

The eLibrary Myanmar Project: Benefits and Impact on Myanmar's Higher Education Libraries

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EIFL IN MYANMAR

This paper discusses the impact of the EIFL eLibrary Myanmar project on higher education and libraries in Myanmar.

EIFL (Electronic Information for Libraries) is a not-for-profit organization that works with libraries to enable access to knowledge in developing and transition economy countries. We work in Africa, Asia Pacific, Europe and Latin America.

The EIFL eLibrary Myanmar project was launched in December 2013 to support educational change at universities in Myanmar.

Through the project, a wealth of scholarly e-resources is made available to academics and students for the first time, and an intensive programme of training is undertaken to maximize awareness about and usage of the e-resources. The project also expands access to knowledge by making Myanmar research available online and advising on improvements to copyright law.

The project started small in 2013, at two universities with 8,500 students: University of Yangon and University of Mandalay. Additional universities could join, so long as they could transform their technical infrastructure to take advantage of the project. As the project progressed, EIFL was approached by other universities seeking partnership. By 2018, the project included a total of 13 universities, reaching over 200,000 students: University of Yangon; University of Mandalay; Yangon University of Economics; Dagon University; Yadanabon University; East Yangon University; West Yangon University; Yangon Technological University; Mandalay Technological University; University of Computer Studies, Yangon; University of Computer Studies, Mandalay; and two universities from outside the major economic regions of Mandalay and Yangon: Sittwe University in Sittwe, capital of Rakhine State, and Mawlamyine University in Mawlamyine, capital of Mon State. It also included the Universities' Central Library.

BACKGROUND TO THE EIFL ELIBRARY MYANMAR PROJECT

The EIFL eLibrary Myanmar project was created to enable libraries at universities under the supervision of the Ministry of Education to provide support for teaching, research and learning across all faculties, from the sciences and technology to the social sciences and humanities. When EIFL launched the eLibrary Myanmar project in 2013, there were 164 universities in Myanmar under 13 different Government ministries (including 46 under the Ministry of Education).

At that time, Myanmar was emerging from decades of isolation. For universities, the impact of being cut off from the international academic community was distressing: scholarship and teaching had stagnated and university infrastructure had decayed; digital technology was limited and outdated; internet connections were slow or non-existent. University libraries were like storehouses of outdated texts that had not been used for decades. Library collections were small and in Myanmar's closed society, updated textbooks and international academic journals were unobtainable.

How, in this situation, could Myanmar's struggling universities improve teaching, learning and research, and catch up with universities in other countries?

Education reform in Myanmar, especially in higher education, had started in 2011. Those involved in reform, including the Ministry of Education, recognized that after so many years of isolation, higher education was in need of collaboration with international institutions and organizations. At the same time, in 2013/14, new Internet Service Providers entered the country, presenting a great opportunity to improve university internet infrastructure and access.

THE AIMS OF THE EIFL ELIBRARY MYANMAR PROJECT

The EIFL eLibrary Myanmar project was launched to help improve higher education in Myanmar with support from the Open Society Foundations' Higher Education Support Program (HESP).

The main aim of the project is to increase availability to universities of relevant up-to-date content in electronic format to bridge the knowledge and information gap and to provide the basis for effective teaching, research and learning across all departments. Provision of content by the project was guided by the following principles:

- **Affordability:** To negotiate free or highly-discounted access to a comprehensive package of core 'commercial' e-resources.
- **Discoverability:** To make it as easy as possible for users to discover and access e-resources.
- **Usage:** To ensure that e-resources (both 'commercial' and Open Access) are used effectively for the benefit of teaching, learning and research across all disciplines.
- **Sustainability:** To assess options for long term sustainability (such as creation of a library consortium).

The project also aims to increase visibility of local research outputs by creating Open Access institutional repositories.

CHALLENGES FACING THE PROJECT

The role of university libraries and librarians had been ignored for five decades. Libraries were not seen as important, there was little or no investment in library development, and capacity building for librarians had been overlooked.

There were major technological challenges. Very few of Myanmar's universities had internet, and those that did had exceptionally low bandwidth (2Mbps per second or less). Institutions faced difficulties in getting static IP addresses, which are required for gaining access to

commercial (licensed) e-resources. None of the universities had any online presence, for example, websites. Electricity supply was unreliable, especially in summer.

Universities did not have IT policies or development plans.

Librarians, faculty and students had poor digital technology and information literacy skills. For students, critical thinking was an issue, because rote learning had been the norm for decades.

Cooperation among libraries had not been encouraged, and there had never been a library consortium in Myanmar.

However, the desire for change among rectors, faculty and librarians was immense, presenting fertile ground for the EIFL eLibrary Myanmar project.

IMPLEMENTATION AND ACTIVITIES

The main objectives of the project are to -

- Provide access to a comprehensive multi-disciplinary package of international subscription e-resources through effective negotiations with publishers.
- Increase the skills and capacity of librarians, including IT and information literacy training.
- Empower librarians to build close links with faculty.
- Raise awareness amongst faculty, researchers and students about the availability and benefits of e-resources (both subscription and Open Access), and improve skills and confidence through training.
- Encourage faculty to embed the use of e-resources in the curriculum.
- Review national copyright law and provide advice to ensure that revisions support libraries, education and access to knowledge.
- Support visibility of local research outputs through Open Access publishing and institutional repositories.
- Develop a library consortium to sustain and grow the project.

Negotiated and licensed access to over 55 commercial e-resources

At the start of the eLibrary Myanmar project in December 2013, libraries at partner universities had very limited and very out-of-date print collections, no or very limited internet access, and no subscriptions to the high quality e-resources that students and faculty at institutions in other parts of the world take for granted. Within four months, this was no longer the case at University of Mandalay and University of Yangon.

By June 2015 all seven of our partner universities had IP addresses and access to high quality e-journal/e-book collections and databases negotiated by the EIFL eLibrary Myanmar project.

We initially negotiated access to 36 high quality e-journal/e-book collections and databases, and managed to secure free access to 27 of these e-resources. Collections were strong in social sciences and humanities as those were the subjects taught at universities covered by the Ministry

of Education, and include the world's leading publishers and vendors such as LexisNexis, Oxford University Press, Cambridge University Press, JSTOR, HeinOnline, Taylor & Francis, SAGE, EBSCO.

Later more content was added, and by January 2018 the eLibrary Myanmar project had licensed more than 55 e-resources including 25,000+ full-text scholarly journals, 265,000+ full-text academic e-books, plus a vast range of other materials.

We managed to negotiate excellent terms of use: all e-resources are available on an unlimited simultaneous-user basis, so there is no limit on the number of faculty or students that can use resources at the same time; access to all e-resources is available 24/7 to faculty and students anywhere on campus; remote off-campus access to EBSCO databases is also available to faculty and students via a username and password, and walk-in users (e.g. faculty and students from other universities) are allowed to use licensed e-resources in the libraries of project partner universities, and also the Universities' Central Library, which serves students from across Myanmar.

Availability of the e-resources to walk-in users is an extremely valuable service, because so many universities do not have access to international databases, e-journals and e-books.

In order to maximize use of e-resources (both those licensed for the project and Open Access resources), it was important to make it as easy as possible for faculty and students to discover what was available to them and to find the information they need. However, the fact that the 55+ e-resources, and Open Access resources, have different URLs and, in most cases, different interfaces, creates a significant barrier to discovery and usage, particularly for less-experienced users.

In order to address this issue, we licensed the EBSCO Discovery Service (EDS). This is a customizable solution that provides a single "Google"-like search box to cross-search subscribed-to e-resources from many publishers alongside high quality Open Access materials.

We worked with EBSCO to customize the interface for partner universities, and to include institutional branding. The universities are delighted to have an eLibrary homepage which looks as if it is their library page, and which enables users to cross-search the vast majority of resources that have been licensed for the project (together with Open Access materials) via a single search box.

As universities did not have functioning websites, we worked with EBSCO to create a special "Access Individual Databases" page on the Discovery Service. This page (a first for EBSCO) acts like a basic library webpage so that users can see a list of the individual e-resources available within the overall eLibrary. It also makes it easy for users to access individual e-resources directly via hyperlinks.

The project has sparked significant upgrades to technological infrastructure and library facilities

The project has been a catalyst for massive investment by university partners in technological infrastructure, bandwidth, computer equipment and libraries more generally.

In the first 18 months, a quite extraordinary transformation took place. WiFi was made available in libraries and across seven partner university campuses. All partner universities have installed new high-speed fiber optic networks, and in most cases these cover the whole campus. Dagon University was the first university to secure a 50 Mbps connection by the end of June 2015. This was a huge improvement on their 2MB satellite connection.

Following explanations about how access to commercial e-resources works, and the need for a static IP address, all partner universities have secured static IP addresses for the first time. It took several months and a lot of persistence for the University of Yangon and the University of Mandalay to secure IP addresses. But they were able to advise other universities on the process, and the process has become quicker since then.

Universities were also sharing information about installation of fiber networks and applications for additional bandwidth.

The project encouraged the universities and librarians to develop university library websites which include a user-friendly library webpage, with information about services and print and electronic collections.

The ICT upgrades and access to e-resources have led to a sharp increase in the number of library users. Universities have invested further in upgrading their libraries and ensuring that requirements of the eLibrary are given a high priority in the design of new library buildings, for example, by allocating sufficient space for computer workstations and e-resources training rooms, equipping library spaces with new furniture and new air-conditioning units, improved signage and access routes.

Increased skills and capacity of librarians

At the start of the eLibrary Myanmar project, skills levels of librarians, and their confidence, were very low. The majority of librarians had limited or no IT skills. Many had never used email or the internet, and some had never used a computer. Most librarians did not speak or understand English.

There was little or no interaction between librarians and faculty, and no concept of subject librarianship. For example, one senior librarian at University of Yangon reported that she had never met a professor in her 25+ years at the library and, before the start of the eLibrary Myanmar project, no librarians at the library had ever visited a faculty office.

To build librarians' skills and confidence, the EIFL eLibrary Myanmar project initiated an extensive capacity building programme. By building in-country training capacity, we created a corps of librarians who can train colleagues, at their own and other universities, and also provide ongoing training for faculty and students in e-literacy and computer skills. Training skills, and training-of-trainer skills are therefore essential components of the project's capacity building programme.

Early in the project, we hired three highly-skilled former librarians from Myanmar to work as Local Project Coordinators on a part-time basis - one based in Mandalay, one in Yangon, and (later) one in Dagon. All had many years of library experience, had travelled or studied abroad, and two had considerable experience of using e-resources.

Their role has been invaluable and wide-ranging. With deep knowledge of the local context, they have been able to train librarians, faculty and students, coordinate visits and organize workshops to be facilitated by EIFL and other external trainers, advise on library improvements and help librarians to advocate for change. They have also developed excellent relationships with rectors, librarians and academic staff.

Starting at University of Mandalay, University of Yangon and Universities' Central Library, the Local Project Coordinators conducted a skills audit, interviewing library staff to establish levels of skills (including IT and information literacy skills, English language skills and presentation skills). All librarians received basic IT (how to open an email account; attach documents; use MS Word and MS Excel) and information literacy training.

During the training we identified librarians with the best potential to a) become e-resource specialists able to provide training and support to faculty and to students and b) over time, to develop into subject librarians. A selected group of "advanced level" librarians received additional information literacy training, use of e-resources, presentation and training skills.

By the time more universities joined the project, the Local Project Coordinators had gained a great deal of experience of training – what works, what doesn't. They had also established a model which they applied at other universities (starting with a skills audit, basic training, identifying potential trainers, etc.), and had built up a bank of training materials. A training framework was developed to provide a structure for the wide range of courses offered to librarians, members of faculty, graduate students, and some undergraduates.

In addition to the extensive training programme provided in Myanmar, the project organized study tours abroad.

In 2016, eight library directors, from the seven partner universities and Universities' Central Library, visited Hong Kong University Library and Lingnan University Library to learn about their programmes and services, and to see first-hand what could be achieved through effective access to e-resources, collaboration between librarians and faculty, and collaboration between libraries in a library consortium. For most of the directors, this was their first trip abroad.

In 2017, two library directors (University of Yangon, University of Mandalay) and a librarian from Universities' Central Library spent three months in Budapest, Hungary, on a Central European University (CEU) fellowship. The fellowship allowed them to spend time at the newly-built CEU library learning about modern library services.

The project encouraged and supported the librarians to advocate for the needs of their libraries and now library directors have confidence to raise issues directly with university rectors.

The project has been a catalyst for new library services

Over the course of the project, librarians' confidence has grown. They have lost their reserve, and are more outgoing and proactive. The status of libraries and librarians has improved and library facilities have been significantly upgraded. Librarians have taken the initiative and remodelled library spaces, creating training and discussion spaces and making libraries more welcoming to students.

The librarians take huge pride in being able to provide a good service. All seven library partners in the eLibrary Myanmar project have increased their opening times, some to include opening times at weekends and over holidays. They are all offering library induction sessions for new students, including introduction to library e-resources and services.

All seven partner libraries also provide basic IT and e-resources training for faculty and students, led by librarians, and regular drop-in sessions for faculty and students seeking training and advice on e-resources. Some libraries are offering IT support to individuals, including assisting with software upgrades and download of Zotero manager, and providing advice on other technical issues.

Five libraries (University of Yangon, University of Mandalay, Yangon University of Economics, East Yangon University and West Yangon University) are providing training courses for faculty and students on bibliographic referencing and citations, and use of Zotero software.

University of Yangon, Universities' Central Library and Yangon University of Economics have introduced student volunteer programmes in which advanced students volunteer to support their peers with IT and e-resources searches. At University of Mandalay, an IT help desk is staffed by student volunteers.

At University of Dagon and West Yangon University, libraries offer services specifically for blind and visually impaired people, including workstations with software for blind and low vision users.

Libraries are also providing subject guides and responding to requests from library users for articles and e-books chapters, sending the requested information back via CD or email. University of Mandalay library offers weekly one-hour sessions on academic writing for faculty and students.

Improved skills and confidence of faculty and students in using e-resources for teaching, learning and research

Raising awareness amongst faculty, researchers and students about the availability and benefits of e-resources (both subscription and Open Access), and improving skills and confidence through training was one of many activities of the eLibrary Myanmar project.

Introductory e-resources training took place in all departments of all the project partner universities. It covered general internet search and information literacy skills – for example, how to use the new EBSCO Discovery Service to find e-resources; how to access the service using mobile devices; how to save materials in personal online libraries, and how to link to content from teaching materials and reading lists.

More specialist training, including building awareness about the best e-resources for individual subject areas and how to use them, came next.

From 2014 - 2017, a total of 6,800 faculty and 6,200 graduate and undergraduate students attended e-resources training sessions at the seven partner universities. (Please note - this is the total number of people attending courses, not the number of unique individuals).

In addition, we conducted training on reference management, plagiarism, and creation of online unique identifiers for faculty and graduate students at the University of Yangon and the University of Mandalay. A total of over 800 faculty and 700 graduates attended these training sessions.

Training, awareness raising and institutional support has resulted in excellent usage of e-resources. Over a period of four years (2014 - 2017), there were over 205,000 full-text downloads of journal articles and book chapters. The statistics have exceeded our expectations – and we are confident that high levels of usage can be sustained.

Strengthened collaboration between librarians and faculty regarding integration of e-resources into curriculum and teaching

In order to promote change in teaching, learning and research, we used three strategies: a) we built the skills and confidence of faculty and students in using e-resources; b) we worked with the Central European University (CEU) to support their curriculum development programmes for University of Yangon and University of Mandalay, and to encourage the integration of e-resources into new teaching and learning materials, and c) we identified other organizations working on curriculum development initiatives to raise their awareness about the e-resources available through the eLibrary Myanmar project.

Since 2012, CEU has been an active partner for higher education reform in Myanmar. As part of its efforts, CEU, with assistance and funding from the Open Society Foundation (OSF), has provided more than 50 researchers and faculty from Myanmar with fellowships to spend time at CEU to develop curriculum.

When the fellows return to Myanmar they become enthusiastic users of their university libraries as they realize that their libraries have access to world class e-resources. Many of them conduct their classes in the library using the e-resources, or give research assignments to their students that require use of a library and e-resources. They also invite librarians to their classes to introduce e-resources that are relevant to their subjects.

Local Project Coordinators have identified e-resources champions from each university department and have worked with them to prepare subject guides. In this way we ensured that in each department there was a staff member (the champion), with in-depth knowledge of available e-resources in a particular subject.

Increased visibility of local research outputs

When the project began (2014) very few articles from researchers in Myanmar were published in international peer-reviewed journals, and local scholarly journals or conference papers were only published in print. The term Open Access - referring to the immediate, online, free and unrestricted availability of peer-reviewed, research literature - was very little known or understood in Myanmar universities.

Access to thousands of journals and e-books stimulated an increase in research output in EIFL partner universities in Myanmar. For example, from 2010 - 2013, the Web of Science (global scientific citation index service) indexed 23 articles co-authored by researchers from the University of Yangon. From 2014 - 2017, the university had 71 articles indexed in the Web of Science. Most of these articles are from materials science, engineering and chemistry (please note that the Web of Science index does not cover humanities). Although the number of articles is still very small compared with other countries, overall there has been progress.

Following the workshops on changing scholarly communications organized by the eLibrary Myanmar project in 2015, there was interest from the universities of Mandalay and Yangon in setting up Open Access repositories to increase the visibility and impact of their research publications. Both universities set up Open Access Working Groups which developed Open Access and institutional repository policies.

To address IT infrastructure and skills issues, an external host solution was chosen to manage and host DSpace platforms for the Open Access institutional repositories.

In May 2017 the universities of Mandalay and Yangon both launched institutional Open Access repositories that include books and book chapters, journal articles, conference papers and dissertations.

At the time of writing, the University of Yangon Repository had 470 publications. There had been 21,586 views by 2,366 unique users from 85 countries since the repository was set. The University of Mandalay repository had 238 publications. There had been 13,139 views by 1,386 unique users from 86 countries. The librarians who manage the repositories continue to collect articles from the departments.

Through the project, both universities have licensed a plagiarism detection checker to check articles uploaded to the repositories. To ensure the quality of thesis and dissertations, from 2018, some departments will start using the plagiarism detection checker to give better feedback to students on how to improve their work.

Three more repositories will be launched in 2018 with the help of the eLibrary Myanmar project, at Yangon University of Economics and Yadanabon University and Yezin Agricultural University.

Advised on improvements to draft copyright law to ensure that it supports libraries, education and access to knowledge

In order to maximize access to knowledge and learning resources, it is vital that Myanmar has a copyright law that is fit for the digital age. Myanmar is in the process of drafting a new copyright law, along with laws on patent and trademarks, collectively known as intellectual property (IP).

We have reviewed the draft copyright law and have provided recommendations on amendments to support the work of libraries bringing access to knowledge to students and researchers in Myanmar.

During two visits to Myanmar in 2015, EIFL held discussions with the local library community, gave presentations on copyright to librarians and law students at Yangon University, and met with policy-makers.

Since then we have provided support and advice to the Myanmar Library Association Legal Affairs Committee on the copyright law reforms that are needed to support effective library services in Myanmar.

During 2016-2017, the draft copyright law was jointly reviewed by the Attorney General's office and the Ministry of Education (the Ministry responsible for copyright). In 2018, it is expected that the draft law will be sent by the Office of the Union Government to Parliament for discussion, possible amendment, and final approval.

Supported creation of a consortium of academic libraries

To ensure long-term sustainability of achievements of the eLibrary Myanmar project we supported establishment of a consortium of academic libraries in Myanmar. A library consortium is the formal and structured cooperation by any number of libraries. It is a mechanism that enables its members to share financial, human, technical and other resources. Library consortia have proved to be successful worldwide in jointly negotiating access to e-resources, saving large amounts of public money, compared to individual institutional licensing.

In April 2013, when EIFL management travelled to Myanmar universities for a consultative visit, the notion of pooling resources and maximising service provision by working in a library consortium was unfamiliar to university leadership and librarians alike.

Over the course of the project, we made the concept of collaboration and knowledge sharing real - both at the library level, through joint training events, and study tours and at the higher institutional level by encouraging pro-rectors to help and support each other in areas such as applying for IP addresses and additional bandwidth.

The final milestone for creation of a consortium was an EIFL workshop in August 2016 on 'How to manage a successful library consortium'. During the workshop, participants developed a Memorandum of Understanding (MoU) that universities could sign to join the Myanmar Academic Library Consortium (MALC).

The nine founding member libraries of MALC are the Universities' Central Library, University of Yangon, Dagon University, Yangon Economic University, East Yangon University, West Yangon University, University of Mandalay, Yadanabon University and Yezin Agricultural University.

Through MALC, the project has created an infrastructure for other libraries to gain access to e-resources when they have the needed technology and IP addresses.

CONCLUSIONS

The changes that have taken place at libraries that have taken part in the project are dramatic. Academic libraries are no longer ignored and neglected. Well-stocked with high-quality international e-resources, equipped with IT, and offering new services and training, the libraries are at the centre of learning, research and teaching at their institutions.

The capacity and mindsets of librarians have changed. They are initiating change, improving infrastructure and conditions in their libraries, and leading the way in helping faculty and students to access and use valuable resources, and to integrate them into curricula and teaching.

The project has been a catalyst for change, leading to the government and university investment in technological infrastructure (new fiber internet lines; eLibrary training rooms with computers, laptops etc).

By showing the way forward for libraries to work together in a library consortium, the project has created a platform for other universities to access the e-resources once they have the needed technology. The consortium will be a source of knowledge and capacity building.

None of this would have been possible in such a short time without the dedication and enthusiasm of our three Local Project Coordinators, Aung Kyaw Soe, Myat Sann Nyein and Tin Win Yee; without the support of rectors and pro-rectors at partner universities; excellent collaboration between the project and other partners involved in curriculum development in universities, and the commitment of tireless and hardworking librarians; the openness of the Ministry of Education, and the generous support of the Open Society Foundation's Higher Education Support Programme.