarian should travel in the Digital Humanities world, let us briefly examine the status of the Digital Humanities in the Caribbean. Digital Humanities as a discipline, has been in existence since 1946 when a Jesuit priest, Robert Busa, entered into a partnership with IBM founder Thomas J. Watson to create the *Index Thomisticus*. The *Index Thomisticus* offered researchers the chance to explore the works of renowned religious scholar Thomas Aquinas by performing text searches. It was a thirty-year project culminating in the creation of a website in 2005. (<https://www.corpusth-thomisticum.org/it/index.age>). Digital Humanities now thrives, in Europe, United States of America, Canada, China and Australia. Countries within Latin America, such as Brazil and Mexico, are increasingly engaged in exploring the field, as are India and Japan. Countries such as South Africa and, to a lesser extent, Nigeria have begun to seek out opportunities in Digital Humanities, for the most part, developing countries, including those in the Caribbean, have not yet committed to entering the field. Although we can find no digital projects within the Caribbean, there have been instances where persons who are part of the diaspora have explored West Indian history through the Digital Humanities. For example, in 2012, Prof. Charles Warren, Professor of History and Professor of African and African-American Studies at Harvard University, explored a major slave revolt that took place in Jamaica. The revolt began on April 7, 1760 and lasted until October of 1761. He did so by creating an animated thematic map narrating the spatial history of what he calls “the greatest slave insurrection in the eighteenth-century British Empire (Slave Revolt in Jamaica, 1760–1761 (axismaps.com)).

This is not to say there has been no local interest in Digital Humanities. In 2018, Silvia Kouwenberg presented a case for the development of a Digital Humanities programme at the University of the West Indies, and the Faculty of Humanities and Education Distinguished Lecture was titled “These Master’s Tools Ain’t Like the Others: Towards a Caribbean Digital Humanities Praxis.”

This article proposes that academic libraries can play a key role in creating interest and assisting in developing programmes and projects, thereby increasing the research output of the humanities within universities. With this in mind, academic libraries need to decide on an approach to encouraging universities that the field is ultimately advantageous to Caribbean scholarship, providing new avenues of exploration into various aspects of the region’s cultural heritage. We suggest that libraries may need to diverge from the traditional and purely

service model and adopt a more collaborative/partnership approach to developing the discipline. Academic librarians, in short, will have to nurture Digital Humanities work. There are numerous ways in which this can be accomplished. The recognition that, unlike traditional scholarship, Digital Humanities is not an individual-focused discipline. It stands to reason that no single person will possess all the necessary skills and knowledge to put together a project. As stated elsewhere in this article, a collaborative team approach is the best option as a team of scholars, information technology specialists and, yes, librarians will need to work together to ensure a successful outcome.

The liaison librarian program present in many universities is ideally placed to oversee such projects. A liaison librarian will have built working relationships with their assigned departments and build working relationships resulting in understanding not only of the instructional needs of the faculty, staff and students but their research needs as well (Hartstall-Gundy, Braunstein, Golomb, 2015) and so, to begin at the beginning, within the Caribbean context, the academic library/librarian will have to be proactive. In other words, the academic librarian cannot sit and wait for researchers to approach the library. Although academic librarians recognise that the skills and knowledge they possess, e.g., selection, acquisitions, cataloguing, preservation and digitalisation, are important, they cannot rely on researchers to recognise these qualities on their own. Academic librarians have to bring these things to their attention. Librarians need to find a way to identify which members of the faculty are already involved in Digital Humanities projects or are doing research. Librarians cannot be reluctant to approach faculty in this regard. The fact is that the participation of the librarian at this stage is crucial to the development of any project. For universities, at the very beginning of any Digital Humanities project, librarians can provide several pathways to development. For example, the librarian can work with the IT team to educate faculty about the ever-evolving range of digital tools available.

Librarians are uniquely situated at the planning stages of a project to contribute significantly to its trajectory and even its long-term success. Librarians' participation can begin with offering insight into selecting a topic, and the scope and choice of content. This can be done in several ways. Earlier in this article, the point was made that the library's traditional roles and practices often lend to its invisibility. The fact is that much of what librarians are trained to do as part of their professional routine can prove essential to a Digital Humanities project. For example, librarians, particularly those with cataloguing experience and knowledge of metadata, can assist in the selection of controlled vocabulary. Also, a part of the

modern-day librarians' skill set is familiarity with the issues involved in digital preservation and long-term access and sustainability of completed projects. In addition to liaising with scholars on their needs and concerns, librarians can also act as a go-between with any technology specialists involved. They can advise on issues such as file formats and to ensure that digital preservation conventions are followed. In short, "the librarian must balance a scholar's interest and ideas for the project with the scope of the project, the needs of the collection and the technical considerations for long-term preservation." (Gibson et al., 2015, p.11)

Methodology

The research technique employed was an extensive examination of secondary sources, i.e., books, periodicals, websites, etc. This was chosen as the application of survey data was not a feasible option since it was necessary to mostly extrapolate because very little has been written about the Digital Humanities in the Caribbean.

Proposals and Discussion

If the decision is taken to commit fully to participating in the development of a Digital Humanities programme, the library will have to make decisions on how to develop and promote Digital Humanities research projects. There are several ways that this can be accomplished. Begin with graduate students in the humanities, particularly if they have not begun their thesis or dissertation process, connect with them, initiate discussions about their interests and determine whether or not Digital Humanities could be a viable option in pursuing their research interests and offer to assist. Consider organising and hosting a symposium on the Digital Humanities and invite faculty, students, persons who focus on technology and other librarians. Perhaps suggest and work with faculty in designing a class assignment using a Digital Humanities tool to begin familiarisation of the discipline. Organise workshops that will serve to update researchers and fellow librarians on developments within Digital Humanities as well as new tools and systems. To better enhance the collaboration process, offer training to technology specialists in subject matter organisation and background. Identify, preferably, free training on Digital Humanities tools, in order to acquire new competencies. Seek to connect with the global Digital Humanities community. Twitter offers the largest platform for those interested in engaging with other participants, e.g.,

Digital Humanities Now (@dhnow) and dh+lib (@DHandLib) are particularly good accounts to follow. Discussion groups such as Global DH (<https://hcommons.org/groups/global-dh/>) provide excellent resources for researchers and librarians. If librarians are to play a greater leadership role in Digital Humanities initiatives, they will have to expand their knowledge base and develop skill sets that are more grounded in technology. As the name states, Digital Humanities requires new or increased knowledge by librarians in the technology field, , learning the basics of coding. Librarians need to familiarise themselves with tools as PHP, MySQL and Apache. Many free online courses are available on sites such as Coursera or EdX. Some examples of other competencies that are often applied are: proficiency with managing geospatial data, proficiency with web programming within Content Management Systems (CMS), a good understanding of data mining principles and a high level of understanding of data formats and the equipment used in the digitisation process. These are what are termed ‘hard’ skills. However, ‘soft skills’ are also needed. “Digital Humanities projects depend upon adept project management since human resources invariably constitute the most expensive part of a DH endeavour” (Poole, 2017). Organisation, planning, follow-up, grant writing and administration, and conflict resolution are all important aspects of managing a Digital Humanities project.

As important as the ‘hard’ skills are, the ‘soft’ skills ultimately determine a project’s success or failure. Lorang and Johnson (2015) have devised a checklist that librarians as leaders/partners would do well to apply as digital projects are embarked upon (91). To begin with, ensure the project’s research question is properly articulated. Once this has been done, the eventual thesis will emerge as the project proceeds. To avoid any perception of duplication or, worse, imitation, research other projects which may have similar research aims. Define the boundaries of the project. What will it accomplish? Who is its audience? Where does it end? Defining boundaries ensures that the project does not continue with no end in sight. Determine the resources that will be deemed necessary. What hardware and/or software will be needed? What expertise, either internally or externally, will need to be acquired? What resources are already available at the institution? Identify the project’s participants. Digital Humanities projects often involve researchers, students, librarians, IT professionals, and people outside the academic community who may bring specialised knowledge and skills to the table. A communication plan is essential. It sets out the etiquette for how the people involved will communicate with each other and with external participants. Intellectual property is another critical element of any project. Stating in

unambiguous terms, providing justification for use, and ensuring that copyright and fair use terms are strictly adhered to. In fact, documenting any decisions made about the use of intellectual property is often advised. Developing a work plan, which includes the budget ensures that there is an order to the activities involved. Assess project development continuously. Doing so ensures that the work matches the scope, timelines, and goals and stays within budget. Beware of mission creep. Mission creep is defined as a project that takes longer than originally planned as a result of factors such as, budget constraints.

Document the work of the project. Without documentation, projects risk duplication of effort if staff turnover takes place. Good documentation is also essential for peer review. Proactively seek out evaluation and peer review. Peer review lends gravitas to projects and allows others to examine the project from the lens of fellow digital humanists. Moreover, for faculty whose goals include tenure or promotion, evaluation and peer review are critical. Therefore, ensure that project results are properly disseminated. There are a variety of ways that this can be accomplished, including articles, books, and blog posts, which make this information accessible to the community. Finally, closing a project may seem obvious, but it is a crucial final step. Closedown can include completing any outstanding documentation, ensuring that the data management plan is followed through, and properly thanking the various participants.

Conclusion

The Digital Humanities have moved beyond emergence globally and exist fully as part of scholarship. Its absence in the Caribbean region should not be allowed to continue, and it is our opinion that libraries can play a key role in bringing this field of study to the forefront of academia. We also strongly believe that the academic library/librarian's role should be one of support and partnership. Librarians possess a slate of skills and an ever-expanding knowledge base which can only be an asset to researchers. By providing expertise on national and international trends, advising on best practices, digitisation and project management, and shouldering the responsibilities of identifying funding, managing labs, etc., we can ensure that the Digital Humanities become as established as history, literature, and cultural studies in the traditional humanities. The question, of course, that will be asked are: What are the challenges inherent in projects/programmes of this kind? What about lack of funding, staffing gaps and, quite often, the lack of trust from faculty who are not fully aware of what libraries/librarians have to offer? What about

administrative support or lack thereof if the benefits of such projects cannot be identified in the short term, particularly, after a significant investment in funds? There is, of course, no denying that there is a plethora of challenges that need to be acknowledged and solutions found, but first, the idea of Digital Humanities must be implanted, the benefits acknowledged and emphasised. It cannot be that in the Caribbean yet another part of our history, our cultural heritage present in newer contexts should be appropriated. While diaspora interest is a good thing, anchored in our own experience, scholarship can only be enhanced by participation in the Digital Humanities arena. As librarians, we cannot wait to be consulted, to be approached tentatively, we need to step forward with confidence and lead the way into a new future within the academic world.

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Research and Publication Output of Librarians in a Professional Network In Jamaica

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Abstract

The purpose of the study was to investigate the research and publication output of librarians from the College Libraries Information Network (COLINET) in Jamaica over a 20-year span (2001–2021). The study examined the challenges librarians face; the support mechanisms and strategies in place for research and publishing productivity, and COLINET librarians' perceptions of their roles in fostering a research culture. The study utilised a mixed-methods survey approach. An online survey was designed using Google Forms and distributed to COLINET librarians via the COLINET Google group and individual emails. Extensive literature search strategies across local and international databases were employed to ascertain the research and publication output by librarians in COLINET over a 20-year span from 2001–2021. With a response rate of 50%, the results indicated the research and publication output of COLINET librarians and the perceptions of COLINET librarians' roles in fostering research and publishing culture. The conclusions showed that COLINET members need to adapt and foster a culture of research and publishing among its librarians. The recommended strategies to encourage research and publishing are also high-

lighted. This study will assist COLINET librarians in Jamaica in cultivating and advancing a culture of excellence in research and publishing. Additionally, it will add to the empirical literature on Caribbean librarians' culture of research and publishing productivity.

Keywords: Research productivity, Research catalyst, Research Culture, publication output, COLINET.

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Introduction

College Libraries Information Network (COLINET) is a non-profit organisation that was formed to encourage the active participation of libraries and other information units within its network. It was established in November 1985 in Jamaica and currently comprises 31 institutional members. This group includes members from public, private, and tertiary educational institutions, universities, teachers' colleges, specialist colleges, community colleges, and theological colleges. According to Salmon and Bradford (2007), COLINET was established to facilitate speedy access to information, promote the sharing of ideas and resources, and encourage the participation of the colleges in the National Information System (NALIS), now Jamaica Information Network (JAMLIN).

COLINET is devoted to the development of libraries in educational institutions and, acts as a catalyst for change through meetings, consultations, seminars, workshops, visits, and the creation and promotion of standards to govern libraries. The focal point for COLINET is the Calvin McKain Library at the University of Technology, Jamaica (UTech, Ja.) (Smart & Stewart-Fullerton, 2013).

According to Sife and Lwoga (2014), research in library and information science (LIS) has contributed significantly to creating professional knowledge for the continued development and growth of librarians. Consequently, research and publication among librarians have become increasingly important and are a requirement by some academic institutions for librarians to remain viable in their profession. In today's information-driven society where empirical evidence is paramount, librarians cannot solely be curators of information, providing access to patrons, they must be producers that add to the plethora of knowledge and information that exists globally. Notwithstanding, research productivity

among academic librarians is growing exponentially internationally and, to a lesser extent, locally. Gill and Gosine-Boodoo (2021) stated that in this new information age, scholarly research, and publishing engagements are important for librarians to remain relevant in their institutions. This is not the case for COLINET librarians because research is not a job requirement in their institutions. However, earlier movements in the diversification and advancement in the level of programme offerings and the recent thrust in advancing a culture of research in the librarians' parent institutions might herald a change in this position (Miller and Munroe, 2014).

The major movement in programmes has created a major shift in the attitude towards research and publication in Jamaica's Ministry of Education and Youth (MOEY) and many tertiary-level institutions. In 2019, the MOEY created a new position in teachers' colleges, that of Research Officer, this reiterated the increasing importance being placed on research in these parent institutions. In 2010, the MOEY revised the minimum entry-level qualification for teachers; prospective teachers are now required to obtain a bachelor's degree instead of a diploma to enter the classroom (Shortwood Teachers' College, 2013). Teachers' colleges are a major grouping within COLINET, hence the need for libraries and librarians in these institutions to embrace a culture of research.

The 'publish or perish' concept has been a part of some institutions' mandate for librarians for decades. According to Ibegbulam and Jacintha (2015) the "publish or perish" notion has been a mantra for many individuals in academia. Academic librarians are included in this vision and are expected to conduct, write, and publish research papers. In Jamaica, academic librarians at the University of the West Indies, Mona (UWI) have paved the way for their fellow counterparts to follow suit, as many librarians in other institutions do not have research as a part of their job function. In the case of UWI, a librarian's tenure is tied to the 'publish or perish' culture; therefore, they are required to conduct and publish research papers (Gill & Gosine-Boodoo, 2021). Other academic librarians external to the UWI do not have their tenure tied to the "publish or perish" model. In recent years, professional networks such as COLINET have been seeking to foster a culture of research among their members to remain relevant and as a result, create, develop and publish research literature on Library and Information Studies in Jamaica and, by extension the Caribbean.

The seemingly daunting task of conducting, writing, and publishing research is possibly one reason why many librarians in Jamaica have not taken on the challenge of publishing and conducting research. Secondly, in-depth training in

research methodology while pursuing a library degree is not always included in the curricula, so they lack the necessary skills to conduct research (Sassen & Wahl, 2014). According to the Association of College and Research Libraries (ACRL) (2018), the combination of constrained budgets and the changing, increasingly competitive domain of information production impacts virtually every library. Additionally, Sivakumaren et al. (2011) posited that a lack of writing skills, lack of funds, inadequate research skills, and inadequate literature to support research are some of the hindrances to research productivity.

Research productivity amongst COLINET members is very low. Nevertheless, COLINET group members have recognised that fostering a research culture is essential and is of utmost importance for them to improve their practice and remain relevant. This study investigated the research and publication output of librarians from the 31 institutional members of COLINET in Jamaica. Challenges, support and strategies regarding research and publishing productivity were of particular interest. The study sought to determine the quantity, topics covered and publication types, not the quality of the research productivity of librarians in COLINET.

Research questions:

1. To what extent do COLINET librarians engage in research and publishing?
2. What are the challenges faced by COLINET librarians regarding research and publication?
3. What strategies are used to support and encourage COLINET librarians to research and publish?
4. What are COLINET librarians' perceptions of their roles in the fostering of research and publishing culture?

Literature Review

Librarians, especially academic librarians, have always played a significant role in the research process. Academic librarians in their substantive roles, support members of an academic community by managing, organising, evaluating, and disseminating information that they need for scholarly communications. However, there is the belief that academic librarians need to be involved in research not merely as facilitators but as researchers themselves (Crampsie et al., 2020; O'Brien & Cronin, 2016; Ocholla et al., 2012; Stover, 1996; Verzosa, 2007). Ocholla

et al. (2012) purport that “research is done to fulfil learning, domestic and career needs, to satisfy curiosity for egoistic reasons, such as recognition and visibility; for career-related rewards, such as promotion, securing tenure or permanent appointment; and for self-development or growth”.

The literature shows that academic librarians have increasingly become researchers and publishers themselves. Several studies indicate that academic librarians worldwide are increasingly engaged in research and publishing (Fiawotoafor et al., 2019; Kozłowska & Scoulas, 2020; Ramos-Eclevia et al., 2018). They have published as single authors, in collaboration with others (librarians and non-librarians) and have published in areas primarily within the library and information field, but also in other disciplines such as agriculture, mental health and health science (Harris, 2016). They have published their works in peer-reviewed journals, conference proceedings, and books. Additionally, with the advent of online resources, academic librarians are publishing on blogs, online forums, websites, etcetera. It is noteworthy and not unusual that librarians in developed countries publish more than their counterparts in developing countries.

Challenges Regarding Research Productivity

There is extensive literature (Fennewald, 2008; Fiawotoafor et al., 2019; Ibegbulam & Jacintha, 2015; Kozłowska & Scoulas, 2020; Ramos-Eclevia et al, 2018; Sassen & Wahl, 2014 Sivakumaren et al., 2011) detailing the numerous factors that prevent librarians from researching and publishing. One such factor is the idea that actively participating in research and publishing is beyond the librarian’s scope of work. Verzosa (2007) details reasons such as librarians not having an interest in research, being overwhelmed, not having access to professional literature, and insufficient knowledge and training in the area. Additionally, some librarians have copious administrative work and cannot find time to contribute to research outside of their substantive roles.

Factors that Encourage Research Productivity

The elements that contribute to increasing productivity, creating a research culture and facilitating participation in LIS research in the Jamaican setting are sparse. However, a plethora of literature exists internationally, in the area. Formal research training, promotion and tenure, the librarian’s annual review, and the ability to attend conferences and defray research costs were all mentioned as potential

catalysts for research productivity in Fennewald's (2008) qualitative study of research productivity among librarians at Penn State University (McNicol, 2002).

Methodology

The study utilised a mixed methods survey approach. An online survey was created using Google Forms and distributed to all the librarians in the College Libraries Information Network via the COLINET Google group and individual work email. According to Creswell (2014), "Surveys help identify important beliefs and attitudes of individuals." Therefore, a survey design was considered the most appropriate design for this research since it examined what COLINET librarians believed to be catalysts for their research productivity and how they perceived their roles in the fostering of research and publishing culture.

The survey consisted of both closed-ended and open-ended questions. The closed-ended questions allowed for comparison and statistical analysis; the open-ended questions allowed the respondents to give their perspectives and elaborate on their responses. Additionally, survey respondents were required to list their published works.

Extensive literature search strategies were employed to ascertain the research and publication output of librarians in the College Libraries Information Network over a 20-year span from 2001–2021. The focus was to determine productivity and the type of publication.

Article Identification and Selection

To identify articles produced by librarians within the COLINET group, the researchers perused the Library and Information Association of Jamaica (LIAJA) and COLINET email Google groups for new publication announcements. Searches were conducted in local publications such as *LIAJA Journal* (formerly *LIAJA Bulletin*), *Journal of Arts Science and Technology (JAST)* and *Caribbean Journal of Education*. Past COLINET symposium programmes were consulted to find presentations conducted by COLINET Librarians. The researchers conducted extensive Google searches using keywords: COLINET institutions and librarians' names, research, publications, and library research (Caribbean librarians); search strategies such as Boolean operators, truncation, and wildcards were also used. Additionally, internet bibliographies and resumes were examined to determine where an author worked at the time of publication. The established criteria for

publication selection were a book, book chapters, peer-reviewed journal articles, conference papers, and articles in trade publications. Full bibliographic information (title, authors, abstract, cited references, etc.) was collected for all publications selected.

Author Affiliation Coding

The affiliation of the authors was determined by examining the papers. Each article was sorted into one of two categories, that is, by a sole author who works mainly within the COLINET libraries setting; (2) co-authored articles with at least one author employed within the COLINET libraries setting and co-authored articles with all authors employed within the COLINET libraries setting.

Results and Discussion

The online questionnaire was completed by COLINET librarians. The questionnaire was comprised of five sections. The first section collected demographic and biographic data about the participants. The responses are presented below. The other sections were designed to gather data pertinent to the research questions:

1. To what extent do COLINET librarians engage in research and publishing?
2. What are the challenges faced by librarians regarding research and publication?
3. What strategies are used to support and encourage COLINET librarians to research and publish?
4. What are COLINET librarians' perceptions of their roles in the fostering of research and publishing culture?

Demographic and Biographic Data

The data showed that 30 female librarians (90.9%) and three male librarians (9.1%) participated in the survey. Participants were also asked to state their age range and years of service within the field of librarianship. The results are presented in Table 1.

Table 1 data revealed a diverse demographic composition among librarians based on age and years of service within the library and information field. Among the participants, the largest age group comprised librarians aged 41–50 years, rep-

Table 1: Librarians' Age Range and Years of Service

Age Range	N	Percent
21–30 yrs.	2	6.1%
31–40 yrs.	10	30.3%
40–50 yrs.	4	42.4%
Over 50 yrs.	21.2	6.1%
Years of Service		
1–5 yrs.	2	6.1%
6–10 yrs.	4	12.2%
11–15 yrs.	7	21.2%
16–20 yrs.	13	39.4%
Over 20 yrs.	7	21.2%

representing 42.4% of the surveyed population. This suggests a significant presence of mid-career professionals within the academic librarian cohort.

In terms of years of service, the data indicated a varied distribution. A notable portion of librarians, 39.4%, had accumulated 16–20 years of experience in the field, indicating a significant number of experienced professionals among the respondents. Additionally, 21.2% of the librarians had worked for over 20 years, showcasing a cadre of long-tenured individuals contributing their expertise to the profession. There were also librarians in the early stages of their careers, with 6.1% having 1–5 years of service and 12.1% falling within the 6–10 years range. This mix of experience levels suggests a dynamic workforce with a blend of fresh perspectives and experienced insights that should be able to contribute to the library and information field in terms of research productivity in the academic setting.

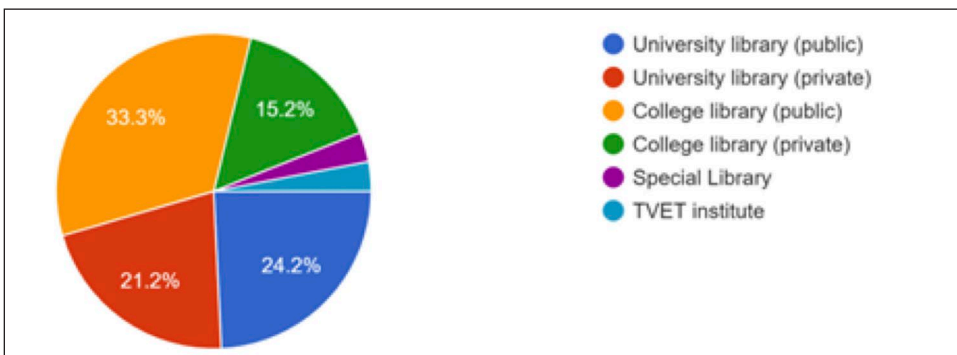


Figure 1: Library Type

The results from Figure 1 illustrate the distribution of participants based on their institutional affiliations among COLINET librarians. The majority (33.3%) of the participants were public college librarians. Twenty-four (24.2%) were public university librarians, 21.2% were private university librarians, and 15.2% were private college librarians. The least represented were special librarians (3%) and TVET librarians (3%). These results provide valuable insights into the diversity of the participants within the COLINET network, suggesting possible varying levels of engagement in research and publishing activities across distinct types of libraries.

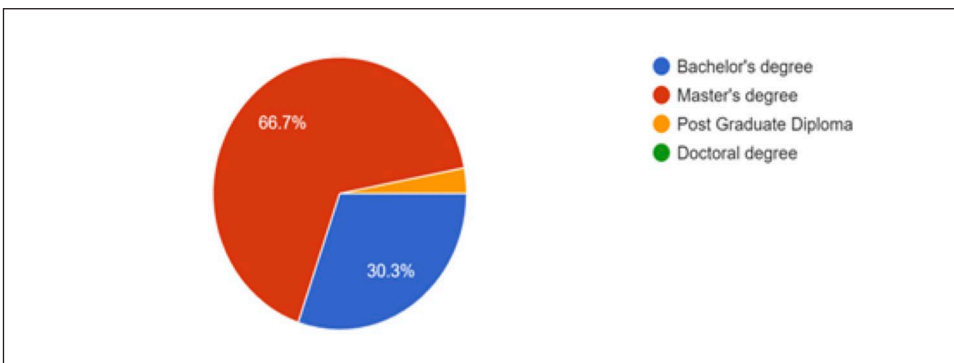


Figure 2: Educational Profile

The data presented in Figure 2 outlines the educational profile of the survey participants. Most participants, accounting for 66.7%, held a master’s degree, indicating that a significant portion of librarians within the COLINET network have attained this level of education. Additionally, 30.3% of participants held a bachelor’s degree, while only 3% had a Post Graduate Diploma. Notably, there were no participants with doctoral degrees, suggesting a lack of representation of individuals with the highest academic qualification in the survey sample. These results highlight potential areas for professional development and support in terms of qualifications to enhance research productivity and publishing efforts among COLINET librarians.

Results related to the research questions are presented below:

To what extent do COLINET librarians engage in research and publishing?

An extensive literature search, on the research productivity and the type of publication covered were examined. The publication types examined were book chapters, journal articles, conference presentations and conference proceedings.

Table 2: COLINET Research & Publication Output 2001–2021 (20 years)

Research/Publication Type	Number of Research and Publication Output
Book Chapters	3
Journal Articles	30
Conference Proceedings	3
Conference Presentations	32
Total	68

The data presented in Table 2 provides insights into the research and publication outputs among COLINET librarians over a 20-year period from 2001 to 2021. A total of 68 research and publication outputs were documented during this time frame. While conference presentations (32) and the publication of journal articles (30) were the most popular publication type, the publication of book chapters (3) and conference proceedings (3) highlight the diverse range of scholarly contributions made by the librarians within the network. It was observed that a significant number of conference presentations occurred at the Biennial COLINET Symposium, indicating the symposium’s role as a primary platform for highlighting research and promoting publication activities within the network. The results also suggest that the COLINET Symposium serves as a catalyst for fostering a culture of research and publication among librarians in the network, emphasising the importance of such events in encouraging scholarly engagement and knowledge dissemination within the community. This supports the view that academic librarians can be actively involved in research not merely as facilitators but as researchers themselves (Crampsie et al., 2020; O’Brien & Cronin, 2016; Ocholla et al., 2012, Stover, 1996; Verzosa, 2007).

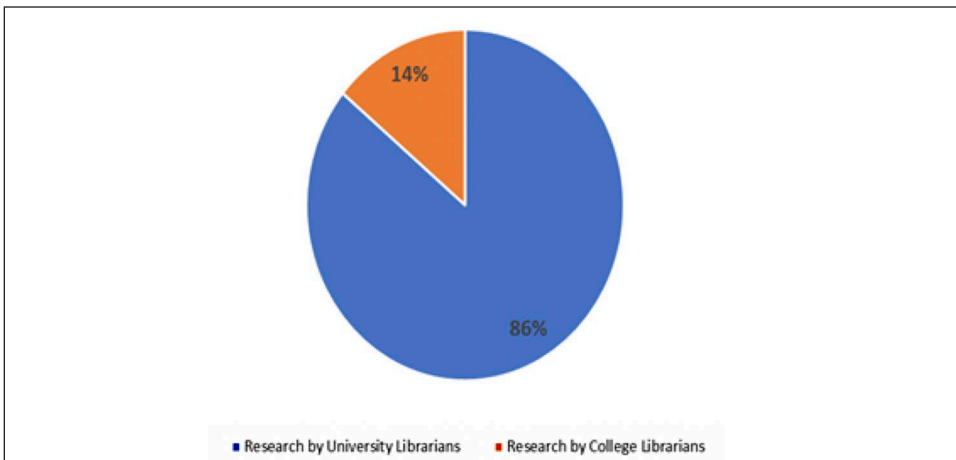


Figure 3: Research and Publication Based on COLINET Institution Type

The data presented in Figure 3 demonstrates that the bulk of the research and publication output, comprising 86%, was attributed to university librarians within the COLINET network. In contrast, college librarians accounted for 14% of the total research and publication output. This disparity in contribution between university and college librarians within the network may inform strategies that support and enhance research culture among college librarians to promote greater scholarly engagement and knowledge dissemination within the COLINET community.

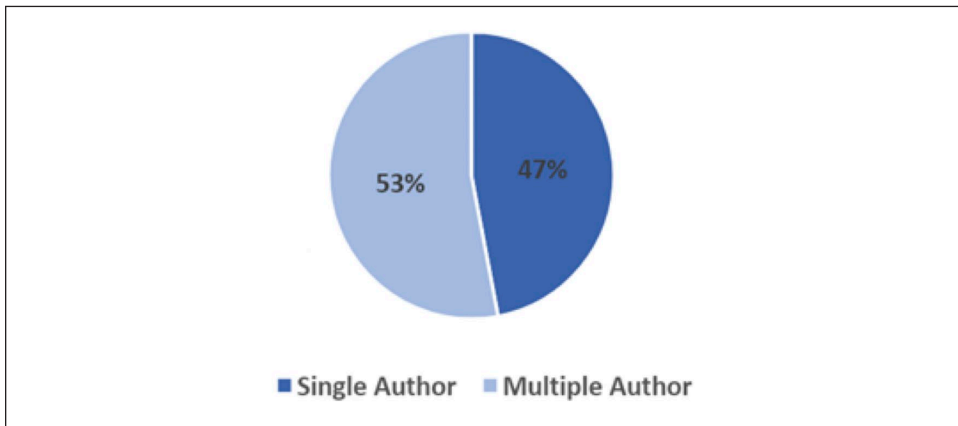


Figure 4: Single & Multiple Author Publications

Figure 4 shows that single-author publications constituted 47% of the total output, whereas multiple-author publications represented 53% of the research contributions. Additionally, among multiple-author publications, collaborations and publications with faculty members accounted for 32% of the output, while collaborations with other librarians accounted for 20% of the total. These results highlight the significance of collaborative efforts in research and publishing output within the network, demonstrating the value of interdisciplinary partnerships and knowledge sharing among librarians and faculty members. The data suggests a culture of collaboration and knowledge exchange that contributes to the diversity and richness of research output within the COLINET community.

Respondents were asked to select the types of research they engaged in during higher education studies. The survey results, as illustrated in Figure 5, indicate that a significant proportion of the surveyed COLINET librarians possess research experience and skills. Specifically, 94% of the librarians reported undertaking a research methods course during their educational studies, highlighting a foundational understanding of research methodologies. Additionally, 33% of the librarians

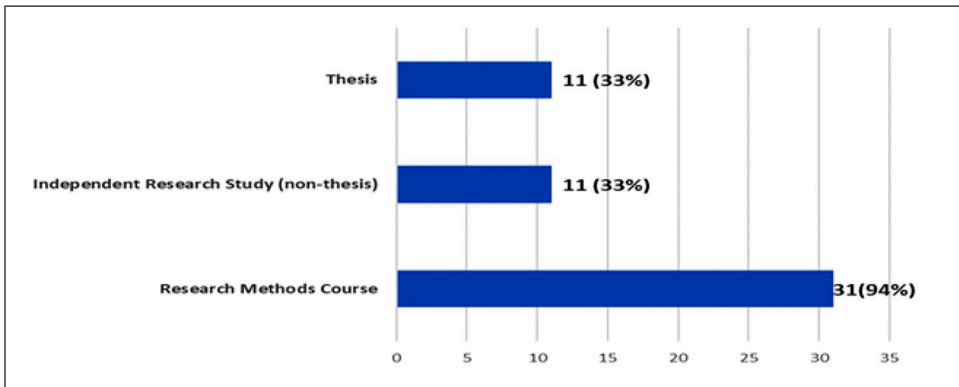


Figure 5: Engagement in Research During Higher Education Training

conducted an independent study (non-thesis), while an equal percentage of 33% completed a thesis as part of their educational requirements. The overall results suggest that most COLINET librarians have engaged in structured research activities during their academic training, demonstrating a solid foundation in research methodology and scholarly inquiry. The prevalence of research experience among the surveyed librarians underscores their preparedness and capacity to contribute to research and publishing initiatives within the COLINET network. These findings align with other scholarly findings that academic librarians worldwide are increasingly engaged in research and publishing (Fiawotoafor et al., 2019; Kozłowska & Scoulas, 2020; Ramos-Eclevia et al., 2018).

The data presented in Figure 6 provides insights into the professional development and research activities among COLINET librarians post-graduation. The findings indicate that 54.5% of the surveyed librarians had pursued formal research training through courses, workshops, or seminars following graduation, highlighting a proactive approach to enhancing research skills and knowledge. In contrast, 45.5% of librarians stated that they had not completed formal research training post-graduation. Additionally, the survey revealed that 63.6% of librarians had not conducted or published research since completing their Library & Information Studies (LIS) degree, while 36.4% had engaged in research activities and publication. These results highlight the importance of ongoing professional development in research skills and the need to encourage research engagement among librarians to foster a culture of scholarly inquiry and publication within the COLINET network. Thus, Fennewald (2008) suggested that formal research training and the ability to attend research conferences could be used as potential catalysts for research productivity as a form of professional development among

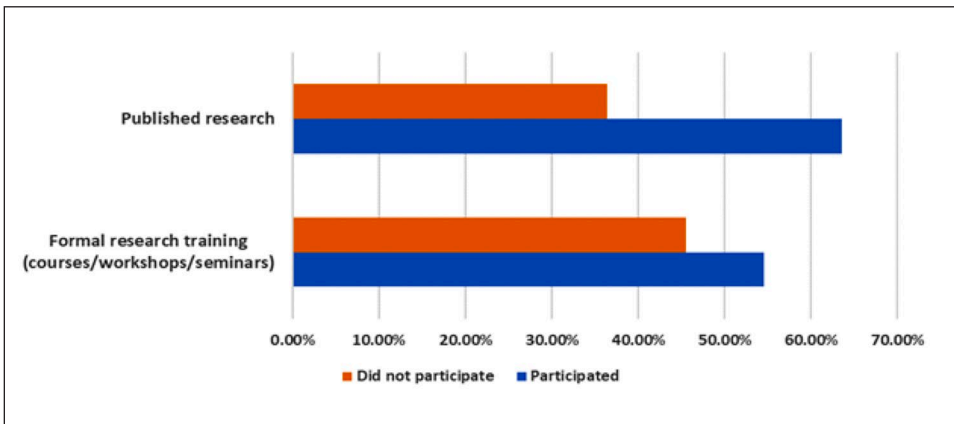


Figure 6: Engagement in Research After Higher Education Training

librarians.

Publication Dissemination Formats

The survey also revealed that librarians disseminated their research in various formats. Eight (8) librarians (61.5%) published journal articles; nine (9) librarians (69.2%) presented conference papers; and six (6) librarians (46.2%) did poster presentations. None of the participating librarians published books or book chapters. Like the literature search (see Table 2), conference presentations were the most prevalent type of research engagement among librarians.

The survey findings from Figure 7 highlight the research and publishing output behaviours of COLINET librarians. The data shows that a small percentage of librarians publish in peer-reviewed journals at least once a year (6.1%), while some rarely publish (12.1%). Notably, many librarians who have been in the profession for numerous years have not published (36.4%), while some early-career librarians have not published (12.1%). Additionally, a many librarians are in the process of getting published (15.2%) or have presented at conferences/symposia/seminars (33.3%), with a minority serving as editors of books/journals (6.1%). The survey also revealed that the majority of COLINET librarians (84.8%) stated that research and publishing are not necessary for promotion at their institution, contrasting with the 5.2% who considered it important for advancement. These results underscore the varied publication and research engagement levels among COLINET librarians, reflecting differing career stages and experiences. The results also have implications for institutional expectations regarding research

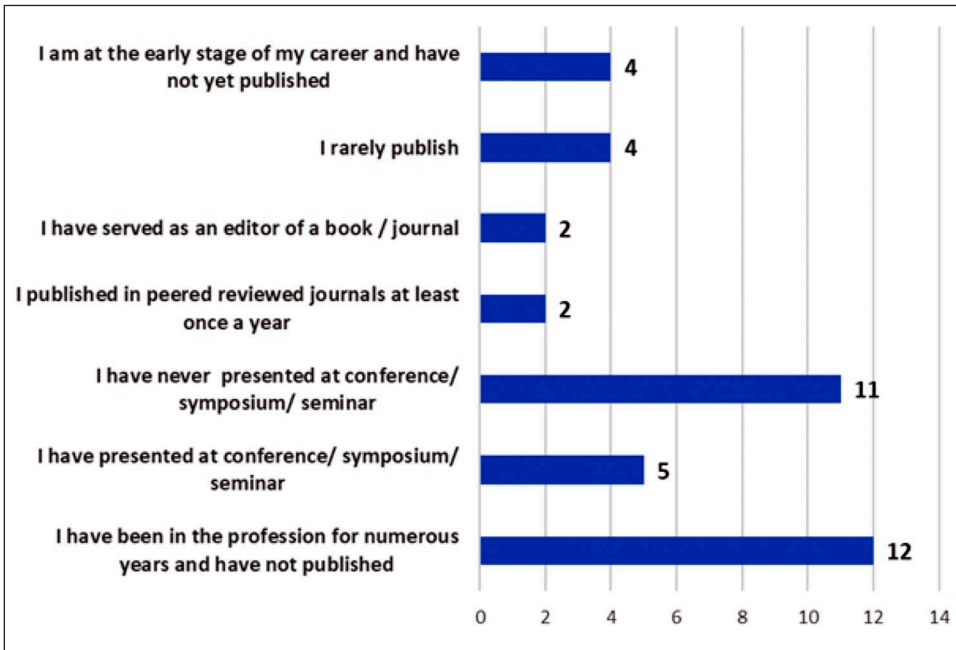


Figure 7: Librarians' Description of their Research & Publication Output

and publishing activities. Again, there are also implications for professional development and promotion of research as a skill within the network. In fact, since research and publication of COLINET librarians contribute to the overall research of the institution, institutional leaders could heed Fennewald's (2008) advice to utilise formal research training in promotion and tenure as part of the librarian's annual review.

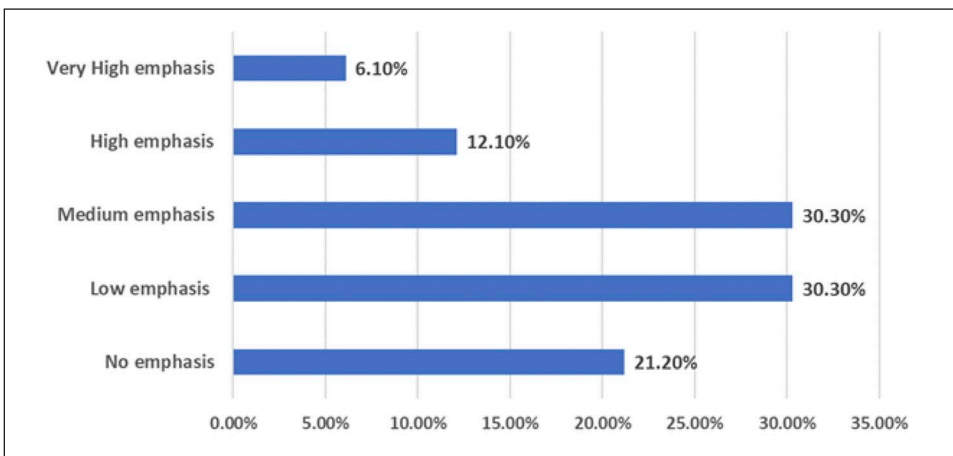


Figure 8: Libraries' Emphasis on Research and Publishing

The data from Figure 8 illustrate that librarians hold diverse views on their library’s emphasis on research and publishing. A significant number of librarians rating this as medium (30.3%) or low (30.3%), and a notable percentage indicating ‘no emphasis’ (21.2%). This suggests potential challenges related to resource allocation and institutional priorities. To address these findings, efforts could be made to enhance support for research and publishing initiatives, provide professional development opportunities, and foster a culture that values scholarly communication.

Factors That Contribute to the Research & Publishing Activities for Librarians

The data from Table 3 highlights the factors that librarians rate as most significant and least significant in contributing to research and publishing activities. The highest-rated factors include time management, institutional support, and motivation. Factors such as rejection from publishers, stage of librarianship/ career, and the journal submission process received the lowest ratings, suggesting

Table 3: Factors That Contribute to the Research & Publishing Activities for Librarians

Factors	Ratings				
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
Time management	18	8	6	–	1
Training	10	17	3	1	2
Mentoring	11	14	5	1	1
Institutional support	16	12	3	1	1
Confidence in research and writing skills	11	16	4	–	2
Motivation	15	12	4	2	–
Rejection from publishers	5	4	17	4	3
Access to research literature	8	13	3	6	3
Research process is daunting	10	13	8	2	–
Journal submission process	7	11	11	4	–
Stage of librarianship/ career	6	10	8	6	3

potential areas for improvement or challenges faced by librarians in these aspects. Furthermore, the survey results reveal that many librarians strongly agree (39.4%) that conferences/symposia/seminar presentations play a vital role in advancing librarians’ publishing efforts, followed by those who agree (27.3%). Interestingly, no respondents disagreed with this statement, while a smaller percentage were undecided (21.2%) or strongly disagreed (12.1%). This underscores the importance of academic conferences and presentations in enhancing librarians’ publication success and indicates a positive outlook on their impact within the scholarly community.

COLINET Librarians’ reasons to research & publish

Librarians were also asked to select the reasons for researching and publishing. The results are shown in Table 4.

The data presented in Table 4 reveals the primary motivations that drive COLINET librarians to engage in research and publishing activities. The most frequent reasons identified include personal and professional development (93.9%), research interest (79.7%), shared innovations and best practices (60.6%), improvement of work practices (57.6%), and visibility for their libraries and parent institutions (51.5%). These findings underscore the significance of personal growth, research curiosity, knowledge sharing, and organisational enhancement as key drivers for librarians’ research and publication pursuits. Additionally, a notable percentage of librarians pursue research for career advancement (45.5%) and to foster an institutional research culture (42.4%), thus highlighting the importance

Table 4: COLINET Librarians Reasons to Research and Publish

Reasons to Research & Publish	Number of Librarians	Percentage %
Research interest	23	79.7%
Career advancement	15	45.5%
Recognition	9	27.3%
Personal & professional development	31	93.9%
Improve work practice in libraries	19	57.6%
Shared innovations and best practices	20	60.6%
Visibility for the library and parent institution	17	51.5%
Institutional research culture	14	42.4%
Promotion / additional benefits	8	24.2%

of professional progression and organisational development within the context of research activities. In contrast, promotion/additional benefits (24.2%) and recognition (27.3%) were rated lower in importance as motivations for publishing among COLINET librarians, suggesting that intrinsic factors related to growth and impact hold greater significance in driving their research and publication efforts.

What are the challenges faced by librarians regarding research and publication?

Librarians were also asked to state what they considered the biggest challenges to their research and publishing output. The results are presented in Figure 9.

Four central themes emerged from the data regarding challenges. These are knowledge and competency, institutional support, and time and self-regulation challenges. Librarians felt that they did not possess the requisite knowledge and competencies to contribute significantly to research and publishing output. Some librarians admitted that they did not know how to begin a research project. “*I don’t know what to write about (formulating a topic)*” said librarian 14. Some librarians

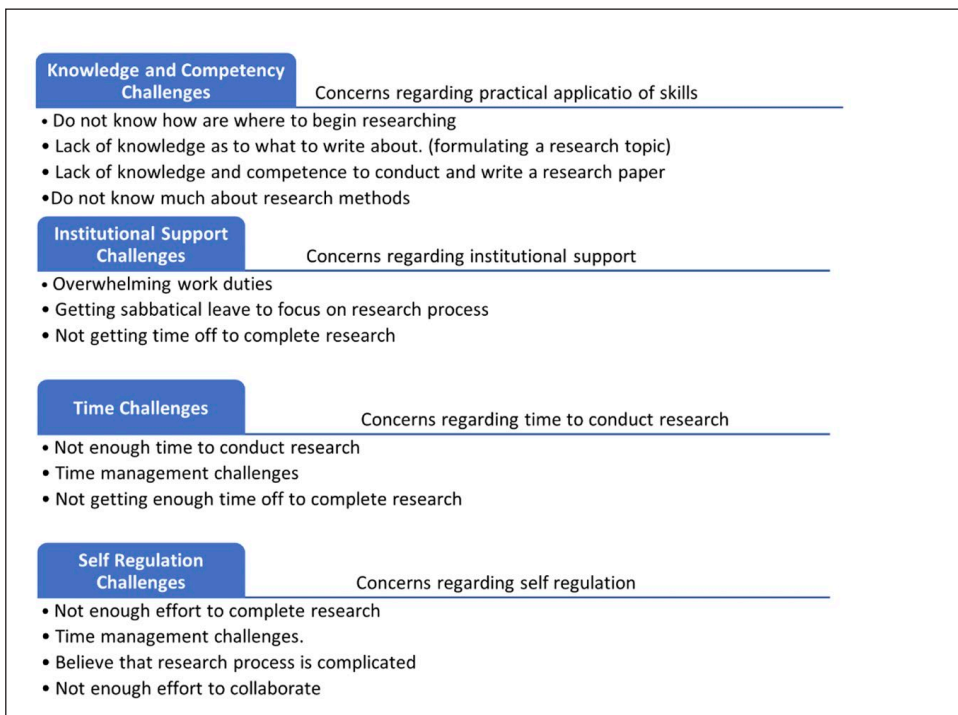


Figure 9: Challenges to COLINET Librarians' Research & Publishing Output

also had reservations about their overall knowledge and competence to conduct research. Librarian 2 stated that *“I don’t have the knowledge and competence to conduct and write a research paper”*, while librarian 20 admitted, *“I don’t think I know much about research methods”*.

Some librarians felt they did not receive enough institutional support to undertake and publish research. *“I have overwhelming work duties,”* stated librarian 17, while librarian 12 cited a *“Lack of support from my institution”*. Librarian 3 expressed this lack of support as *“not getting Sabbatical Leave to focus on the research process”*. According to librarian 22, *“They [administrators of parent institutions] are not giving time off to complete research”*. Lack of mentorship, funding and incentives were also mentioned as barriers faced by librarians.

Time was also cited repeatedly as a crucial barrier to research and publication efforts. There were repeated mentions of unwillingness by institutions to provide librarians with time to dedicate to the research process. Heavy workloads were seen as a deterrent to dedicating time to research activities. According to librarian 20, *“They are not giving time off to complete research (they want you to do research and still complete all responsibilities)”*. Time was also cited as a barrier throughout the research literature. For example, Crampsie et al. found that (2020) formal time allocated to research does not always represent reality, regardless of institution size or status, the desire to do research or career stage. Fennewald’s (2008) study also identified time as the major barrier to accomplishing research.

Another challenge that was identified was self-regulation. Some specific self-regulatory patterns were identified in the responses from librarians. Among these were librarians not putting enough effort into conducting research, such as setting aside time for individual and collaborative research, as well as regulatory efforts in acquiring research knowledge. For example, librarian 5 stated, *“I believe the research process is too complicated, I can’t bother”*, while according to librarian 11, *“I do not try hard enough to do research”*. Librarian 26, however, believed that if adequate effort is made, librarians can overcome procrastination and produce and publish research. Self-regulation was not cited as a challenge to the research output by librarians.

What are the strategies used to support and encourage COLINET librarians to research and publish?

Librarians were required to indicate how research and publication output could be increased among COLINET Librarians. The results are shown in Figure 10.

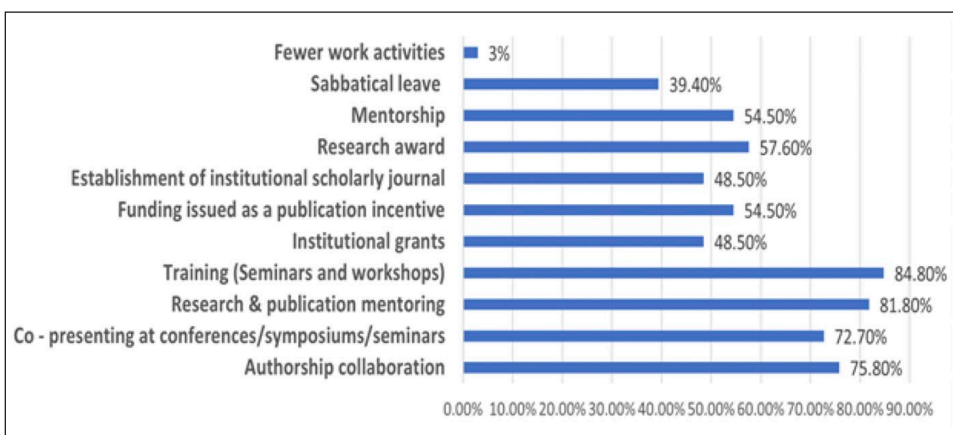


Figure 10: Strategies for Increasing Publication Output Among COLINET Librarians

The data from Figure 10 indicates that COLINET librarians prioritise specific areas to enhance their research output. Most respondents selected training (seminars and workshops) (84.8%), research & publication mentoring (81.8%), co-presenting at conferences/symposiums/seminars (72.7%), and authorship collaboration (75.8%) as key factors for improving their research endeavours. While Table 2 and Figure 4 data suggest that COLINET librarians are actively engaged in these areas, there is also an indication that capacity building through training, mentoring, collaborative opportunities, and authorship support may require further development within the community. The data also highlights three additional incentive-based areas that were considered above-average in importance by respondents: research awards (57.6%), mentorship (54.5%), and funding as a publication incentive (54.5%). Other significant factors include institutional grants (48.5%), the establishment of institutional scholarly journals (48.5%), and sabbatical leave for research (39.4%). The value that COLINET librarians place on recognition, support, and resources for their research activities suggests potential areas for improvement and development within their individual institutions and the COLINET community to further foster a culture of research and scholarly engagement. Additionally, the minimal response regarding reducing work activities (3%) indicates a willingness among some librarians to prioritise research and publication-related initiatives in their professional roles.

Librarians were also asked about the resources or services offered by their institutions that would augment research productivity. The data is presented in Figure 11.

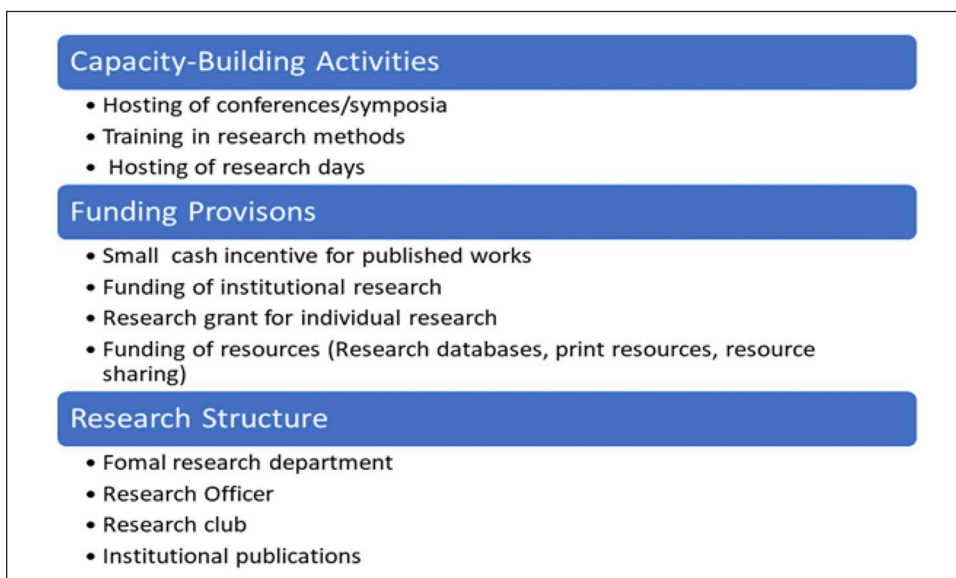


Figure 11: Resources/Support Offered by Institutions for Research Productivity of Librarians

Capacity-building activities, funding provisions and research structure emerged as the three central themes emanating from librarians' responses (See figure 11).

Capacity-building Activities: The staging of workshops and seminars, research days and the hosting of symposia and conferences were reported by librarians from several institutions. Other librarians bemoan the absence of workshops and seminar activities. Some librarians mentioned that their institutions also provide training in research methods and the hosting of research days. Other librarians report the absence of these activities. Librarians believe that these forums provide them with the platform to hone their research skills and motivate them to publish. *Librarian 16* credits this motivation to "*An enthusiastic Research Officer*".

Funding Provisions: Various funding provisions are in place in several COLINET institutions. The extent of these provisions varies based on the type of institution. Universities, for example, provide small cash incentives and research grants for individual research. Funding of institutional research is more widespread, especially since the introduction of institutional research grants by the Ministry of Education for the community and teachers' colleges in 2018. Librarians also saw the funding of resources such as online databases, and print resources (books, book chapters and research datasets) as an incentive.

Research Structure: Librarians named the implementation of formal research departments and the installation of research officers as moving in the right direc-

tion to increase research productivity. However, even with the appointment of a research officer by the Ministry of Education and Youth at several institutions, research productivity remained low at some institutions. A few librarians mentioned research clubs and the introduction of institutional publications to build research culture and augment research productivity. Some librarians report that a research committee also provided additional support. While in the minority, sabbatical leave for research was granted by at least one COLINET institution for research.

What are COLINET librarians' perceptions of their roles in the fostering of research and publishing culture?

Librarians were also asked how they perceived their role in the fostering of a research and publishing culture. The data revealed that of the librarians surveyed, 18.2% (6 librarians) perceived their role primarily as supporting researchers. They saw themselves as being critical in assisting others in their research endeavours. On the other hand, 15.2% (5 librarians) identified themselves as designated facilitators, highlighting their role in streamlining and enabling the research process for others. Additionally, 12.1% (4 librarians) viewed themselves as researchers, actively engaging in scholarly activities themselves. A significant number of librarians, 84.8% (28 librarians), perceived their role as encompassing all the above aspects. This suggests that this group saw themselves as versatile professionals with a multifaceted role in nurturing a vibrant research and publishing culture within their parent institutions.

The survey also required librarians to note their specific actions to foster research and publishing culture within their institutions. The data revealed that these professionals employed various strategies. It was found that 24% of librarians were actively involved in setting research and publishing strategic goals and targets for staff. Additionally, 32% provided mentorship to their colleagues who were engaged in research activities. Nearly half of the librarians surveyed, 48% or 12 librarians, participated in collaborative research initiatives, while 40% or 10 librarians were instrumental in organising and hosting conferences, symposiums, seminars, and workshops aimed at encouraging research presentations within their institutions. Most of the surveyed librarians, or 60%, focused on actively encouraging and supporting conference attendance among their peers. Additionally, 24% of the librarians, advocated for research funding to support research endeavours within their community. Twelve librarians (48%) provided editing support to enhance

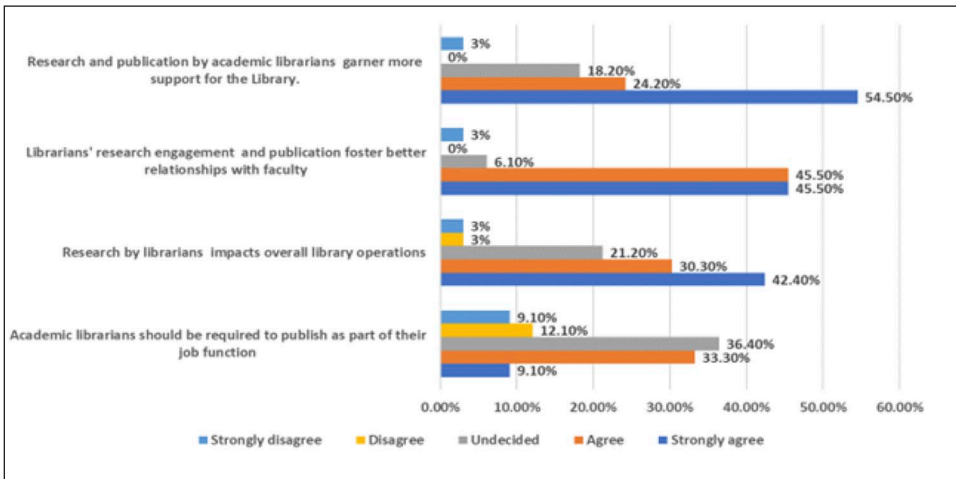


Figure 12: Librarians' Perceptions of Their Role in the Fostering of a Research & Publishing Culture

the quality of research outputs within their organisations. A small proportion of the librarians, comprising 8%, reported that they had not actively fostered any research and publishing culture among their peers. Overall, the data highlighted the diverse roles and initiatives undertaken by COLINET librarians to cultivate a robust research and publishing culture within their organisations.

Participants were also required to state their level of agreement with four statements regarding their roles as researchers. The results are presented in Figure 12.

The data from Figure 12 reveals varying perspectives among academic librarians regarding the role in research and publishing in their job functions and its impact on library operations and relationships with faculty.

Statement 1: Academic librarians should be required to publish as part of their job function. Opinions are divided, with a significant proportion being undecided (36.4%) and the rest spread across Disagree (12.1%), Agree (33.3%), and Strongly Agree (9.1%). This suggests a lack of consensus on whether academic librarians should be required to publish as part of their job function.

Statement 2: Research conducted by librarians impacts the overall operations of the library. A majority of librarians surveyed, strongly agree (42.4%) that research conducted by librarians significantly impacts the overall operations of the library, indicating a recognition of the value of research in improving library services and functions.

Statement 3: Librarians' engagement in research and publication can foster better relationships with faculty. Statement 3 highlights a positive perception, with a combined 90.9% of librarians agreeing or strongly agreeing that librari-



Figure 13: Librarians' Perception of Their Impact on Research Culture in Their Organizations

ans' engagement in research and publication can foster better relationships with faculty, emphasising the potential benefits of collaborative scholarly activities.

Statement 4: Research and publication by academic librarians can garner more support for the library. A majority of librarians (78.7%) agree or strongly agree that research and publication by academic librarians can garner more support for the library, emphasising the importance of research in enhancing the library's visibility and institutional backing.

Librarians were asked to reflect on their impact on their organisation's research culture. Their responses appear in Figure 13. Librarians as facilitators of the research process and librarians as producers of research were the two main themes that emanated from the research.

Librarians mainly perceive their impact on the research culture of their organisation as that of facilitators. Facilitation activities include pointing faculty and students to new research areas and providing research materials through liaison work, teaching information literacy skills and ad-hoc bibliographic instructions.

Librarians also believe that they impact their institutions' research culture by producing research. Research is produced through individual efforts, collaboration with faculty and collaboration with students.

Conclusion and Recommendations

Publish or perish is the paradigm that should motivate academic librarians to incorporate research and publication into their professional sphere. While it may not be mandatory for some librarians within COLINET due to its lack of enforcement by the parent institutions, research and publishing should motivate professional growth, development and nation-building.

This research was conducted to establish and determine the place of research and publication amongst COLINET librarians. Based on the literature review and the findings of the research, it can be concluded that more attention needs to be given to this area as it can be a powerful tool for the advancement of self and the profession as well as to add to the plethora of knowledge that exists globally. Therefore, COLINET members must adapt and foster a culture of research and publishing among its librarians.

The overall degree of productivity and collaboration among librarians remains quite weak. The reasons provided by librarians align with Verzosa's (2007) findings of being overwhelmed, insufficient knowledge, and lack of funding support and training in the area. Also, the COLINET group must overcome the constraints that were noted, that is, the lack of self-motivation, time management, more collaboration, sabbatical leave, and incentives from parent institutions. While sixty-eight (68) research and publication output within a 20-year span is commendable, it is deduced that COLINET librarians can increase their research output if the recommendations below are adapted.

Moreover, conducting research is vital to the research process. The intrinsic value of sharing our thoughts, experiences, insights and knowledge with our peers and the wider community adds to job security, management support and promotion.

According to Chan (2018), the purpose of publishing research is to disseminate the results of experiments and to inform the audience about new concepts and ideas in the scientific field. He further posits that the more a researcher publishes, the more productive he or she will seem to be. Hence, over time, the researcher will be recognised for his or her work through reward systems and accolades, and the volume of his or her publications can be used as supportive evidence of the researcher's expertise in the field as well as justification to receive grants and sponsorships. Therefore, COLINET librarians should be encouraged to lead the charge in the research arena.

The following are recommendations were proposed based on the findings of the research:

- Establish an editorial committee to assist COLINET members in their research and publication endeavours;
- Capacity Building: Develop and promote sustainable best practices (training and mentorship) that will encourage and strengthen the research & publishing output of COLINET librarians;
- Promote collaboration and partnership by leveraging resources to aid in publishing among COLINET members;
- Develop justifications/returns on investment for funding library research and publishing initiatives – institution visibility, increase academic standing and recognition of the library/ librarian; and
- Introduce an incentive programme for librarians who can produce and publish research.

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Repositioning Libraries Within Institutions: Charting a New Course

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Abstract

The onset of the COVID-19 pandemic worldwide resulted in many challenges for libraries, such as changing the landscape of the learning environment. Many libraries had to be innovative to serve their clientele amidst the challenges. A mixed-method approach was used to explore how academic libraries affected by the COVID-19 pandemic repositioned themselves to ensure that they could continue to provide services and support for their stakeholders. Some libraries encountered staff reduction; others were able to redesign services to facilitate the needs of stakeholders and keep staff during the pandemic. Within the Caribbean, academic libraries updated their websites and social media platforms to communicate with students and staff. Also, libraries intensified the information literacy training of students to ensure they could evaluate the information being broadcast during the pandemic. Furthermore, libraries offered scanning services to meet the demands of users who experienced limited and inconsistent internet connectivity in their vicinity. Undoubtedly, many libraries and their users realised how essential librarians and library resources, especially e-resources, were to the success of institutions. Libraries are always reconfiguring and evolving to ensure that users' needs are being met regardless of the situation, as in the case of the pandemic.

Keywords: COLINET, COVID-19, Library Use, library resilience, repositioning libraries

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Introduction

Prior to the COVID-19 pandemic, there were underlying challenges that libraries encountered, but these challenges escalated during the pandemic. Additionally, the physical library was seemingly not the preferred choice for some students to conduct research. However, some library users in Jamaica would have been restricted to using the physical library due to the protocol from the Ministry of Health and Wellness. With the physical space being challenged to redirect users to other platforms to access information, many libraries had to be creative at disseminating information. Therefore, the library had to be innovative at meeting users' information needs, among other services. The University of the West Indies Mona Library established an online platform for users to conduct academic research on the COVID-19 pandemic. Examples of research platforms included LitCovid, PAHO Evidence Portal, and Virtual Health Library, among others. Additionally, a comprehensive guide with content and methods supporting online teaching and learning was accessible on the library's website (UWI Mona Library, 2021). While the pandemic had caused staff reductions in some libraries, this would have influenced their role in repackaging information for greater accessibility online.

The emergence of the COVID-19 pandemic provided opportunities for libraries to assess how information is disseminated, and librarians relied on the expertise of System Administrators for technical support. Some librarians had to facilitate users' requests for a variety of print and non-print sources, which were obtained from online databases or content from print resources. Subsequently, the printed information would be scanned and delivered by email, WhatsApp or other online platforms. The library staff learned to be versatile during that period since frequent ongoing sessions with users enabled them to develop specific skills needed to increase productivity at the library. This lends credence to the UWI Mona Library's insight when they said the collaborative role of the librarian in institutions is expanding out of the context of the traditional library and has been accelerated in the COVID-19 pandemic (UWI Mona Library, 2020).

The pandemic has influenced numerous academic libraries to conduct webinars, create videos, and utilise social media for marketing their services (UWI Mona Library, 2020). Additionally, some librarians who were instructors had to engage in blended learning. Many students, whether they were home or on campus, depended mainly on consistent internet service to conduct research, communicate with lecturers and engage in assessment. Therefore, librarians facilitated classes

and reference queries both online and face-to-face. Some tertiary institutions also provided opportunities for students to borrow tablets from the library to assist them with online classes and research (UWI Mona Library, 2020). Some students who were unable to readily access classes and resources virtually were facilitated by librarians who also assisted faculty with disseminating information by photocopying content and downloading and printing e-resources, which were collected from curbside pickup service or by other arrangements. This paper sought to explore how academic libraries were affected by COVID-19 and how they repositioned themselves to ensure they could provide services and support for their stakeholders. The following questions guided the research:

1. How has COLINET and university libraries responded to the challenges posed by the COVID-19 pandemic?
2. How has the perception of libraries changed since the pandemic?
3. What are some recommendations that can be made to ensure that libraries are able to fulfil their mandate during times of crisis?

Literature Review

Libraries have grappled with numerous challenges over the years, which led to some becoming dormant or closed. However, during the COVID-19 pandemic, many libraries were challenged to demonstrate their resilience, even though the internet seemed to be the preferred choice by many for conducting research. Anyanwu, Ogbonna & Nwaigwe (2020) recounted the origin of the coronavirus and its effect on the operations of the institution's mandate to deliver quality service regarding teaching and learning. The coronavirus popularly known as COVID-19 started in Wuhan, China in December 2019. On the 31st of December 2019, the World Health Organization (WHO) was formally notified of a cluster of pneumonia cases in Wuhan, China. By January 5, 2020, there were 59 cases. Ten days later, the World Health Organization was aware of 282 confirmed cases (Chaplin, 2020). This pandemic, which ravaged the world, resulted in the death of thousands of people. It also resulted in the closing of schools, manufacturing and business activities globally.

Many people can recall the fear of contracting this virus as if it were yesterday. How many libraries were prepared for the repercussions emerging from such an unexpected and uncontrollable virus? IFLA advised that library staff maintain their safety by following the guidelines set forth by the World Health Organization, such as social distancing, hand washing with soap, using hand sanitisers,

wearing nose (face) masks, and maintaining general cleanliness, regardless of the measures taken by various countries, such as business as usual, restrictions, or closing of libraries (Ogbonna & Nwaigwe, 2020). Academic library services facilitated individuals with a vested interest in pursuing entrepreneurial pathways. Academic libraries provided recently graduated students and school dropouts with resources such as business ideas, feasibility studies, and guidance on becoming entrepreneurs and launching new ventures (Anyanwu, Ogbonna & Nwaigwe, 2020). These services would help people who lose their jobs after the pandemic gain employment or become self-employed.

COVID-19's Impact on the Library Services

Thomas & Kroch (2002) stated that the focus in libraries has changed from ownership to access, with a greater emphasis on services, as they are creatively repurposing their space. Additionally, they asserted that individuals' expectations impact their perception of what is feasible, desirable, and essential when they attend universities. People are more mobile now; they travel and relocate frequently. Hence, the physical and the psychosocial library environment ought not be overlooked since students' satisfaction and academic performance are markers of success.

Notwithstanding, libraries have demonstrated how they have evolved over the years by using cutting-edge technology, offering links to online resources and real experts, and having areas for social interaction and community development (Thomas & Kroch, 2002). Library spaces are now viewed as complex environments having various social, cultural, and objective values for both the community and the individual, rather than only a utilitarian space in the technocratic sense of the twentieth century. Therefore, in the context of knowledge societies, the academic library can still play a significant role in research and instruction. However, it should not be the only venue for these activities. Examples of other spaces that could be useful include blended learning and multimedia education (Walton, 2013). The evolution of libraries and their impact on education continues to be important areas of concern for researchers whose efforts to effect change within unprecedented times have not gone unnoticed.

During the COVID-19 pandemic, academic and public library services were not confined to the physical walls since services were conducted in parking lots, as was the case of Muskingum County Library in Zanesville, Ohio (American Library Association [ALA] (2021). Families, job seekers who telecommuted, and

students using the free Wi-Fi, occupied the parking lot on most days to attend Zoom meetings, remote learning sessions, job interviews, and telemedicine appointments. The libraries' open concept strategy provided a space that was easily accessible and safe for their users.

Teaching information literacy is a library service offered to students, whether collaboratively with faculty or as standalone courses (Heath & Sinclair, 2020). Information literacy can be viewed as a science for conducting research, that ought not to be overlooked by the administration. Moreover, infusing information literacy content into other subject disciplines will better prepare students for academic success and produce critical-thinking citizens, which will require that schools and colleges appreciate and integrate the concept of information literacy into their learning programs (Heath & Samuda, 2022). Emphasizing the need for grasping concepts such as higher-order thinking skills, problem-solving, libraries, technology, media, and computer literacies when conducting research, will enable more students to cope with issues that might affect their learning.

Impact of the Library's Psychosocial Environment

A psychosocial environment is commonly defined as the amalgamation of psychological and social elements, serving as the intermediary between a student's psychological growth and engagement with the surrounding social milieu (Jama-luddin, 2021). Psychosocial terminologies are frequently employed to depict the distinct mechanisms that transpire in an individual due to their engagements with their surroundings. Fraser (1994) explained that the psychosocial environment encompasses the interactions and partnerships between educators and learners and between learners and their circumstances (Jamaluddin, 2021). The impact of the COVID-19 pandemic did not exempt any specific geographic region, institution or organisation and many individuals were affected in numerous ways. During the pandemic, libraries had to pivot their services, which affected patrons' coping mechanisms, and included offering psychosocial assistance. Pryce, et al. (2021) mentioned that for staff members who were experiencing anxiety or stress, several institutions and libraries offered help, which included in-person and remote therapy from guidance counsellors. Supportive advice and strategies for overcoming the pandemic were offered through seminars and webinars.

Impact of COVID-19 Pandemic on Academic and University Libraries (Regionally and Globally)

Using social media, The National Library and Information System Authority (NALIS) continues to evolve along with society's changing needs and expectations. Libraries benefitted greatly from social media's assistance in remaining relevant in the ever-expanding digital culture (NALIS, 2022). NALIS embraced several channels, including Facebook, YouTube, Twitter, and blogs, for the purpose of creating content and fostering cooperative ties between its libraries and the public. During the COVID-19 pandemic, social media expanded the access points of patrons to the libraries in Trinidad and Tobago as they had new ways to connect with librarians. (NALIS, 2022). During the pandemic, platforms like Facebook, Google Classroom, Microsoft 365, WhatsApp, and emails were used to share information and offer library services. As a result, the employees of Trinidad and Tobago's libraries took up the responsibility of ensuring that the e-resource collection, which supports research and academic endeavours at all educational levels, was widely publicised via the usage of different social media platforms. (NALIS, 2022).

During the onset of the pandemic, many publishers and vendors removed paywalls between users and their online collections. This was done either for free without library mediation or upon library request, based on a call from the International Coalition of Library Consortia (ICOLC), who requested that vendors lift many of the usual licensing restrictions and open access to the 391 million students affected by school and library shutdowns (Connell, Wallis & Comeaux, 2021).

The utilisation of many libraries' physical resources was adversely impacted even with the expanded availability of online materials. Despite the abundance of online services, many instructors and students continued to use conventional resources like print books. Academic libraries started to promote online versions of these print resources due to the COVID-19 restrictions, which included abrupt and permanent restrictions on access to physical materials and spaces. One example is the HathiTrust Emergency Temporary Access Service (ETAS), which provided reading access to more than 48% of Penn State University's libraries' print collections (Connell, Wallis & Comeaux, 2021). Upon seeing the collected mass of print books students returned prior to leaving campus due to COVID-19, librarian Nora Dimmock of Brown University's John Jay Library, recognised that there is an immediate need to move "more intentionally" to purchase e-books

over print books in future purchasing decisions (Wallis & Comeaux, 2021). A survey developed by Lisa Janicke and Christine Wolff-Eisenberg chronicled the impact of the pandemic on academic libraries. It found that libraries pivoted reference services to online or phone delivery. Meanwhile, access to print collections, whether onsite or via delivery, declined significantly (Peet, 2020). Another survey conducted by ALA indicated that more than half of the college and research libraries had seen eliminations or reductions in planned hiring, professional development funding, print collection budgets, and program budgets (American Library Association, 2021).

College Libraries and Information Network (COLINET): Their Responses During the Pandemic

Pryce et al. (2021) stated that Jamaican librarians who participated in a study concurred that institutional and governmental regulations related to the pandemic had an immediate impact on their library's daily operations. Based on the survey five COLINET librarians indicated that staffing, resources, support and engagement of library users were the three central areas immediately affected by the pandemic. Overall, many colleges encountered numerous challenges, which created greater opportunities for institutions to recognise that libraries are evolving.

The relevance of library services during the pandemic highlighted some strengths of library staff. To prevent job layoffs, several libraries turned to staff rotation, staggered shifts, redesignation, deployment (adding greater responsibilities to staff with technology expertise), and redeployment (redistributing staff between departments within libraries and between institutions) (Pryce et al., 2021). Employees were assigned other non-library duties whose jobs could not be done in an internet work-from-home setting (Pryce et al., 2021). This resulted in a backlog of library tasks due to the library staff being redeployed to other areas of the university (Pryce et al., 2021). There were other issues at some libraries as a few staff members felt overwhelmed by the pandemic and all the events, activities and news surrounding it. Additionally, the researchers observed that the long hours spent online, and the unpredictability of their jobs led to frequent complaints of stress (Pryce, et al., 2021).

Method

The mixed method approach (a combination of quantitative and qualitative methods) was used to explore how academic libraries affected by the COVID-19 pandemic repositioned themselves to ensure that they could continue to provide services and support for their stakeholders. Quantitative data includes data expressing a certain quantity, amount or range (Organization for Economic Co-operation and Development, 2006). Qualitative research focuses on the “why” rather than the “what” of social phenomena and relies on the direct experiences of human beings as meaning-making agents in their everyday lives. Rather than using logical and statistical procedures, qualitative researchers use multiple systems of inquiry for the study of human phenomena including biography, case study, historical analysis, discourse analysis, ethnography, grounded theory, and phenomenology” (University of Arlington, 2016). Content for the research paper was obtained online from surveys, journal articles, reports, books, and a library blog, which provided numerous perspectives and library initiatives to withstand the devastating impact of the COVID-19 pandemic.

The researcher conducted a survey on the experiences of academic libraries in Jamaica in July 2022. The instrument had ten (10) questions: questions 2 and 3 were open-ended, which allowed the participants to express their thoughts on the examined subject, while the others were closed-ended. Of the 30 participating librarians of COLINET surveyed, only nine responded to the instrument, which represents a 30% response rate. Librarians were also asked to submit images of their physical library for individuals to compare similarities and differences of their approaches to limit the spread of the COVID-19 pandemic. Such illustrations will provide readers with a synopsis of the challenges which libraries encountered during the COVID-19 pandemic. Many libraries indicated that they did not take many pictures during the pandemic. Additionally, further online research was conducted to include the perspective from libraries regionally and internationally. The research conducted by Pryce et al., (2021) on the experiences of college librarians in Jamaica, was very useful since some information provided overlapped with the areas of focus in this research. An exploration of the resilience of libraries and the range of perspectives locally, regionally and globally provided scope for further research.

Results and Discussion

The researcher conducted a survey with the College Libraries and Information Network (COLINET) membership in July 2022. A total of 9 out of 31 (29%) librarians responded. However, their feedback is valuable for discussion and the possibilities to effect change are likely to ensue from their input.

From the survey conducted, the respondents highlighted the relevance of information literacy. Twenty-two percent (22%) of the respondents indicated that information literacy was necessary. This viewpoint is supported by Heath and Samuda (2022) who stated that information literacy training enables persons to take advantage of the information society’s opportunities. Also, information literacy is important to the academic success of students and for developing good citizens.

Figure 1 depicts various libraries in Jamaica and some of the measures that were implemented in keeping with the Ministry of Health and Wellness protocols for users to observe. Some examples included, placing markers on the floor indicating the six feet apart, ensuring users wear masks, installing partition on the circulation desk and study carrels, erecting hand sanitisers on the walls and displaying signage to reinforce the protocols. These measures were supported by (Pryce et al., 2021) and were not dissimilar to those of other libraries as was highlighted in the case of Muskingum County Library in Zanesville, Ohio (ALA,



Figure 1: Preventative Measures Against the Spread of COVID-19 in College and University Libraries in Jamaica 2020–2022

2021). Many countries employed similar pandemic measures to ensure the safety of their citizenry.

Question 2 asked where participants envision college libraries would be in the next five (5) years. A range of responses were given for this question, which included “having a more hybrid library catering to all users from various divides” (Librarian 1). Librarian 2 responded by saying “increase online presence and e-resources with limited emphasis on the physical space”. The other seven librarians had similar thoughts about their libraries, emphasising the need for a blended approach to service delivery, with increased online resources. These views were reflected in Wallis and Comeaux (2021) reports which spoke about ensuring that greater focus must be placed on having more e-resources so that a library hybrid space can be created. Though e-resources were present in libraries at the onset of the pandemic, many of the textbooks were not in electronic format.

Question 3, from the survey asked, “In what ways has the perception of libraries changed since the pandemic?” This elicited several responses, however the majority concurred that “the library’s role has been strengthened as there is a need to educate our students and staff about the kind of information on the internet and that they need to be evaluated. Librarian 3 from one of our rural colleges stated that “they [administration] now realise that the library is a critical support to teaching and learning and that the library’s staff possess skills beyond retrieving and shelving books”.

Question 4 revealed which social media platforms had the most impact on the library. Of note, Facebook was most utilised by libraries with 44.4% using the platform, while the other social media platforms had 11.1% usage each. These figures showing the social media platforms that were engaged for library user services were in tandem with the model presented in the case of Trinidad and

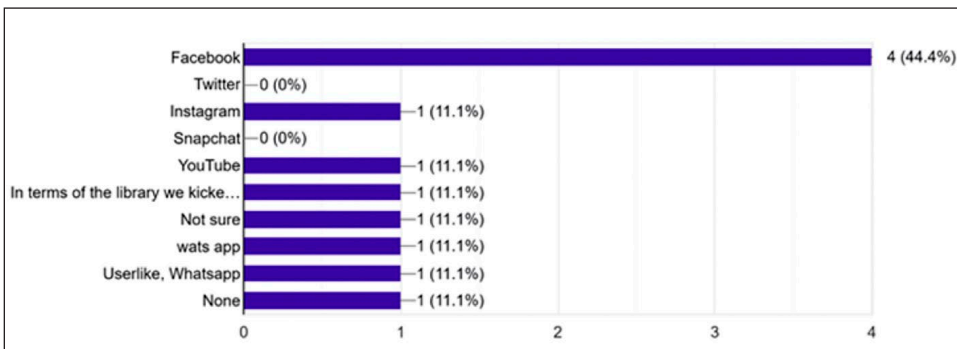


Figure 2: Social media platforms which had the most impact on libraries

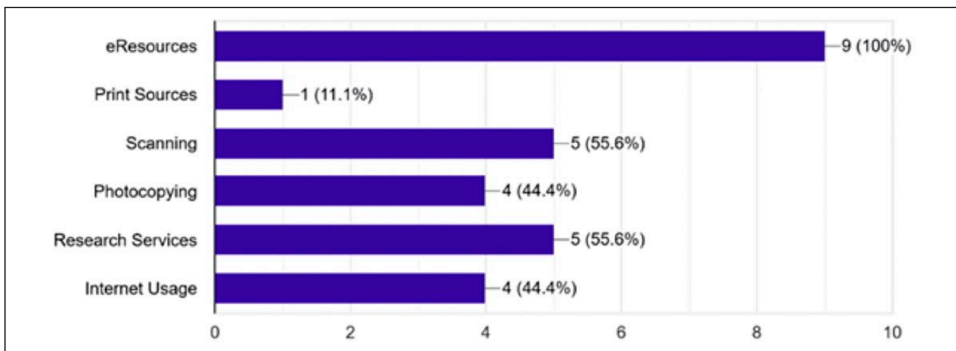


Figure 3: Library services that were mostly utilised by users during COVID-19 pandemic.

Tobago (NALIS, 2022). These and other communication platforms became popular during the pandemic as they were available and free for use by persons with smart devices.

Question 6, from the survey, showed responses to library services which were most utilised. There was 100% response to the use of e-resources while the response for research services was 55.6%, which is an indication that digital literacy is an important skill which users must have. This result is in keeping with global trends while the pandemic measures were in effect, as social distancing and online classes were the hallmark for educational institutions worldwide. Thus, students and faculty were forced to rely heavily on the e-resources of the library.

Question 9, from the survey revealed the aspect of the library which was greatly affected by the pandemic. The acquisition of resources was the area with the highest percentage, which was 88.9%. However, resources (print/electronic) and the budget were the second highest percentage, at 77.7%. The Wi-Fi and Inter-Library

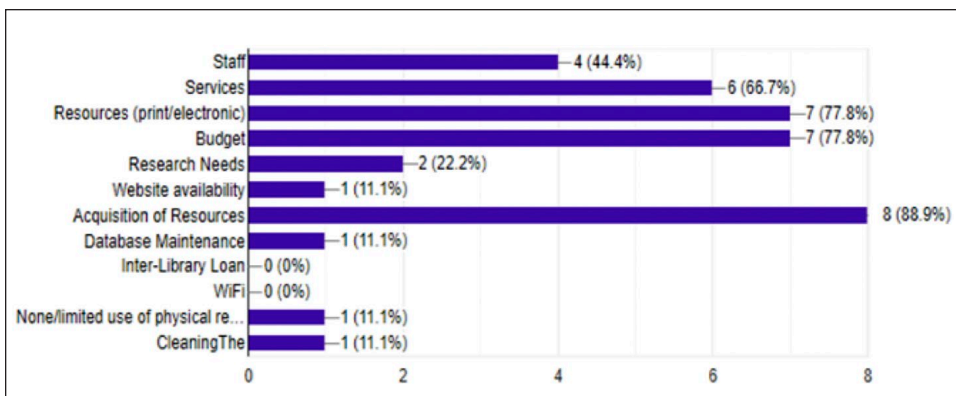


Figure 4: Aspects of the library programme affected by the pandemic.

Loan were two areas which had no responses. Acquisitions in most libraries had to do with buying print books, thus the results seem to reflect the activities of libraries globally (Wallis & Comeaux, 2021) as schools were being held online. Therefore, buying print books was seen to be unwise at the time.

Repositioning the Physical and Psychosocial Library Environment

Numerous libraries have now reorganised their space due to social distance protocols. In fact, some furniture and equipment have been placed in storage until further notice. Based on these changes, most libraries have created a health and safety policy which is in keeping with the Ministry of Health and Wellness' guidelines. It is with this background that the issues affecting the academic performance of students could be connected to the library. Invariably, if the academic library is functioning well, it stands to reason that students' and instructors' output will be greatly impacted. The physical infrastructure of libraries should appeal to its users due to the availability of a quiet space which many individuals appreciate and embrace. Recently, libraries have been challenged to operate virtually based on the government's restrictions placed on the nation to protect life. With the severity of the pandemic, some individuals had no choice but to rely on e-resources. However, those who encountered challenges accessing information utilised curbside pickup, request scanned documents or downloaded content.

Therefore, for academic libraries to remain relevant in this age of technological advancement, makerspaces are created for group study, cafes are integrated into the library, gadgets, computers and the internet all have contributed to enhancing the physical library environment. However, users of libraries now require information at the click of a button. In fact, the accessibility of library apps has made research not only convenient, but also reliable and comfortable. The library's image of providing credible, accurate and up-to-date information will never change. Therefore, to meet the needs of users whose expectations are rapidly changing, libraries need to rebrand their offerings to upskill and remain worthwhile.

Expectations of Digital Natives and their Literacy Needs

The information explosion era has cultured digital learners to expect certain responses as they utilise library services. These digital learners are desirous of accessing resources readily by clicking on links and hyperlinks, expecting information to be accurate to avoid making much effort in the research process. Students

are delighted when apps and software enhance their academic experience, but scant regard for the ethics of copyright policies becomes problematic.

Caribbean academic libraries need to strive to adapt to the changing times and be flexible to facilitate their users. Librarians are now intrigued by using ICT skills to reach more users in impactful ways. Librarians need to create videos with content so that their users can become independent researchers. Some librarians need to develop new and emerging skill sets for them to be impactful on social media platforms. They need to organise webinars and conferences in a bid to network with other like-minded experts. However, such efforts have shown the versatility of the library staff to embrace change. Numerous faculty members relied on libraries to reinforce knowledge about academic integrity, provide supplemental resources and seek assistance to cultivate research and writing skills. Therefore, libraries are not 'dead' but their effort to prove their relevance to underscore the institution's strategic goals must be applauded.

Practical Significance/Theoretical or Social Implications

Libraries are effecting change in their quest to meet the needs of diverse users who are influenced by different societal expectations. Below is an overview of this research's significance which should be considered by policymakers, researchers, educators, librarians, students and other stakeholders.

1. Libraries are forced to repackage their offerings to be flexible to meet the demands for new services, expectations and users' needs.
2. Institutions will discover the value of librarians beyond traditional roles associated with being a librarian.
3. Research officers, librarians, educators and others should collaborate to increase research culture at the institution.
4. Greater linkage between faculty and librarians should contribute to improving institutions' ethos.
5. The pandemic and other world crises should inspire professionals to conduct research aimed at resolving issues affecting staff, such as, safety, health concerns, attrition rate, globalisation, and growth mind-set.

Conclusion

For centuries, libraries internationally have made indelible contributions towards building an educated, and literate society. Academic libraries have been creative

in meeting their users' needs. Although the financial challenges loomed greater during the pandemic, libraries had to negotiate their expectations from administration. The impact of the COVID-19 pandemic created numerous challenges for libraries. However, these challenges enabled libraries to become resilient since their performance on the job will determine to some extent, the learners' success. Libraries internationally are relentless in their pursuit to effect change in the education system. Repositioning, pivoting, and engaging in research for a better teaching and learning experience is the hallmark for upward mobility in this information age. Through research, libraries should gain greater insight as to how other libraries are accelerating their impact in the marketplace. Subsequently, libraries are focused on implementing new initiatives and evaluating their services to add value to society; therefore, it is more likely that private entities will partner with them to encourage their vision. Libraries should not become dormant since the wealth of the country is partially their responsibility, as education is fuelled by experts whose worth goes beyond accessing, retrieving, and disseminating information.

Recommendations

The following are possible strategies which institutions and the governing bodies should utilise to enhance the teaching-learning experience. Being optimistic about the future of libraries and expressing concerns, and possible solutions, will cause relevant people to become sensitised on the future of libraries not just internationally but locally.

1. COLINET libraries need to invest more in e-resources, as educational institutions seemed to be envisioning occupying a hybrid space.
2. As educational institutions move towards being hybrid, the libraries need to reconfigure the physical spaces to create interactive learning environments for those persons who are on campus.
3. Upskilling must become second nature to librarians as they advance in their careers. Librarians and paraprofessionals should be aware that upgrading their qualifications and being multifaceted on the job can bring greater job satisfaction and provide their institutions with valuable skills.

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