2014/15
NTU Libraries Year in Review
The mission of our library is to enable staff and students in NTU to engage optimally with the ever changing information environment in order to succeed in their research, learning and teaching goal. For the academic year (AY) of 2014-2015, the Library continued to progress in our work to meet the aims of this mission. This annual review provides snapshots of some of our achievements and work, and I would like to highlight a few of them here.

This past year saw a significant increase in the provision of e-books from 642,000 last year to 820,000 this year. In line with current trends, we spend 82% of our materials budget on providing e-resources. This gives our users anytime and anywhere access to a deep and wide range of resources, which is a key strength of our Library.

We have been heavily involved in the pioneering work of supporting research data management, working with the Research Integrity Office, Research Support Office and Centre for IT Services. We will be completing the development of a Data Management Plan (DMP) tool to enable researchers to clarify and record their data requirements for their research projects.

Our New Media Group has been very active in co-developing course blogs with faculty to support and enhance their teaching work. We have also worked with the School of ADM to develop e-portfolios to showcase the creative work of students. With increasing worldwide interest in altmetrics, the Group has also completed a feasibility study to launch a new service for our researchers.

Information literacy instruction by librarians is a key service for many university libraries. This year, the Provost and Deans Group approved the Library’s proposal for a compulsory information literacy programme for all undergraduate students. This consists of 2 modules conducted in blended learning style, and embedded within core courses in all undergraduate programmes.

The Library Outpost in the Learning Hub at South Spine is set to open after a year of planning and design work with the architect. The Outpost aims to foster a love of learning and reading across all disciplines in support of our students becoming well-rounded, well-read, curious, engaged and global citizens. Our new Automated Reserves Machine (ARM) will also be opened together with the Outpost.

Lastly, and most important of all, it is our Library staff that make every innovation realizable, every service engagement a fruitful one, and every resource retrieved and used possible. We continue to find ways and means to ensure our staff engage in continuous professional development, and we work to create opportunities for staff to work with others locally and overseas to enrich their work and learning experience. As an indicator of our professional engagement and leadership, we presented 11 papers during the year at international and local conferences.

I hope this review gives you a flavour of the work we are doing in serving you.

Choy Fatt Cheong
University Librarian
E-Resources

Though there is much information available on the Internet, the library provides a large amount of relevant and scholarly resources that are not freely available on the open web. As convenient and easy access to information is a given for our users today, procurement and subscription to digital resources is generally preferred - thus our Library spends about 82% of the materials budget on digital resources.

E-books

Our e-book collection continues to grow rapidly with over 820,000 e-books. As e-books are comparatively new in the publishing industry, the way they are being procured is still evolving. We have been working with publishers and vendors in trying out various models. For example, patron-driven-acquisition (PDA) and evidence-based-acquisition (EBA) are e-book models that allow us to offer titles to our users that we have not yet purchased/subscribed, giving users more control over what they need and when they need them. This year, NTU Libraries worked with Oxford University Press using the EBA model, and thus we now provide access to all e-books in the Oxford Scholarship Online database. Another major publisher we worked with is JSTOR, which hosts e-books from more than 40 university presses (including Princeton, Yale, etc.). These new models add over 150,000 titles for users, on top of the ~670,000 owned/subscribed titles.

Other notable e-resource growth includes a new subscription to the OverDrive platform offering ebooks beyond curriculum needs that will expand readers’ horizons and stimulate learning, thinking, and creativity. The easy mobile interface and downloading features provided by OverDrive make it a popular platform for electronic reading and audiobooks.
**HARNESSING THE DIGITAL ENVIRONMENT**

**New Databases**

An increasing number of humanities and social sciences research rely on the use of primary sources and early publications. The following electronic archives of newspapers and periodicals were acquired:

- 19th Century UK Periodical Series 1 & 2
- South Asia Archive
- South China Morning Post 1903-1995
- Times of India 1838-2005
- 大成老旧刊数据库

**Streaming Video**

Online video databases have expanded to include JoVE Science Education and Asian Film Online Collection II. The former consists of 90 videos on laboratory fundamentals on cellular and molecular biology, neuroscience, developmental biology, etc. The latter added another 226 Asian films to the initial 699 titles. Streaming video databases support teachers and learners in our blended learning environment here at NTU.
Technology

Blog Services Blooming

Our blogs@NTU service is maturing into one of our core services, with 375 blogs meeting the teaching, research and marketing needs of faculty and school administrators. Via blogs, we are helping faculty to share their research with a global audience and to provide rich learning experiences for their students. Besides providing a robust in-house Wordpress system, our librarians help faculty with blog design, advise on content management, and conduct training. Two new notable blog projects are the hosting of an open access e-journal for a WKWSCI faculty member who was recently named as chief editor, and the creation of a course blog for a popular elective “Impact of Chemistry on Society” which had about 120 students.

Platform upgrades

In upgrading our Citrix platform, a number of library databases such as Coloribus and SeaWeb are now easily accessible via mobile devices such as smartphones and tablets. Users also have faster and smoother access to databases that have streaming video or multimedia content.

Our self-service kiosks were also upgraded with the latest software, and users now have an enhanced experience when borrowing library resources at the machines. We have: (a) a new look and a faster response time, (b) a view of the list of titles borrowed under My Account, and (c) an option to send receipts to their personal email address.

Website revamp

Enhancing user experience and interaction with library information and resources was a key objective in the revamping of our library website. Our redesign team looked into user feedback, webpages statistics and the library strategic goals to review, organize and pull content that was most popular with our users to the first level for greater visibility and discoverability. The template was also refreshed with a cleaner look, placing key content such as our OneSearch box, publicity banner and social media tools to connect with our users in the prime space. Four broad categories of links were also defined, surfacing the most popular links for ease of discovery. Other links were placed under sub-pages to achieve a cleaner look.
Bringing our information and publishing expertise to the world of data, our newly formed data management team worked closely with the Research Integrity Office, Research Support Office and Centre for IT Services to identify and develop tools that support NTU researchers in meeting research integrity requirements for data. Our data librarians developed an online Data Management Plan (DMP) tool that is being integrated into the existing research information system RIMS, assisting our researchers in creating DMPs as and when they have new research projects. As our local funding agencies begin to mandate data sharing for funding recipients, we have shared our knowledge and expertise with potential principal investigators and research support staff from other Singapore research institutions as well.

**Data Management**

**NTU RESEARCH DATA MODEL**

**POLICIES AND GUIDELINES**
- NTU Research Data Policy
- Data Governance
- Open Access Data

**TECHNICAL INFRASTRUCTURE**
- NTU Data Management Plan
- NTU Research Data Repository
- NTU Electronic Lab Notebook

**SERVICE INFRASTRUCTURE**
- Data Management Plan Writing Advisory
- Data Curation for Long-term Preservation & Access
- Data Literacy
- Data Management Advisory

**Digital Projects**

Another burgeoning area of work for the Library, our digital projects initiative saw the realisation of several projects from the Humanities, Arts and Social Sciences this past year, and we look forward to works-in-progress including those from the College of Engineering in the coming year. Faculty feedback indicates that our support of digital scholarship is drawing attention to their academic work beyond traditional forms of scholarly communication. The inclusion of Student Research Works as a new category of digital projects is intended to showcase selected collections of exceptional student work to a global audience.

Increasing the visibility and impact of all kinds of NTU research output - text, data, images and more.
PARTNERING IN RESEARCH AND SCHOLARSHIP

Research Impact

A newly developed citation report service for faculty who are candidates for promotion and / or tenure was offered, providing quality reports in a consistent format for easier analysis. 39 reports were completed for faculty over two P&T exercises, with 40% more requests during the second P&T exercise.

Institutional name variants on Scopus & Web of Science were scrutinised for the purpose of World University Ranking exercises, and reported to the Institutional Statistics Unit. We also identified more than 50 attribution errors and informed the respective citation databases providers to make corrections.

Alternative Research Metrics (Altmetrics)

For the last 2 years, alternative metrics or “altmetrics” have been discussed in conferences and adopted increasingly by major scholarly publishers, potentially creating a disruption that could change the way research impact is measured. NTU Libraries launched a strategic initiative to systematically investigate local and international developments in altmetrics. Our activities included: analyzing leading altmetrics platforms, surveying local adoption of altmetrics, delivering workshops and conference presentations, sitting on a NISO working group, conducting a detailed study of an altmetrics platform for a sample of NTU faculty, and participating in a research project led by Prof Theng Yin Leng (WKWSCI). We are now planning to work with various stakeholders such as RSO (Research Support Office) to develop and deliver an altmetrics service to NTU researchers.

"Thanks so much for the prompt and thorough analysis. I very much appreciate it."
CoE Faculty Member

"Thank you so much for all your help..."
CoS Faculty Member

"Appreciate this very much! I’ll let you know when the results come out, good or bad!"
CoHASS Faculty Member
PARTNERING IN TEACHING AND LEARNING

From information/digital literacy skills to instilling a love of lifelong learning, NTU librarians facilitate various types of learning in various ways.

Information Literacy Undergraduate Requirement

A required information literacy programme for undergraduate students was endorsed by the University Library Committee, and approved by the Provost & Deans Group (PDG). The programme requires all UG students to undertake 2 short modules during their studies at NTU – a foundation module in Year 1/2 and an advanced module in Year 3/4. Both modules will use a blended learning approach with online components and a face-to-face workshop. A key feature of the programme is to embed the modules within school curriculum so that learning is relevant and put to use within specific disciplines. Aiming to begin with the foundation modules in AY15/16, we have been working with colleges and schools to identify suitable courses and customize general learning outcomes to the specific needs of the courses/disciplines.

Library Outpost Planning

In the soon-to-open Library Outpost (Learning Hub – South Spine), we aim to foster a love of learning and reading across all disciplines in support of our students becoming well-rounded, well-read, curious, engaged, global citizens. Special collections have been carefully built such as the Discovery Collection, Books your Professors Read, and 100 Films to Watch before you Graduate, and rich programming to help students discover new knowledge and new areas of interest have been planned. Other highlights of the Outpost include conveniently located Course Reserves for HSS, NBS and SPMS, including a 24/7 Automated Reserves Machine (ARM), and a rich audiovisual collection of films and documentaries. We hope our relaxed, comfortable spaces for reading and viewing will become a favourite place for students at the Learning Hub!
Our regular Academic Publishing series for postgraduate students & early career researchers continues to be well-received. Throughout the month of March, there were 10 talks with speakers from publishers, NTU faculty, NTU Graduate Student Council, NTU Research Support Office and NTU Libraries. 690 participants attended the talks. This is an increase of 28% in attendance compared to previous series in 2014. 62% of the attendees were postgraduates including PhD & Masters students from across all Schools.

Highlighted Talks:

“PUBLISHING CONFIDENTIAL: THE SCOOP ON GETTING PUBLISHED” with faculty panelists from NRS, CEE, ADM, HSS, SGRM.

“DEVELOPING YOUR STRATEGY FOR SUCCESSFUL SCIENTIFIC PUBLISHING” by NTU Research Support Office and Bibliometrics Analysis.

“EVOLVING RESEARCH TOOLS IN SCHOLARLY COMMUNICATION” by Nature.
04

COLLABORATION AND KNOWLEDGE EXCHANGE

Engaging with local and international colleagues improves our services and contributes to the excellent reputation of NTU at home and abroad.

International Collaboration

International engagement builds lasting relationships, brings fresh ideas and triggers collaborative improvements to our services. With our partners in AUNiLO and LATN, we are working on shared repositories, open educational resources, and digital learning approaches for libraries. Staff exchanges with Shanghai Jiao Tong University and Xiamen University, have ignited fresh ideas and conversations, and resulted in new collaborative projects related to our collections. NTU Libraries attracted 60 professional visitors from around the world interested in learning more about our innovative services, and 921 general visitors for which we hope the Library contributes to the esteem held for NTU.

Local Collaboration

Working with our colleagues in other universities in Singapore opens the door for many fruitful collaborations. Together with other university libraries and funding agencies, we promoted and celebrated Open Access Week together this year, offering information, quizzes and prizes to increase awareness and participation in this international effort. We have initiated a data management interest group with counterparts at NUS and SMU, tackling this new area collectively. Expanding the “Day in the Life” staff exposure programme for librarians piloted by NTU, NUS and SMU, this year we coordinated the expansion of the programme to include NIE, SUTD and SIM. This programme encourages communication and collaboration amongst university libraries in Singapore.
With many common goals, we have worked closely with many partners across campus. Highlights include working closely with CITS and RSO to embed a DMP (data management plan) into the existing RIMS workflow; working with the Graduate Student Council to improve and promote our Academic Publishing series for postgraduate students; and, working with the Student Affairs Office to bring accessible education initiatives and equipment to our libraries.

In collaboration with the National Institute of Education International (NIEI), the Library also conducted a one-day workshop in Chinese for senior university administrators from China in March 2015. This is the first of several similar workshops for various batches of officials on the NIEI course.


Subject Librarian in Action

This year, our subject librarians conducted over 400 subject-specific workshops, provided 197 research consultations and resolved 5,157 research enquiries. On top of that, they worked closely with faculty members on a variety of learning activities inside and outside the classroom. These include project showcases, class critiques, talks, exhibitions, literary events, etc. Subject librarians continue to support researchers in depositing their articles in DR-NTU for greater access and possible citation, and they have been key in identifying possible digital projects and working closely with faculty to bring such projects into focus and fruition.

Strengthening our matrix-like organizational structure, we have been building strong specialities amongst our librarians in areas such as open access, data management, instruction, copyright and licensing support, e-book platforms, and social media for research impact. Our subject librarians provide services in these areas in the context of unique disciplinary needs and practices, but our specialists provide leadership and training for subject librarians in these specialist areas, and further support when more depth of expertise is required.

Specialist Librarians in Strategic Areas

Developing strong relationships allows us to anticipate shifting needs, changing environments and innovative opportunities.
Promoting and Assessing Library Services

Promoting library resources and services ensures awareness and use of best available resources in best-suited ways. Our various promotional activities reach a wide range of students and staff – our freshman orientation activities engaged over 2,800 students, three ebook quizzes had almost 3,000 participants, and ten exhibitions attracted over 16,000 visitors in total. Our newsletter, Library Xpress, was redesigned and the online version enhanced to allow us to re-use and promote individual articles. There was a 14.8% increase in readership of the digital edition. Beyond promoting our services, we must also assess them to ensure our efforts have positive and measurable impact on university goals. To this end, a proposal to initiate an academic library assessment programme and adopt impact measure practices was developed for implementation in the coming year.

Investing In Expertise

Staff development remains a key priority as innovative, excellent service is dependent upon the continual learning and growth of our people. Our monthly half-day professional development series saw topics on information literacy, communication, next generation library systems and more. New staff development initiatives include a monthly “brown-bag session” for librarians interested in research and publishing, and a monthly “Lunch with Lynda” session for support staff working through online courses via NTU’s Lynda subscription. Learning together provides motivation and support, and builds a culture that values continual learning.
## LIBRARY STATISTICAL HIGHLIGHTS

### RESOURCES

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<tr>
<th>Material type</th>
<th>Total</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books (print), vols</td>
<td>834,662</td>
<td>-7.90</td>
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<tr>
<td>Books (electronic), titles owned/subscribed</td>
<td>668,615</td>
<td>4.27</td>
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<tr>
<td>Books (electronic), titles accessible via PDA</td>
<td>151,248</td>
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<tr>
<td>Audio-visual materials, items</td>
<td>73,350</td>
<td>0.31</td>
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<tr>
<td>Periodical titles (print)</td>
<td>548</td>
<td>-23.14</td>
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<tr>
<td>Periodical titles (electronic)</td>
<td>71,959</td>
<td>22.00</td>
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<tr>
<td>Databases, title</td>
<td>229</td>
<td>2.69</td>
</tr>
<tr>
<td>Exam papers</td>
<td>23,022</td>
<td>7.6</td>
</tr>
<tr>
<td>Student theses &amp; reports in DR-NTU</td>
<td>39,543</td>
<td>11.9</td>
</tr>
<tr>
<td>Open access staff publications in DR-NTU</td>
<td>17,432</td>
<td>18.2</td>
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<td>18.2</td>
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</tbody>
</table>

### USAGE

<table>
<thead>
<tr>
<th>Visits to all libraries</th>
<th>1,602,477</th>
</tr>
</thead>
<tbody>
<tr>
<td>By Library</td>
<td>No. %</td>
</tr>
<tr>
<td>Art, Design &amp; Media</td>
<td>127,423</td>
</tr>
<tr>
<td>Business</td>
<td>238,086</td>
</tr>
<tr>
<td>Chinese</td>
<td>148,600</td>
</tr>
<tr>
<td>Communication &amp; Information</td>
<td>38,059</td>
</tr>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>96,880</td>
</tr>
<tr>
<td>Lee Wee Nam (Engineering &amp; Science)</td>
<td>934,127</td>
</tr>
<tr>
<td>Wang Gungwu</td>
<td>19,302</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bookings for facilities in learning commons</th>
<th>14,871</th>
</tr>
</thead>
<tbody>
<tr>
<td>By types of facilities in learning commons</td>
<td>No. %</td>
</tr>
<tr>
<td>Learning pods</td>
<td>8,705</td>
</tr>
<tr>
<td>Multiscreen monitors</td>
<td>4,118</td>
</tr>
<tr>
<td>Language learning rooms</td>
<td>1,210</td>
</tr>
<tr>
<td>Recording room</td>
<td>646</td>
</tr>
<tr>
<td>Cinema (including ADM Library)</td>
<td>192</td>
</tr>
</tbody>
</table>

| Bookings for media stations (+ADML & CMIL Libraries) | 6,356        |

### Loans of materials

**By Type**

- Circulating collection: 235,871 (85.79%)
- Reserves: 24,926 (9.07%)
- AV: 14,124 (5.14%)

### Usage of full-text document downloaded

- Total: 5,603,392

### Services

- Total no. of FAQs received (statistics not complete): 22,382
- No. of blogs created for users: 375
- No. of exhibitions, events & talks held: 84

### Facilities

- Total floor area in all libraries (m²): 15,440
- No. of seats in all libraries: 1,880
- No. of computers for users in all libraries: 620

<table>
<thead>
<tr>
<th>Library space</th>
<th>Floor area</th>
<th>Seats</th>
<th>Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art, Design &amp; Media</td>
<td>1,295</td>
<td>79</td>
<td>19</td>
</tr>
<tr>
<td>Business</td>
<td>2,735</td>
<td>415</td>
<td>97</td>
</tr>
<tr>
<td>Chinese</td>
<td>1,040</td>
<td>145</td>
<td>26</td>
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<tr>
<td>Communication &amp; Information</td>
<td>354</td>
<td>38</td>
<td>13</td>
</tr>
<tr>
<td>Humanities &amp; Social Sciences</td>
<td>953</td>
<td>114</td>
<td>21</td>
</tr>
<tr>
<td>Library Outpost</td>
<td>375</td>
<td>45</td>
<td>3</td>
</tr>
<tr>
<td>Lee Wee Nam (Engineering &amp; Science)</td>
<td>7,604</td>
<td>1,009</td>
<td>390</td>
</tr>
<tr>
<td>Medical</td>
<td>150</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Wang Gungwu</td>
<td>352</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Instructional Commons</td>
<td>582</td>
<td>15</td>
<td>41</td>
</tr>
</tbody>
</table>

### No. of instructional classes conducted

- Total: 450

- By users from:
  - College of Engineering: 5,168 (52.23%)
  - College of Science: 1,602 (16.19%)
  - College of Humanities, Art & social sciences: 2,550 (25.77%)
  - Nanyang Business School: 263 (2.66%)
  - Others: 312 (3.15%)

### No. of document purchase requested & fulfillment rate

- Total: 1529 (95%)

- Request from:
  - College of Engineering: 411 (100%)
  - College of Science: 159 (98%)
  - College of Humanities, Art & social sciences: 550 (93%)
  - Nanyang Business School: 42 (88%)
  - Others: 303 (96%)

### Total number of enquiries answered

- Total: 26,730

- By Type:
  - Research consultations: 197 (0.74%)
  - Research enquiries: 5,157 (19.29%)
  - General enquiries: 21,376 (79.97%)

### No. of sessions accessing to:

- E-journals, databases and e-books: 2,777,984
- DR-NTU: 1,051,027
- Library website: 1,114,694
- OPAC: 1,218,211

### Loans of materials

- Total: 274,921

- By Type:
  - Circulating collection: 235,871 (85.79%)
  - Reserves: 24,926 (9.07%)
  - AV: 14,124 (5.14%)

### Enquiries answered

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- By Type:
  - Research consultations: 197 (0.74%)
  - Research enquiries: 5,157 (19.29%)
  - General enquiries: 21,376 (79.97%)

- By Mode (Research enquiries):
  - In person: 3,735 (72.43%)
  - Phone: 389 (7.54%)
  - Email: 1,033 (20.03%)

- By Mode (General enquiries):
  - In person: 18,069 (84.53%)
  - Phone: 840 (3.93%)
  - Email: 2,354 (11.01%)

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### Booking for media stations (+ADML & CMIL Libraries)

- Total: 6,356