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**Platforms for real-time collaborative learning for practicing librarians: using blogs, wikis, and emailing**

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**Abstract**

*Workplace learning has gained increasing importance in this fast-paced world of information explosion to meet changing consumer lifestyles and demands. At the same time, the advent of technology has also brought about drastic changes to workplace learning methods.*

*This paper discusses how the National Library of Singapore (NLS) uses technological innovations to prototype an online collaborative platform known as the Network of Specialists (NOS) for effective knowledge sharing and workplace learning. It facilitates collaborative learning and sharing in an anywhere anytime manner using the email service, a blog and a wiki-like platform.*

*The NOS platform comprises various subject and special interest online communities of librarians and subject experts. The email service is used to alert librarians and subject experts of opportunities for learning and contributions to a subject community to help answer reference enquiries received from library customers. The wiki-like platform serves as the e-space for expert contributions while the blog keeps a detailed record of all the contributions received. Through this online collaborative platform, librarians and subject experts from anywhere can be connected digitally to collaborate in real time, discuss, learn and share knowledge.*

## **Introduction**

In this age of rapid information growth, technological innovations, changing consumer lifestyles and demands, the work environment facing librarians and information professionals everywhere in the world has become increasingly complex and challenging. For librarians in Singapore, a cosmopolitan city-state of 699 km<sup>2</sup> with a population size of 4 million, the challenge facing us is equally daunting. We need to constantly keep abreast of advancing technologies, learn new skills and knowledge to remain relevant to the needs of our customers. Finding effective and efficient means for fellow librarians to share knowledge and learn from each other in the provision of reference and information service becomes paramount.

## **Reference and Information Service at the National Library of Singapore**

One of the core functions of the National Library of Singapore (NLS) is the provision of reference enquiry service to researchers, government officials, industry players, businessmen, students and the general public. The reference librarian provides answers to queries, suggest search strategies and guide library customers to relevant and useful resources.

In the past 2 years, NLS has been exploring ways to leverage on technology to reposition the delivery of its Reference and Information Service (RIS) with three service objectives set out:

- a. **Service within reach** – providing RIS wherever, however and whenever customers need it, with any device they have at hand. They can request and have the actual content delivered, all via any PC or handheld device that they hold in their hands.
- b. **Service as a lifestyle** – making RIS available within the social space that customers are comfortable in, e.g. Google, Yahoo!, MSN (GYM), without them having to leave their comfort zone to find the library's resources.
- c. **Service as a team** – providing RIS by leveraging on the collective wisdom and knowledge of the library community. Through an online collaboration platform, librarians from anywhere can come together digitally to collaborate in real time, discuss and simultaneously work on one enquiry using their respective email systems.

The Network of Specialists (NOS) collaborative platform is a prototype that illustrates the 'service as a team' objective. It also functions as a valuable knowledge repository and an effective training tool for librarians.

## **Background and Purpose for a Collaborative Platform**

Before the prototype of the NOS platform, librarians used to work in silos on the reference enquiries as it was often difficult and time consuming to find the right subject experts to help. The method of engaging assistance was cumbersome, where they had to send an email or call up the subject-expert librarian concerned.

Furthermore, the onus was on the librarian who received the enquiry to track discussions and consolidate all the relevant information from different parties before packaging and delivering the final response to the customer.

There were no effective and efficient ways for fellow librarians to help and collaborate with each other to answer difficult enquiries. The extensive knowledge residing with the subject–expert librarians was also not effectively shared or re-used.

The NOS platform is designed in a manner that improves the way librarians collaborate and learn from each other’s work.

## **Description of the NOS Platform**

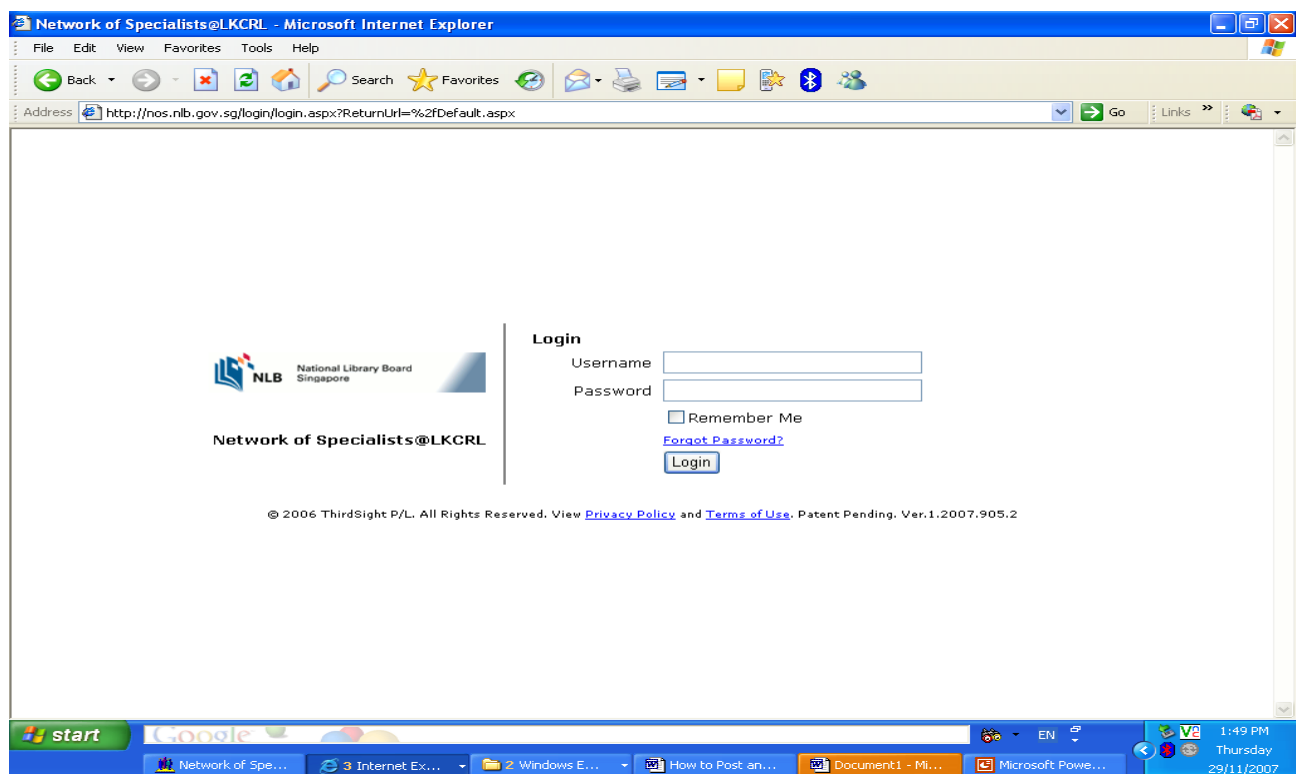
### The email platform as the start point of collaboration and learning

The NOS platform comprises various subject and special interest online communities such as the Arts Subject Community, Business Subject Community and the Singapore/Southeast Asia Subject Community. For the NLS, these are thriving communities that have been initiated since May 2007.

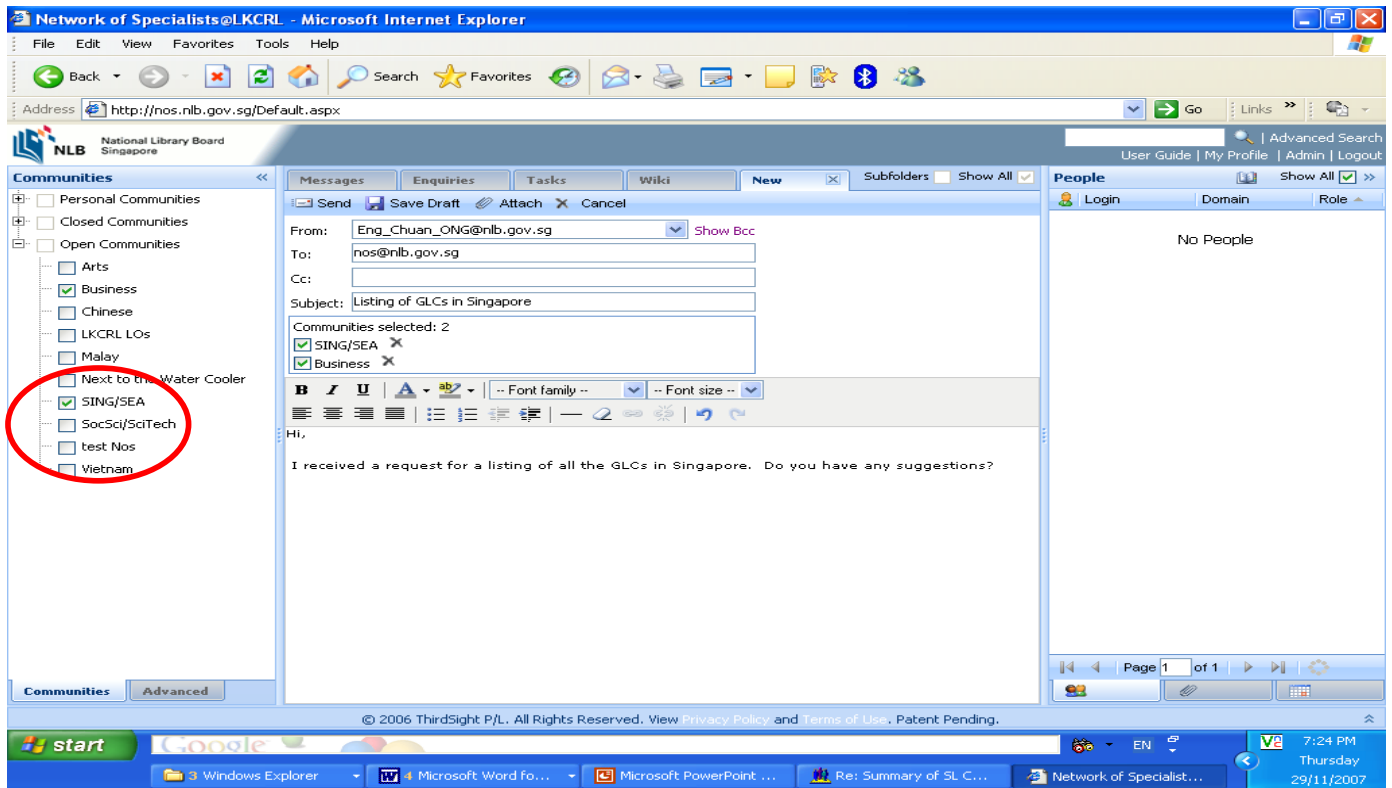
A librarian receiving a difficult enquiry can send an email to the relevant subject community/communities to seek assistance and it will be broadcasted to all the community members simultaneously. Members of the community are alerted via email the opportunity for learning as well as to contribute to a reference enquiry. The email platform has been chosen as the start point of the collaboration and learning because to both library staff and users alike, emailing is one of the most popular communication channels.

Figures 1 and 2 below show the logon interface of the NOS platform and how to broadcast an email message to subject community members.

**Figure 1:** Logon to the NOS portal at <http://nos.nlb.gov.sg>



**Fig 2:** The reference librarian selects the subject community (eg Art, Business, Sing/SEA etc), which he or she would like to escalate the enquiry to by clicking on the square box on the left of the community's name. The email will be broadcasted to all members belonging to the community simultaneously.



### Wiki-like platform for real time collaboration and learning

Members of the community can review and contribute in a common e-space that is web-based. This means that anyone in the community who has an Internet enabled device can access the collaborative platform anywhere anytime. Librarians and subject experts from different places could come together digitally to collaborate in real time, discuss and simultaneously work on one enquiry in a very convenient manner. In the case of Singapore, a multi-lingual platform is designed to meet the needs of our multi-racial community.

Through this sharing process, learning takes place as the initiating librarian continues to take ownership of the reply to the enquiry whilst getting inputs contributed by others in the community. This improves the staff's capability in handling the more challenging reference enquiries.

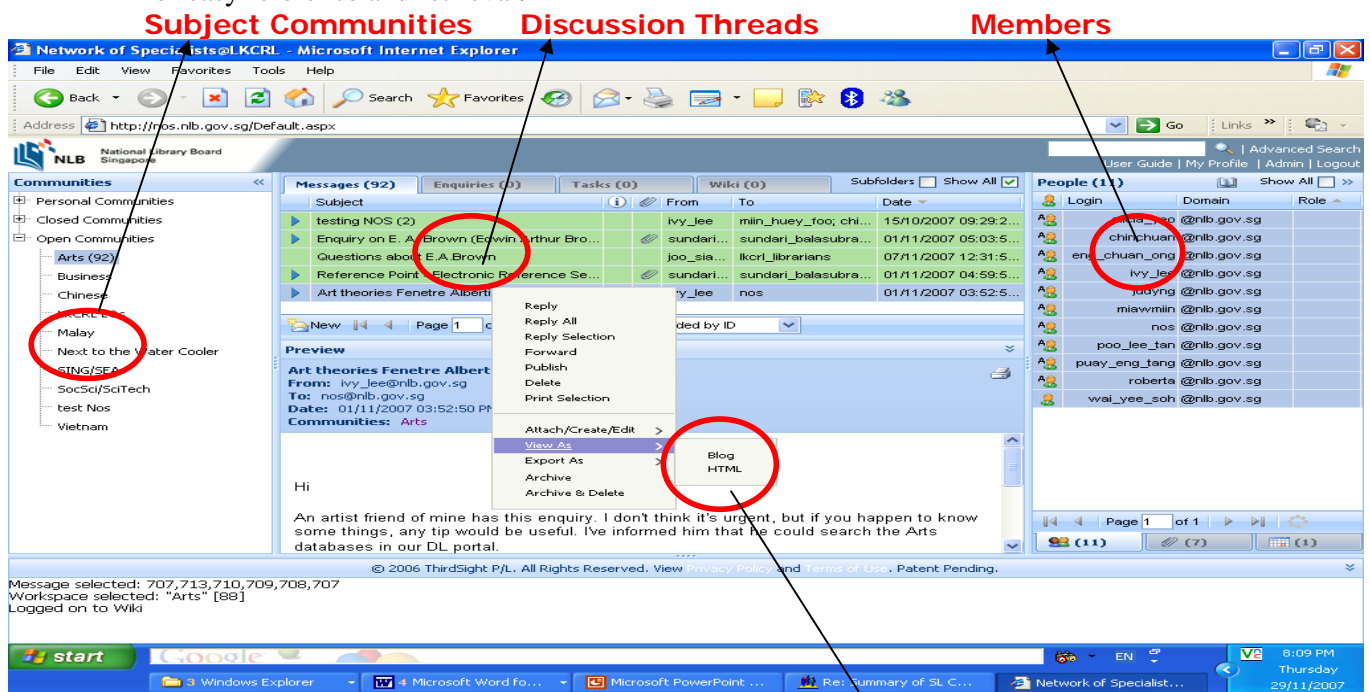
Collaborative communities can be formed easily and dynamically according to the subject matter requested by the enquirer. Participating librarians and subject experts can contribute resources to the wiki-like platform in real time. Joint reports and research papers can also be collaboratively prepared using this platform.

## Threaded emails and blogs as learning tools

Discussion threads relating to the topic of enquiry is tracked and organised by the NOS system and one can choose to display the whole flow of discussion threads either in HTML webpage or a blog page for easy reference. This allows librarians to learn by observing what goes on in the various communities, while different contributors put in their contributions before the final list of resources is compiled and sent out to the enquirer who needs the information. There is also additional value as such threads become a way to capture some of the tacit knowledge transfers that are usually transpired between librarians speaking with each other.

Figure 3 below shows the full screen shot of the NOS platform and the display of discussion threads.

**Fig 3:** NOS displays inputs from subject experts in threaded format as blog or HTML for easy reference and retrieval.



**Option to view discussion threads in blog or HTML format**

## **Impact and Benefits of the NOS Platform**

By enabling collaboration and sharing of knowledge in an efficient and effective manner, the NOS system has made a significant impact on the service quality of the NL's Enquiry Service as well as brings with it numerous benefits such as serving as an effective training tool for librarians new on the job or those who are new to the subject area. The following paragraphs detail some of the benefits.

### Efficiency improvement

Staff no longer need to spend hours relentlessly searching for answers to challenging enquiries as the NOS system efficiently allows staff to tap on each other and external experts' expertise and capabilities. This increases staff's productivity and saves valuable staff time. On average, the time taken for a reference librarian to answer a challenging reference enquiry is 5 man-days. By escalating the enquiry to the NOS platform, staff are able to respond to customer within 3 man-days. An average of 8-10 reference enquiries are sent to the NOS platform monthly and hence there is a total saving of 20 man-days per month or 240 man-days per year.

### Quality and service improvement

The NOS system facilitates the depth and breadth of knowledge sharing and improves the quality of answers to library customers. The table below gives an example of how an answer is enriched by a community of specialists contributing to an enquiry on NOS.

**Figure 4:** An example of how an enquiry answer is enriched by a community of specialists.

Response by 1 Librarian	Response with Inputs from community of specialists
<p>Sample Enquiry: What are the addresses of Buddhist Temples or Monasteries belonging to the Mahayana Tradition in Singapore?</p>	
<p><b>Recommended Solution:</b></p> <p>The Singapore Buddhist Federation is the umbrella body for Mahayana Buddhism in Singapore. This is their homepage: <a href="http://www.buddhist.org.sg/">http://www.buddhist.org.sg/</a></p> <p>Most information in the homepage is in Chinese. Examples of three major Buddhist temples for Mahayana Buddhism are:</p> <ul style="list-style-type: none"> <li>• Phor Kark See temple</li> <li>• Kwan Im Thong Hood Cho Temple</li> <li>• Shuang Lin Cheng Huang Temple (Formerly known as Siong Lim Temple)</li> </ul>	<p><b>Recommended Solution:</b></p> <p>The Buddhist community in Singapore does not have a complete list of Mahayana Buddhist organizations. Nevertheless, a list of almost all the 136 Buddhist organizations in Singapore can be found on this website. This website is used frequently by the local Buddhist community for events and courses:</p> <p>Source: For You  <a href="http://www.4ui.com/activity/activity.htm">http://www.4ui.com/activity/activity.htm</a>            Click on the individual temple listing to view their addresses.</p> <p>Most of the organizations in the list with Chinese names are Mahayana Buddhist organizations.</p> <p>We have also gotten in touch with the Buddhist Library in Singapore and the librarian will be sending us a book containing the print version of the list similar to the website listed above. We will get in touch with you again when we receive the book.</p> <p>The Buddhist Library has also advised us that if you would like to visit a Chinese-speaking Mahayana temple, then any Chinese Buddhist temple is Mahayana. This includes Bright Hill Temple (at Sin Min Road), Shuang Lim Temple (at Toa Payoh) and the Venerable Ming Yi's temple in Paya Lebar. If you would like to visit an English-speaking Mahayanist temple, then perhaps a trip to the Tibetan temple in Pasir Ris would be helpful.</p>

### Customer satisfaction

The numerous compliments from library customers are strong evidence of their satisfaction with the substantial list of recommended resources sent to them. Below are some of the compliments received:

- i) **Well done! A comprehensive response to my enquiry. Appreciate the provision of various website addresses. The directory posted on “For You Magazine” website is especially useful.**
- ii) **I am so happy! Just read the attachment after replying to you email a few seconds ago. The short write-up of Mr Yong Nyuk Lin is good enough for my National Education display board. FYI, I have been searching for Mr Yong’s info for quite sometime. Finally it is done! All thanks to you & your at NLB & Reference Point!**

### Staff satisfaction and improved learning curves for new librarians

Staff are happy as they enjoy the benefits of sharing and collaborating and that they are able to bring about a better level of service for customers. New librarians or those who are not knowledgeable in the subject areas can also learn and enhance their reference capability and subject knowledge by viewing the discussion threads and contributions coming from a range of experts from different backgrounds. All these have led to an exponential growth in knowledge within the organisation. Below are some positive comments gathered from staff:

- i) **Thanks also to everyone for your invaluable inputs, suggestions and advice! This NOS system is great :-)**
- ii) **I am really impressed with the sharing and willingness to give their time from our fellow colleagues, without whom I would have no clue on how to handle this enquiry. The NOS spirit and the equation “1+1>2” :-)**

### Creation of a knowledge repository

Since the launch of the NOS system in May 2007, an estimated 1211 discussion threads have been created and this knowledge repository is expanding daily. There is a record of 2249 reads, indicating that staff have viewed the content in NOS 2249 times, demonstrating a healthy self-learning culture.

### **Next Steps**

#### Self-Service Enquiry Database of Past Enquiries

The NOS collaborative platform has led the project team to further innovate in the areas of knowledge management. A new project looks into the packaging of the reference enquiries and answers into a self-service enquiry database for librarians and



library customers to access and re-use. Being a searchable database, it will reduce the time required by librarians to identify and select resources for similar enquiries that they receive. Usage of library's resources will also be increased.

### External Collaboration

As the NOS collaborative platform can easily be extended to librarians and subject experts from anywhere, plans are well underway to extend the collaboration platform to the library community and subject experts within Singapore as well as overseas. It is hoped that the collective wisdom or knowledge of librarians and subject experts from both locally and internationally can be tapped on to bring the best resources within the reach of the information seeker.

### **Conclusion**

The NOS platform manifests the principle that collective knowledge is greater than the sum of individual wisdom. Through the collaborative platform, different communities of librarians and subject experts come together to provide tips on complex enquiries and to share and learn virtually anywhere, anytime.

Apart from bringing about a higher and better level of reference and information service for all library customers, the NOS platform also functions as a valuable knowledge repository and an effective training tool for librarians. Staff who participated in the prototype gave feedback that they have learnt and discovered new knowledge. The NOS has effectively helped to foster and promote a workplace-learning culture.