

## Joint-Polytechnic Libraries Collaboration (JPL)

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### Abstract

This paper details the collaboration model of four of Singapore's polytechnic academic libraries (PALs) – Nanyang Polytechnic (NYP), Ngee Ann Polytechnic (NP), Singapore Polytechnic (SP), and Temasek Polytechnic (TP) otherwise known as the Joint-Polytechnic Libraries Collaboration (JPL).

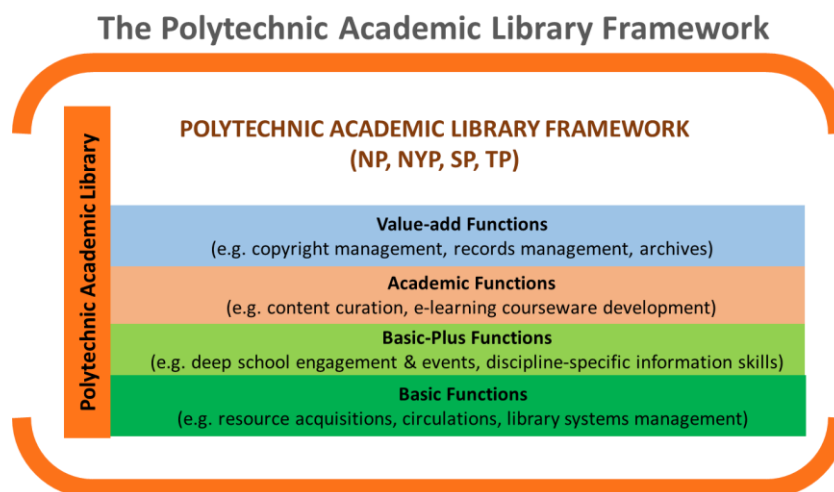
The JPL collaboration model hinges on three key objectives, facilitating effective collaboration among the PALs in four identified focus areas with 10 initiatives that the libraries jointly pilot and implement. The said model is fondly referred to as the 3410 model. While the collaboration framework promotes close-knit collaboration, it also enables differentiation in the offerings of each polytechnic based on their unique value propositions.

*Keywords: academic libraries, collaboration, transformation, operational effectiveness & efficiency, cost savings, academic teaching & learning*

### Background

Four polytechnic academic libraries (PALs) of Singapore – Nanyang Polytechnic (NYP), Ngee Ann Polytechnic (NP), Singapore Polytechnic (SP), and Temasek Polytechnic (TP) came together in January 2020 to purposefully structure a framework which promotes close-knit collaboration of the PALs to reap benefits of shared resources and services and yet allow for differentiated offerings of the various polytechnics. With the endorsement of the four polytechnic Principals cum CEOs (PCEOs), the Joint-Polytechnic Libraries Collaboration (JPL) was officially launched in August 2020.

The PALs are autonomous academic libraries reporting to their respective polytechnic's management. Their primary responsibilities include providing a range of services, from basic daily operations of their physical libraries to basic-plus, academic and value-add functions that tightly integrate support for the academic teaching and learning within the polytechnic schools, as well as strategic thrusts and functions within the polytechnics. The following diagram shows the academic library framework of the four polytechnics. Each PAL may differ in the scope and depth of its services.



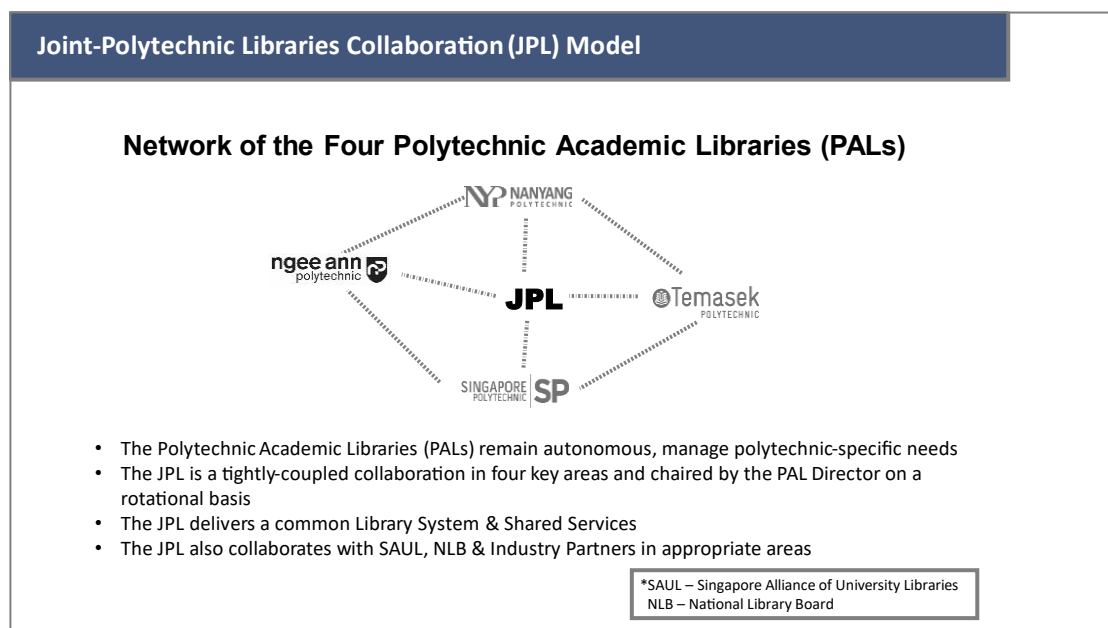
The PAL management representative has a seat on the Polytechnic Senate Committee or Board of Studies which oversees the polytechnic academic development. This ensures that the PALs have full insight into the polytechnic academic framework, new courses, and curricula changes to the courses and modules offered to both the full-time as well as the part-time students and other learners under the continuing adult education scheme.

In addition, the PALs keep track of the industry landscape, the polytechnic strategic thrusts, and initiatives of Ministry of Education (MOE), and SkillsFuture Singapore (SSG). With a good grasp of the educational needs of the polytechnics, the PALs are able to engage deeply with the academic schools, identify, and acquire the relevant and pertinent resources (print or electronic), bring in industry stakeholders to jointly run learning events as well as design, curate or develop supplementary and complementary E-learning courseware to support the polytechnics, academic schools, lecturers, and students.

### **The Joint-Polytechnic Libraries Collaboration (JPL) Model (3410 Model)**

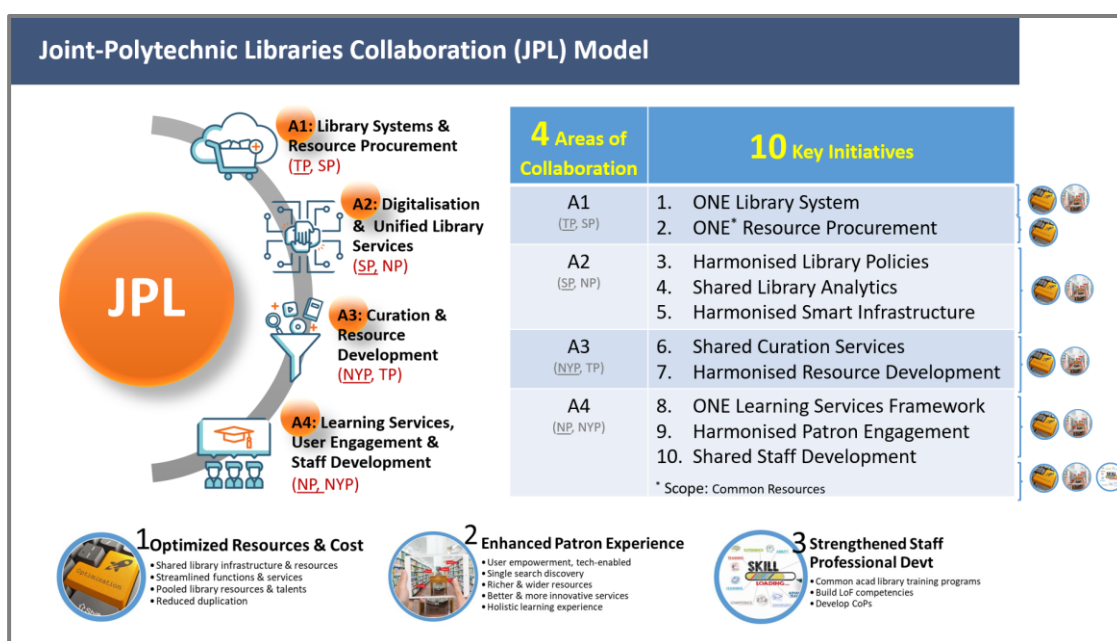
While the JPL collaboration framework promotes close-knit partnership, it also accommodates the differentiation in the offerings of different polytechnics based on their unique value propositions. The PALs function as a network of libraries collaborating for synergy whilst remaining autonomous to manage their polytechnic-specific needs.

The JPL is chaired by a PAL Director on a one-to-two-year rotational basis, starting with NP, followed by TP, SP, and NYP. The JPL Steering Committee is represented by the four PAL Directors and the JPL Committee has met monthly in its initial stage, then continue meeting on a bi-monthly basis as the JPL picks up momentum in their development. For the term that the PAL is chairing the JPL, the JPL is supported by a small JPL secretariat team formed by staff of the chairing PAL.



The JPL collaboration model hinges on three key objectives, facilitating effective collaboration among the PALs in four focus areas with 10 initiatives that the libraries jointly pilot and implement. Hence the model is also often referred to as the 3410 model.

The JPL 3410 model is summarised in the following diagram.



### Three Key Objectives

The JPL's vision is to lead the PALs towards the Library of the Future with three key objectives to:

**(1) enhance patron experience**

- to widen the range of resources and services and to improve resource availability and accessibility to patrons;

**(2) optimise resources & cost**

- to leverage on a single joint-polytechnic team for the benefit of all four PALs, reduce duplication of work and optimise human resources, e.g. in content curation and development, in tender document preparation for evaluation and award; and

### (3) strengthen library staff's professional development

- to promote collaboration and growth in new areas and networking of library staff.



### Four Areas of Collaboration

The JPL Steering Committee identified the areas of collaboration that will yield the highest impact to achieve the set objectives. The identified four focus areas are:

#### (A1) Library Systems & Resource Procurement

- Explore implementing a common platform to offer library services and resource discovery
- Explore shared resources and services for aggregate demand and cost optimisation;

#### (A2) Digitalisation & Unified Library Services

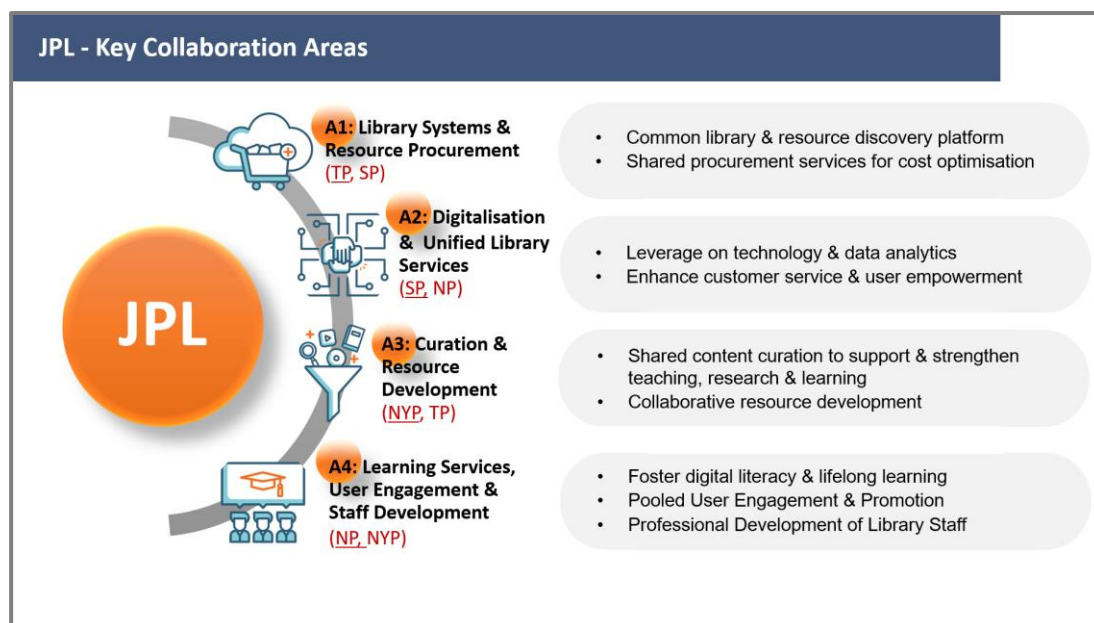
- Explore use of technologies to automate processes for productivity and to enhance patron experience
- Harmonise various library policies and processes;

#### (A3) Curation & Resource Development

- Curate content for digital and media literacy, life-skills aligned with teaching & learning, MOE and SSG identified skills for sharing across the PALs
- Develop shared resources;

#### (A4) Learning Services, User Engagement, & Staff Development

- Foster digital literacy and lifelong learning
- Design and develop E-learning courseware to supplement and complement the teaching & learning programmes of the Schools
- Develop and grow the PALs' staff with digitalisation skills and in emerging areas such as Analytics, Generative Artificial Intelligence (GenAI), Robotic Process Automation (RPA), and in front-facing roles with networking skills.



Each area of collaboration is led by a PAL and co-led by another PAL. For example, JPL-A1 of Library Systems & Resource Procurement is led by TP and co-led by SP and JPL-A4 of Learning Services, User Engagement, & Staff Development is led by NP and co-led by NYP.

For each area of collaboration, the lead and co-lead Polytechnic libraries will work with a JPL workgroup represented by a staff from each of the PALs responsible for that area of work. For example, the JPL-A1 workgroup will have members from NP, NYP, SP, and TP from the technology and procurement teams.

To minimise proliferation or overlapping of work in closely related areas, the same lead or co-lead PALs is intentionally parked in both areas so that there is a good oversight for greater synergy and alignment. For example, in terms of resource development and procurement which spreads across JPL-A1 and JPL-A3, TP leads JPL-A1 and co-leads JPL-A3. For the areas of curation and learning services which spread across JPL-A3 and JPL-A4, NYP leads JPL-A3 and co-leads JPL-A4.

### Ten Key Initiatives

From the four areas of collaboration, the JPL Steering Committee identified 10 key initiatives that the workgroups can help to drive to achieve the set objectives. The initiatives are summarised in the following table.

JPL – Key Initiatives	
4 Areas of Collaboration	10 Key Initiatives
A1 (TP, SP)	1. ONE Library System 2. ONE Resource Procurement
A2 (SP, NP)	3. Harmonised Library Policies 4. Shared Library Analytics 5. Harmonised Smart Infrastructure
A3 (NYP, TP)	6. Shared Curation Services 7. Harmonised Resource Development
A4 (NP, NYP)	8. ONE Learning Services Framework 9. Harmonised Patron Engagement 10. Shared Staff Development

A1 – Library Systems & Resource Procurement  
A2 – Digitalisation & Unified Library Services  
A3 – Curation & Resource Development  
A4 – Learning Services, User Engagement & Staff Development

The JPL identified the projects for each of the initiatives on the premise that each project should at least benefit two or more polytechnics and the mode of implementation would be as follows:

1. Led by the JPL Area lead and co-lead, participated by all four PALs for implementation across the PALs
  - For example, JPL-A1 (TP and SP) led the requirements analysis, specifications, and tender evaluation to award for a common library system, participated by NP and NYP. Each PAL would then work on their own customisation. This has facilitated optimisation of resources and cost savings for the implementation by all the PALs.
2. Led by a PAL, participated by at least another one or more PALs
  - For example, NP led the requirements analysis, specifications, procurement, and implementation of the smart lockers, participated by TP so that resources were optimised and there were cost savings for the implementation on two sites.
3. Led by the JPL Area lead and co-lead and shared with all four PALs
  - For example, JPL-A3 – curated content for some topics which are shared across all PALs
  - Another example, JPL-A4 – designed and developed E-learning courseware in emerging areas to supplement and complement teaching and learning which are shared across all PALs
4. Pilot by a PAL (for more exploratory initiatives) as a reference site for the other three PALs as a learning site to evaluate for possible subsequent implementations.
  - For example, NP piloted the implementation of the UHF RFID smart infrastructure as part of its self-service library transformation and removed fully the counter service and staff. The implementation and pros and cons of UHF RFID (vs the tested HF RFID in most libraries) were subsequently shared with NYP, SP, and TP.

- Another example, TP piloted the implementation of the facial recognition gantries and this was also shared with NP, NYP, and SP. NP eventually also implemented the same.
- Another example, NP led the JPL workgroup to plan and organise the JPL flagship Power UP! Events to level up students’ 21<sup>st</sup> Century skillsets with participation from industry partners such as Adobe, Microsoft, Intel, and LinkedIn Learning.

In these collaborative ways, the PALs could leverage on the JPL to be able to do more with less and to be able to mitigate risk while experimenting with different technologies which could be costly.

### The Achievements of JPL

Into its fourth year since 2020, the JPL has proven to work exceedingly well for the four PALs in achieving the three objectives of:

- Enhanced Patron Experience with widened spectrum of resources and services made available with greater convenience for all the polytechnic Communities;
- Shared resources resulting in cost-savings and productivity for the four PALs; and
- The PALs’ staff have participated in the transformation and are imbued with the need for change and growth mindset. They have also been given more opportunities for training and networking.

On 2 January 2024, the PALs jointly launched the ‘Poly LibSearch’, a one-stop discovery platform that enables convenient searching and requesting of physical resources for staff and students from the PALs. This platform allows users to request books from the partner libraries, resulting in shorter waiting times, improved and widened access to essential resources, and overall enhanced research and learning experience. In addition, users can collect and return the books to their own PAL after use, reducing the need to travel to the partner libraries.

The following table summarises a list of the achievements of JPL to date. The attached annex contains some recent photos of the JPL events and activities for the polytechnics’ communities and libraries’ staff.

Areas of Collaboration	JPL Achievements to Date	Impact of Collaboration
A1 (TP, SP)	<ol style="list-style-type: none"> <li>1. Implemented a common library system for all PALs.</li> <li>2. ONE Poly Search with shared catalogue of four PALs’ resources available to all Polytechnic communities</li> </ol>	<ol style="list-style-type: none"> <li>1. Common library system features &amp; services for all Polytechnic communities (Enhanced Patron Experience)</li> <li>2. Optimised resources &amp; cost savings in the tender preparation, evaluation, and implementation works (Optimised resources &amp; Cost Savings)</li> <li>3. Widened spectrum of resources with no additional cost. Patrons can borrow any resource from any of the four PALs (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</li> </ol>

<p>A2 (<u>SP</u>, NP)</p>	<p>3. Harmonised Library Policies</p> <p>4. Shared Library Analytics</p> <p>5. Harmonised Smart Infrastructure</p>	<p>4. Library Policies such as Operating Hours, Loans, Renewals, Fines are harmonised for consistency and for patron-friendliness. (Enhanced Patron Experience)</p> <p>5. A Basic Analytics Dashboard for all Polytechnic Libraries is generated from the Common Library System. (Optimised Resources &amp; Cost Savings)</p> <p>6. NP Library team on behalf of TP, evaluated and implemented smart lockers for both PALs which made available 24/7 reservation and collection of loans by patrons, beyond library premises &amp; operating hours (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</p> <p>7. TP and NP piloted facial recognition gantries to authenticate access of their patrons and manage traffic flow in times of pandemic. This has been shared with NYP and SP. (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</p> <p>8. NP has piloted the UHF RFID Smart Infrastructure with Borrow and Go concept and this has been shared with NYP, SP, and TP for future implementation. (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</p>
<p>A3 (<u>NYP</u>, TP)</p>	<p>6. Shared Curation Services</p> <p>7. Harmonised Resource Development</p>	<p>9. A suite of curated resources aligning with MOE and SSG Initiatives were developed by the JPL-A3 workgroup to be shared across all four PALs for the Polytechnic communities (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</p>
<p>A4 (<u>NP</u>, NYP)</p>	<p>8. ONE Learning Services Framework</p> <p>9. Harmonised Patron</p>	<p>10. NP led the design and development of the JPL-A4 learning services framework termed as the Digital Life@Polys™ framework out of which various E-learning courseware were designed and developed and shared across the four PALs and communities. These include – Media &amp; Digital Literacy, Financial Literacy, Pre-Internship Toolkit, Critical Thinking,</p>

	<p>Engagement</p> <p>10. Shared Staff Development</p>	<p>Computational Thinking, Generative AI, Sustainability-101. (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</p> <p>11. Conceptualised by the JPL-A4 workgroup, the four PALs launched the JPL flagship – Power UP! Events with industry collaboration to orientate the Year 1 students on digital literacy skills and research skills using the library resources. (Enhanced Patron Experience) + (Optimised Resources &amp; Cost Savings)</p> <p>12. The JPL conducted several training programmes as well as annual networking events for all their library staff such as Generative AI with Adobe and EBSCO as well as design and development of library analytics through use of Power BI. (Strengthened Staff Professional Development)</p>
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### Conclusion

The Joint-Polytechnic Libraries Collaboration (JPL) is a pioneering initiative and the first of its kind in academic libraries collaboration in Singapore. While facilitating close-knit collaboration, it also enables differentiation in the offerings of the different polytechnics based on their unique value propositions.

The JPL framework emerged from extensive brainstorming sessions led by the directors of PALs, in close collaboration with library staff and through focus group discussions with various stakeholders, including polytechnic management, schools, lecturers, administrative staff, and students. The model was subsequently presented to and endorsed by the Polytechnic Principals cum CEOs (PCEOs) and the Ministry of Education (MOE) senior management. The JPL Steering Committee regularly updates the PCEOs and MOE senior management on the JPL collaboration progress through appropriate platforms.

The JPL model serves as a reference collaboration model for academic libraries seeking to address challenges such as manpower reduction and the need for rapid adaptation in education and industry changes where academic curricula needs fast refresh and development as well as rapidly changing industry landscape and patron profile

JPL presented at the International Conference “Collab, Camaraderie, Commune”, organised by the Library Association of Singapore-Persatuan Pustakawan Malaysia (LAS-PPM) Conference 2021 on 6 October 2021.

The JPL is made possible with the relentless and continuing support of the Polytechnics’ management and the intense commitment of the PALs’ Directors and their staff.

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