Inspiring Next Generation Entrepreneurs: Connecting Small and Medium-sized Enterprises (SMEs), Schools and Public Libraries through Information Services

Lee Yee Fuang
Public Library Services, National Library Board, Singapore.
LEE_Yee_Fuang@nlb.gov.sg

Sharlene Goh
Public Library Services, National Library Board, Singapore.
Sharlene_GOH@nlb.gov.sg

Abstract:

'50 Schools, 50 SMEs', is an innovative way for the public libraries of Singapore to make research and reference work purposeful to students and local companies, in support of the national effort to tell the Singapore Story. To celebrate Singapore's 50th birthday in 2015, the National Library Board (NLB) partnered with SPRING (The Standards, Productivity and Innovation Board) for the '50 Schools, 50 SMEs' initiative to collect inspiring stories from local businesses that have played a part in Singapore's economic history. Students from 50 secondary schools visited Small and Medium-sized Enterprises (SMEs) from a wide range of industries, interviewed their founders/leaders, and produced their findings in a story supported with research. Public librarians conducted a series of instructional workshops that covered writing, interviewing and information literacy skills for the students. These skills were necessary for them to write a factual story on the SMEs. Working hand-in-hand with their teachers, the librarians also provided one-to-one tutorial sessions with students to guide them in their research and assisted them in editing. Students' masterpieces were published on Wikipedia and the Singapore Memory Project Portal. These published articles help to reach out to more youths across the world and inspire them through our SMEs' stories. Through this authentic learning approach, the students had the opportunity to connect with local businesses for a greater appreciation of their contributions to Singapore, but also used library resources to document entrepreneurial stories. Students applied what they learnt in an actual task, and so there is not only just head knowledge, but also real-life application. This initiative also opens up work attachment opportunities for students, as it exposes them to local entrepreneurship and motivates the young generation to pursue careers with local SMEs, or even start their own businesses.

Keywords: National Library Board Singapore, reference services, entrepreneurship, information literacy, Singapore SMEs.

1 INTRODUCTION

Singapore is a bustling city filled with activity, with a 5.54 million population resting on a land area of 719 square km. As of June 2015, the workforce in Singapore consists of 3.61 million people, with 2.23 million residents making up the bulk of it. With 180,000 local Small and Medium-sized Enterprises (SMEs) in Singapore, the SME sector makes up 99% of local businesses and employs 70% of our workforce, while generating almost half of the nation's Gross Domestic Product (GDP) which was at 101,989 million dollars (SGD) in 2015.

It was Singapore's Golden Jubilee in 2015 and it provided a great opportunity to connect people with the community. Thus, the National Library Board (NLB) collaborated with SPRING (The Standards, Productivity and Innovation Board) for the '50 Schools, 50 SMEs' initiative.

2 BACKGROUND TO THE '50 SCHOOLS, 50 SMES' INITIATIVE

The '50 Schools, 50 SMEs' initiative was a two-year project leading up to Singapore's 50th birthday celebrations in 2015. The objectives of the initiative were to:

- Connect students to local SMEs,
- Document entrepreneurial stories and,
- Celebrate the SMEs' journeys and contributions to the nation's economic growth.

The participation of the SMEs was valuable to Singapore's youths, especially since these companies have contributed to nation building by growing the economy and creating jobs. Through this initiative, students can fully appreciate the entrepreneurs' talents and learn lessons from them up close. Ms Olivia Lum, Executive Chairman and Group Chief Executive of Hyflux, which is a water treatment specialist business based in Singapore, also elaborated on how this initiative would benefit the community:

> "It's a win-win for students and companies. For the students, they get to learn how businesses are being run and from the companies' point of view, because of these stories, companies may get more people to notice them… In a tight labour market like Singapore, every company wants to get noticed, so this is one way for companies to be profiled" (Lee, 2014).

It is indeed difficult for SMEs to survive, as one of their main obstacles is attracting the manpower they need to grow in Singapore due to the tight labour market. Thus, this initiative was also a way to thank the companies for their years of hard work and perseverance, and share their experiences with the nation.

Jean Ang, the group general manager of Chop Hup Chong Food Industries, which was one of the SMEs that took part in the initiative, remarked in a TODAY news article on how they had initially developed as a local business and expanded to other parts of Asia, such as China and Korea, over the years. They saw the '50 Schools, 50 SMEs' initiative as an exciting opportunity "to share our journey from being a local company to a regional one" (Lee, 2014).

The project captured a part of the Singapore story and preserved stories of the SMEs on a platform which the public could easily access, with the hope of inspiring the next generation of young entrepreneurs.

2.1 Reaching out to the Community

NLB and SPRING tapped on their existing network of partners to gather the students and SMEs needed to fulfil these objectives. NLB has been running an outreach programme since 2013 called the

Read@School programme, which is now regularly reaching out to 145 secondary schools[1] as of 2015. With a presence of 180,000 local SMEs, SPRING plays an important role in Singapore by working with local businesses to "build capabilities and improve productivity, find growth opportunities, enhance accessibility and increase outreach, and nurture innovative start-ups" (SPRING Singapore, 2015).

NLB successfully reached out to students from 51 secondary schools. Some schools could send in more than one team of students, so this resulted in 61 participating teams. At the same time, SPRING invited 61 SMEs to come on board, from a wide range of industries, such as healthcare, food & beverage, departmental store and food manufacturing.

After collating the list of participating schools and SMEs, each team of students was paired with a company. One teacher was also appointed as a mentor for each team of students. NLB and SPRING kept track of and facilitated the progress of both students and SMEs, to ensure they were on track to meeting the main objectives.

2.2 Initiative Outcomes

Each team of students had to produce an article capturing the story of their assigned company. To provide them with a holistic experience, students were tasked to gather primary and secondary data. In order for students to have a first-hand experience in collecting the primary data needed to write a story on their enterprise, they were provided with the following guideline:

    a) An interview with the company's CEO, founder or owner to find out about the company's history and why it was set up.
    b) Another interview with an interesting personality, for example, a long-serving employee, or a second-generation boss.
    c) A visit to the company's office, outlet or factory for students to understand how their business is run.

SMEs were advised to ensure that students have sufficient time to record enough primary data to work on their story later on. After students completed their interviews and visit to the company, they translated their findings into an informational report supported with secondary research. Once they completed their article, it was shared with the SME before uploading it onto Wikipedia. The Wikipedia platform was identified as a way for stories of Singapore's businesses to reach out to a wider audience and allow other users from the Wikipedia community to build on these articles too.

2.3 Implementation

The '50 Schools, 50 SMEs' initiative was rolled out in two phases. Each phase began with the process of inviting schools and SMEs to come on board first, after which, librarians from NLB conducted a training session for students. Then, each team of students was given approximately 8 to 9 months to get the information necessary on their company and write their story.

The first phase rolled out in November 2013 and consisted of 23 pairs of student teams and SMEs. But as news of the initiative spread and it gained more attention, more schools and SMEs wrote in with their interest to come on board and contribute in capturing a piece of Singapore's history. Thus, the second phase of the project started in July 2014, consisting of an additional 39 pairs of student teams and companies.

---

[1] Secondary schools consists of students aged 13 to 17.

Figure 1: *Timeline for the implementation of the initiative*

3 CONNECTING REFERENCE SERVICES TO THE COMMUNITY

Public librarians from NLB conducted an instructional workshop for students before they started to gather primary and secondary information on their companies. The workshop was required as most secondary school students do not receive formal training in Information Literacy (IL) and research techniques in their school curriculum. Studies conducted by Foo et al. (2014) and Chang et al. (2012) showed that while Singaporean secondary students generally do possess lower-order IL skills, scoring better in aspects such as task definition, information seeking strategy, and location and access, they were not familiar with higher-order IL skills such as information use, synthesis, and evaluation. Higher order IL skills were necessary as students had to use, synthesize and evaluate information while writing their article. Additionally, a previous study presented the finding that school media resource libraries in Singapore are generally viewed more as a "center for recreational reading" (Majid, Chaudhry, Foo, & Logan, 2002), thus the public librarians came in to provide reference services for the students too.

This initiative was a meaningful way for students to learn about information literacy and NLB's reference services. Moreover, research has also suggested that "project-based learning provides a good platform for students to learn IL skills as well" (Mokhtar, Foo, & Majid, 2007). Schools were also excited for their students to have this authentic learning experience. It was an active approach towards learning and studies have shown that "students learn best when they are engaged in active learning" (McManus, 2001), compared to a passive form of learning where they could have been assigned to write a report based on case studies of local businesses. Through this initiative, students interacted directly with the SMEs to understand their entrepreneurial spirit and drive, and such learning points were best learnt face-to-face.

3.1 Training the Students

The topics covered during the workshop were interviewing, information literacy and writing skills. We tapped on the expertise of colleagues from NLB programmes such as Singapore Memory Project (SMP) and S.U.R.E. (Source. Understand. Research. Evaluate), to cover the interviewing and information literacy skills. SMP specialises in collecting primary research data by gathering stories and memories relating to Singapore. They trained students by going through the steps necessary for them to conduct a successful interview, starting from doing research to understand their assigned

company and the interviewee's background, conducting research on possible topics to ask, to sharing tips with students on getting the best stories from their interviewees.

On the other hand, S.U.R.E is a nation-wide information literacy campaign headed by reference librarians from NLB. During the training session, students were taught about primary and secondary research, learnt how to identify what information they need, how to locate resources, types of resources, search strategies, and most importantly how to review and evaluate their sources. Some of the recommended resources were Newspaper SG (an online archive of Singapore and Malaya newspapers dating from 1831 to 2009), Archives Online (a database containing primary resources on Singapore's heritage dating back to the 17th century) and NLB eResources (an extensive collection of online databases covering various subjects).

As the articles were eventually intended to be uploaded on Wikipedia, the public librarians trained the students in writing in a style suitable for Wikipedia as well. The training session also served as a platform for students and teachers to clarify with NLB if they were unsure of the project outcomes. To facilitate the publication of the articles, the Wikipedia writing guidelines were provided to SMEs, so that they understood that the article featuring them needed to be factual. The guidelines helped to mitigate issues where the SME might push for an advertorial agenda in the article.

3.2 Scope of Reference Services

With the initiative being the first of its kind in Singapore, and paired with the fact that secondary school students do not have formal training or experience in most aspects of research techniques, students were highly encouraged to consult with the public librarians for help.

Interview questions: If students had trouble formulating interview questions, public librarians pointed them to secondary sources on the company and their interviewee(s), and suggested possible areas for them to dig deeper with questions that expanded beyond the existing information. Students would also send their list of questions to the librarian to check if their questions were relevant to the article too.

Writing the article: The librarians spent majority of their time helping students with their article. For example, students struggled with finding secondary sources relating to their company. The librarians would clarify what their angle of their story was so they could narrow down and provide the students with the most relevant sources relating to their company. The librarians also pointed students to databases that they can look up for more information too. After students had completed their first draft, they sent it to the librarians to check that their article is aligned with Wikipedia's guidelines. The main areas we looked at were:

1) Ensuring that the content is not plagiarised.
2) Checking that their references are cited correctly and are authentic sources of information.
3) Verifying that information extracted from their sources is accurate and not taken out of context.
4) Checking that their article is a factual piece, as it is not intended to be an opinion piece or an advertorial.
5) Editing their work to remove instances of promotional language.

If such problems were spotted in their article, it was communicated to the students and the article was sent back to them for revisions. In situations where students needed more guidance, one-to-one sessions were arranged where students could consult with the librarian directly and get advice on revising the article on-the-spot.

Once the team of students had completed the necessary revisions to the article, it was sent to the SME for their perusal before the students published it online. Some companies requested to add in

additional information to their article, and sought the librarian's help to do so. Thus, librarians assisted the SMEs by locating sources that supported the information they wanted to include in the article.

After the article was approved by the SME, students were tasked with uploading their article on Wikipedia. Although Wikipedia has a comprehensive guide for users to learn how to contribute and edit content on their website, the information provided was too overwhelming as the students had no prior experience contributing content to Wikipedia. Thus, the librarians prepared a simplified digital guide on uploading articles on Wikipedia which extracted the necessary steps from the website, making it easier for students to understand and complete their task. If students were still unable to upload their article on Wikipedia, they could request for tutorial sessions and get guidance from the librarians.

It was also observed that after the articles were uploaded, the Wikipedia community had also made further edits to some of the articles, expanding and updating information on the local businesses.

3.3 Sparking the Entrepreneurial Spirit

Students were collecting primary data through their visits to the company and by conducting interviews, and learning more through secondary research in writing their article, but at the same time, they were also actively learning about the entrepreneurial spirit needed to start and grow a business. Many were inspired by the hard work local entrepreneurs had put in, and their passion and perseverance in working to become what they are today. Here are some examples of what the students had done as part of their primary research with the SMEs:

Students from Crest Secondary School visited Sheng Siong, a local grocery and fresh food supermarket retailing chain in Singapore, which had humble beginnings as family-run pig farming business in the 1970's. They took a tour around Sheng Siong's warehouse and reflected on things they were surprised to learn about the company during their visit, such as the provision of free lunch meals to all employees via a central canteen, meeting a surprisingly affable and approachable CEO, the company's use of solar panels on the roof and how they recycle rain water for use in their warehouse.

Pasir Ris Secondary School students visited Kee Song Poultry, a local poultry company which provides poultry farming and processing services. After visiting a chicken farm and slaughtering house for the first time, students discovered how tough the employees' jobs were and learnt about the stringent process they adhered to ensure that the chicken was safe and healthy for consumption.

Students from Dunearn Secondary School visited Udders to gain insights on how a ice-cream parlour franchise is run in Singapore. They were inspired by the SME's creativity and courage to be different, evident in their bid to regularly invent original and unique ice-cream flavours. They even got to sample Udder's ice-cream, ranging from flavours such as 'Strawberry Fields' to 'Mao Shan Wang Durian.' Their takeaway was that entrepreneurship was not only about having a passion to pursue one's dreams, but was also about managing relationships between people, external and internal stakeholders.

4 CELEBRATING THEIR ACHIEVEMENTS

After both phases of the initiative ended in May 2015, the project culminated in an event on 25th May to celebrate the contributions from the students and SMEs. The event consisted of a dialogue session with Singapore's Social and Family Development Minister, Tan Chuan-Jin, and also gave students an opportunity to re-connect with the companies they had worked with earlier.

Students were elated to have the chance to ask Minister Tan their questions relating to the theme of "Past, Present and Future of Singapore's Entrepreneurs" during the dialogue session, and interacted

with Minister Tan and their SMEs up-close and personal as well. They took away meaningful insights on the changing entrepreneurial landscape in Singapore during the event as well.

| Figure 2: *Minister Tan posing with students for a 'selfie.'* | Figure 3: *Minister Tan taking questions from the floor* |

Chelsea Sim, a Human Resource executive at 2359 Media who had worked with students from Edgefield Secondary School, commented on her personal blog that she loved attending the '50 Schools, 50 SMEs' held on 25th May 2015. She also mentioned that "there is a very real need for youth to learn about all things Singaporean – our music scene, our literature scene, our start-up scene – and be proud of them" (Sim, 2015).

At the end of the initiative, several secondary schools proudly highlighted their students' experience and work on their websites. Yishun Secondary School even invited their students to talk about their experience working on this project and to share their learning points with the school during their assembly period.
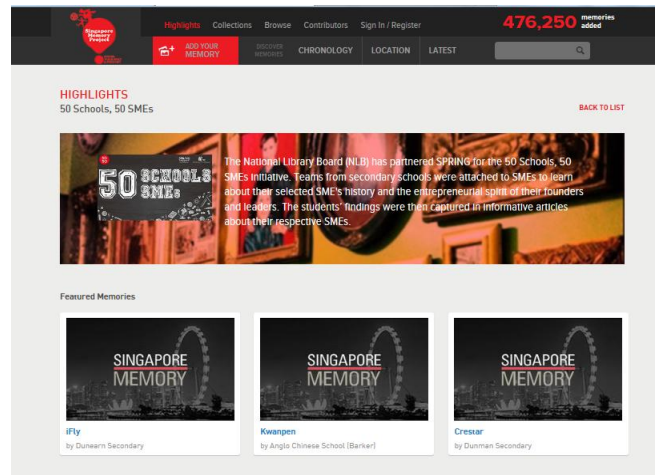
5 CHALLENGES

The main challenge of the project was publishing the article on Wikipedia. Wikipedia was initially identified as an appropriate platform for publication as it had a wide and international reach, but it did not take into account that the database's guidelines was at odds with the initiative's objectives.

For example, a number of the local SMEs were small businesses or established recently, or both. Thus, these companies had very few secondary sources available on it that could be incorporated into the article. Due to the lack of secondary sources featuring the smaller and newer SMEs, Wikipedia editors rejected these articles or flagged them up on the basis that these companies were not noteworthy enough, and that the articles appeared to be an advertisement for the SME. Additionally, Wikipedia did not accept original research, thus most of the primary data recorded by students during their interviews and visits to the SME, had to be removed from the article.

As the students had already put in a lot of effort to write these stories, we identified the Singapore Memory Project (SMP) portal (www.singaporememory.sg) as an alternative platform to host them. According to their website, the Singapore Memory Project is a nationwide initiative that aims to "collect, preserve and provide access to Singapore's knowledge materials, so as to tell the Singapore Story," and these materials are hosted on their online portal. Although the SMP portal has a smaller reach compared to Wikipedia, its objectives are in line with what the '50 Schools, 50 SMEs' initiative's aim to document stories of our local SMEs. However, once the stories are uploaded on the SMP portal, users in the community can no longer make edits to the article directly, unlike on Wikipedia.

In the end, the articles were published on both Wikipedia and the SMP portal, so that if articles were removed or rejected on Wikipedia, there would still be an existing copy available online via the SMP portal.

Figure 4: *Stories are hosted on the "Highlights" page on the Singapore Memory Project Portal*

6 CONCLUSION

Although, there were challenges in finding a suitable way of showcasing the initiative outcomes, the '50 schools, 50 SMEs' initiative was successful in connecting students with SMEs, with reference services supporting it in a meaningful way. Not only was it an enriching experience for the students, the community was brought together to celebrate the successes of the SMEs as well. Ng Yan Ting, a student from Zhonghua Secondary School, reflected on her experience on the school's website: *"It got me thinking that having good academic results is one thing, but to be able to be a successful entrepreneur, one must be willing to take risks and not be held back by failures or [a] fear of failing. One must continue to strive and learn from previous mistakes in order to become successful. Therefore, failures can actually be beneficial for aspiring entrepreneurs. I suppose [the] same can be said about the challenges that we face in school too."*

The founder and director of nature-based events company Gardenasia, Kenny Eng, took on the role of an entrepreneurship mentor to students from Jurongville Secondary School. He commented to The Straits Times that the entrepreneurial environment in Singapore is conducive as "[a]nyone can start a business. Mentors are all around, and the chances of them succeeding are much higher than in the past" (Hio, 2015). Singapore's Social and Family Development Minister, Tan Chuan-Jin, also remarked that he found value in students learning about entrepreneurship from local businesses, and had expressed his hopes for the initiative to become a regular programme. As the nation looks to continue growing the entrepreneurial spirit, this collaborative initiative was a timely one that not only engaged the community, but also helped them to better use the reference services provided by our librarians.

References

Chua, M., & Azli, N. (2014, October). *Making Bookworms out of Teens: A Neverending Story*. Paper presented at International Federation of Library Associations and Institutions, France, Lyon. Retrieved from http://www.reseau-canope.fr/ifla-seminairebnf/pdf/Chua_article.pdf

Chan, F. (June 10). From pig farmer to supermarket chain owner. *The Straits Times*. Retrieved from http://eresources.nlb.gov.sg/newspapers/Digitised/Article/straitstimes20090610-2.2.54.4.aspx

Chang, Y. K., Zhang, X., Mokhtar, I. A., Foo, S., Majid, S., Luyt, B., & Theng, Y. L. (2012). Assessing students' information literacy skills in two secondary schools in Singapore. *Journal of Information Literacy,* Vol. 6, No. 2, pp. 19-34. http://dx.doi.org/10.11645/6.2.1694

Foo, S., Majid, S., Mokhtar, I. A., Zhang, X., Chang, Y. K., Luyt, B., & Theng, Y. L. (2014). Information Literacy Skills of Secondary School Students in Singapore. A*slib Journal of Information Management,* Vol. 66, Issue 1, pp.54 – 76. http://dx.doi.org/10.1108/AJIM-08-2012-0066

Hio, L. (2015, May 25). Take risks, try different things: Students learn from local established SMEs. *The Straits Times*. Retrieved from http://www.straitstimes.com/singapore/take-risks-try-different-things-students-learn-from-local-established-smes

Kee Song Group. (2016). Corporate Profile. Retrieved from http://www.keesong.com/corporate/corporate-profile/

Lee, Y. N. (2014, August 27). Students to tell stories of firms that grew with S'pore. *Today*. Retrieved from http://www.todayonline.com/business/students-tell-stories-firms-grew-spore

Loh, D. (2015, May 26). Secondary school students may get more entrepreneurship opportunities. *Channel NewsAsia*. Retrieved from http://www.channelnewsasia.com/news/business/secondary-school-students/1873230.html

Majid, S., Chaudhry, A., Foo, S., & Logan, E. (2002). Developing 21st century school media resource libraries for Singapore: An assessment and proposal from a library and information science education taskforce. *Proc. 31st Conference of the International Association of School Librarianship and the 6th International Forum on Research in School Librarianship (IASL Malaysia 2002):* School libraries for a knowledge society, Petaling Jaya, Malaysia, August 5-9, 217-224. http://www3.ntu.edu.sg/home/sfoo/publications/2002/2002iasl_fmt.pdf

Mokhtar, I. A., Foo, S., & Majid, S. (2007). Bridging between information literacy and information technology in Singapore schools: An exploratory study. *Education, Knowledge & Economy Journal,* Vol 1, Issue 2, pp. 185-197. http://www.ntu.edu.sg/home/sfoo/publications/2007/2007jeke_fmt.pdf

McManus, D. A. (2001). The Two Paradigms of Education and the Peer Review of Teaching. *Journal of Geoscience Education,* Vol 49 Issue 5, pp. 423-434. http://nagt-jge.org/doi/pdf/10.5408/1089-9995-49.5.423

National Library Board. (2016). About the S.U.R.E. campaign. Retrieved May 20, 2016, from http://www.nlb.gov.sg/sure/sure-campaign/

Rajaratnam, R. (2013, May). *For the Love of Reading! New Strategies to Engage the Next Generation of Readers*. Paper presented at International Federation of Library Associations and Institutions, Singapore. Retrieved from library.ifla.org/71/1/105-rajaratnam-en.pdf

Sim, C. (2015, May 30). 101 | Full Plates. Retrieved May 20, 2016 from https://thechelseabracket.wordpress.com/tag/2359media/

Singapore Department of Statistics. (2016, May 20). Statistics Singapore - Latest Data. Retrieved May 20, 2016, from http://www.singstat.gov.sg/statistics/latest-data#1

Singapore Department of Statistics. (2016, January 12). Gross Domestic Product At Current Market Prices, By Industry, Quarterly. Retrieved May 20, 2016, from http://www.tablebuilder.singstat.gov.sg/publicfacing/createDataTable.action?refId=1907

SPRING Singapore. (2014, August 26). Celebrating SG50 With The Hands That Built Our Nation. Retrieved from http://www.spring.gov.sg/NewsEvents/PR/Pages/Celebrating-SG50-With-The-Hands-That-Built-Our-Nation-20140826.aspx

SPRING Singapore. (2015). Grow your business. Retrieved May 20, 2016, from
www.spring.gov.sg/Resources/Documents/Corp_Marketing_Brochure_Eng.pdf

Singapore Memory Project. (n.d.). FAQs. Retrieved from http://www.singaporememory.sg/Help-Info#faqs

The Columnist. (2013). The Udders Ice Cream Experience: An Interview with Wong Peck Lin.
Retrieved from http://consulus.com/the-udders-ice-cream-experience-an-interview-with-wong-peck-lin/

Yishun Secondary School. (n.d.) YSS SG50 CELEBRATIONS. Retrieved May 20, 2016 from
http://www.yishunsec.moe.edu.sg/announcements

Zhonghua Secondary School. (2015). Dialogue Session with Minister Tan Chuan Jin.
Retrieved May 20, 2016, from http://www.zhonghuasec.moe.edu.sg/others/highlights/dialogue-session-with-minister-tan-chuan-jin