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The next step – the Makeover from Accessible Collections to Attractive Collection

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Abstract:

The National Library Board (NLB) of Singapore through its network of public libraries around the nation provides trusted services that are professional and engaging to its patrons. In its pursuit of life -long learning, NLB continuously improves its services to its users and in this regard has recently revamped two of its public library's collections namely library@orchard and Early Literacy Library (ELL). It has made an audacious attempt to go beyond facilitating access to our collections to engaging our patrons by providing attractive collections to engage our patrons by providing attractive collections – collections that are organized by simple, intuitive categories.

This paper would explore the prototype attempt to go beyond facilitating access to our collections and it describes how in order to enhance the browsability and findability of the collection, an innovative approach of applying hybrid subject categorization, that is using a standard call number with Dewey Decimal Classification and the assigned design clusters and subject categories was adopted. It will also explain some of the learning points our librarians experienced in creating an alternative means of classification.

Keywords: Classification, Categorisation, Categories, Collections, Dewey Decimal, browsability, findability,

Introduction

The advent of the internet may have replaced the importance of libraries as a repository for knowledge. Yet it did not dampen the spirit of libraries to be relevant. Traditionally libraries have played integral roles in human history in propagating knowledge. What libraries strive to do then is to take extra steps to improve their services to meet the needs of the communities and to create a good learning experience for them.

Library blue prints such as Library 2000, Library 2010 and Library 2020 master plan provided a framework in which the National Library Board (NLB) purposed to continuously expand the nations' capacity to learn and positioned itself as a stalwart champion for reading. In its vision to inculcate Readers for Life and Learning Communities and create a Knowledgeable Nation and a mission to make knowledge come alive, spark imagination and create possibilities, NLB aims to provide a trusted, accessible, and globally connected library and information service through the network of National Library and Public Libraries in collaboration with strategic partners and innovative use of technology. Thereupon, NLB pledging its core values of passion for learning, commitment to customer service, valuing the community and working together, constantly aims to improve its services to the clientele it is serving. In this spirit, NLB made an audacious attempt to re-organising the non- fiction books using an alternative approach at the newly opened library @orchard recently. This is an unique arrangement as compared to all other public libraries of NLB. It is "well within the competence of libraries" as Law (2011) also concurs that it is important for libraries to rethink the concept of service. In its aspiration to be a world class library, NLB has already been doing well in providing library users access to a rich array of information services and resources that are convenient, attainable and relevant. Now, it is timely to enhance the users' experience in their browsability and findability of materials in the library. Since public libraries ought to be instrumental in the "universal diffusion and enhancement of knowledge among the populace of a nation" (Azhikodan. 2010), librarians are expected to step up to become knowledge facilitators thus moving away from their traditional roles as being only information providers. NLB then considers it to be equally important to create and transform user experience although primarily every library desires the circulation of the books to be fundamental.

Scope

This paper discusses how NLB took an unorthodox approach by applying subject categorization that uses the standard call number with Dewey Decimal Classification (DDC) together with the assigned design clusters and subject categories to organise collections in library@orchard and Early Literacy Library (ELL).

Library @ Orchard, is situated in Singapore's busiest shopping belt, it aims to attract a wide range of discerning and cosmopolitan groups of library users. Being a design themed library for adults, the niche area focuses on four aspects of design namely, People, Space, Visual and Product while the fifth, Lifestyle Design is a representative collection in other subjects to cater to the general interests and needs of the target users of the libraries.

The ELL was launched in Jurong Regional Library and was rolled out in the Sembawang Public Library that was newly reopened on the fifth floor of the shopping centre on 5 November 2014.The Sembawang Public Library has an area called the Reading Deck where

parents and children can huddle together. The ELL collection here is just perfect for these avid readers. It will show how it implemented this innovative approach by engaging cataloguers from the technical division which is called Resource Discovery and Management (RDM) and librarians from the Public Library Services (PLS) division as well as staff from the Technology and Innovation (TNI) Division. The paper describes NLB's efforts to improve the browsability and findability of the collections. It will also examine some of the learning points our librarians experienced in creating an alternative means of classification.

Alternate classification approaches

The Public Library Division of NLB explored the possibilities of an alternative way to organise its collection for library@orchard as well as Early Literacy Library. (ELL) Prebora and Zitterb (2012) observe that the main advantage of s such a special system is "a more extensive categorization in the desired area which allows a classifier to specify subjects" which otherwise would have lost in the general systems. Thus it actually enhances the browsability and findability of the users. Unequivocally, the users then will be able to not only to locate what they are looking for but also to chance upon what they did not know about before consulting the collection. This enriches the users' experience of self- discovery and connects them to the collection in a meaningful way.

Although Dewey Decimal Classification system (DDC) is the world's most widely used library classification system created by Melvil Dewey in 1876 with an intent to organise all information, clearly many users "don't get that Dewey Decimal thing."(Matthews, 2009). In their 2013 Knowledge Quest article entitled "One Size Does Not Fit All: Creating a Developmentally Appropriate Classification for Your Children's Collection," Kaplan et al, use the Dewey 600s or Technology section to illustrate how unintuitive it can be for children. For instance, subjects that fall in the category are: Inventions, Human body, Electricity, Robots, Cooking, Sewing, Woodworking, and so forth. There are several other examples across the spectrum. It may appear as illogical to most non-librarians. Yet, librarians are not ready to ditch a century old classification system that is systematic and are thus slow to adopt to another Classification System that proposes a user friendlier and more of a bookstore layout. Librarians have thus been in a classification struggle as to whether "To Dewey or not to Dewey", "Ditch Dewey", "Keep Dewey," Dewey and something else".

Perry Branch Library in Maricopa County, Arizona had employed an alternative system adopted from BISAC (Book Industry Standards and Communications), a keyword- based system that is used by the book retail and publishing industry. Since then other branches in the Maricopa County Library District as well as various other libraries across the United States have emulated the" bookstore" approach in classifying their collections acclaiming that BISAC is relatively simple and user friendly in arranging their collections in the library.

However, BISAC system is not exhaustive as it intrinsically classifies books into 52 broad categories and each with additional levels of specificity. Interestingly, it is the non- librarians such as the publishers who may involve editors in determining the categories as they know the best about the books and what the customers may be looking for.

These categories are advantageous to the bookstores which organise their materials. However, the complication arises when there are multiple BISAC headings assigned to in the computer system where the BISAC codes may not visible to the end users. Indeterminately, BISAC may be favourable to enhance browsing and not designed to finding a known item. It

is neither structural nor notational. There is yet another classification system created by Markham Public Library (ON, Canada) that is called the C3 system or the Customer Centred Classification system that helps the library to merchandise its collection in a more flexible way. "The four digit numerical classification system facilitates bookstore style browsability along with the specificity to locate items that Dewey provided." (Matthews, 2009). In other words, by ditching DDC, they have contrived their own classification system that is numerical and word based.

Therefore, holding on to Dewey Decimal or a variant of it is likely to be the case for NLB. It is not ready to ditch DDC. Thus, NLB made an audacious attempt to adopt an alternative categorisation system for library@orchard and Early Literacy Library (ELL) without ditching DDC but switching to a "mash-up" or what we call a hybrid approach. It is not a classification system per say but a categorization process that is based on the classification of Dewey. Using a mapping logic constructed by cataloguers to facilitate a curated, thematic focus, this mapping is fed to a computer program that has been developed in house to re-categorize our collections.

Before, we embarked on the task to re-categorise the collection, a project team was set up comprising of librarians as well as staff from processing and technology and innovation unit. The project team which is also called the Hybrid Categorisation team studied NLB's previous attempts to categorise the 10 most popular categories for the public libraries in 1999. With the management's support, a similar strategy was adopted.

ECN- Enhanced Call Number.

In 1999, a committee was commissioned to enhance the call numbers by adopting bookstore concept of the 10 most popular categories based on DDC. It was a brave move to roll out this categorisation to all the public libraries just as when the colour coding system was introduced in the same year. NLB also standardised the spine labels by incorporating all standalone labels across all the libraries. Previously, each library had it's own labels to arrange it's collections. Based on the feedback from the users of what the most popular categories would be, the committee also had discussions with librarians interacting with their users. NLB was adopting a customer perspective to deliver the services. It was an exciting time. It was helpful for the group of users who might just want to experience browsing and self- discovery.

In order to accede to the request from public libraries to identify the popular categories, a group of cataloguers designed the mapping logic using DDC as a guide. They provided the mapping rules based on DDC and Library of Congress Subject Heading (LCSH). The 10 most popular categories are, Arts, Business and Finance, Computer and IT, Cookery, Family and Parenting, Health and Fitness, Home and Garden, Recreation, Travel Guides and Pets and Animals. Class numbers varying from 000 to 900 have been applied based on the subjects. The classes can be wide-ranging but may not be a catch all. Further, the mapping logic also checks against the values in subject headings and title entries for the categories, annual reports, directories, dictionaries and university calendars. (See figure 1). Such specific requirements are needed to generate the enhanced call numbers. Several iterations were made to the mapping table over the years. When the DDC numbers are changed due to updated versions, the mapping table has to be refurbished. It must also incorporate the regular requests from the users. Based on the mapping logic, Technology & Innovation (TNI) team created a software program to generate the enhanced call number during item processing.

Figure 1

Categories	Subject	Spine label	Class Number	
			=>	>
	Arts	ART	700	790.1
			790.2	791.068
			791.069	791.1
			791.4	791.6
			792	793
			793.3	793.4
	Business & Finance	BIZ	330	333
			334	335
			336	340
			343.2	344
			343.03	343.034
			343.056	343.057
			343.067	343.071
	Business & Finance	BIZ	343.072	343.0725
			343.078	343.09

			343.2	344
			346.048	346.05
			346.065	346.066
			346.0662	346.06622
			346.07	346.086
			346.09	347
			364.168	364.17
			368.094	368.096
			368.81	368.82
			381	383
			389.63	390
			650	651.8
			651.9	660
		Computers & IT	COM	004 007
				384.3 384.5
				621.39 621.4
		Cookery	COO	641.5 642.6
		Family and Parenting	FAM	306.8 306.9

		618.2	618.3	
		646.78	646.79	
		649	650	
	Health and Fitness	HEA	155.9042	155.91
			610	618.2
			618.3	620
	Home and Garden	HOM		
	Recreation	REC	769.56	769.9
			790	791
			793	800
	Travel Guides	TRA	910.202	910.22
			910.41	910.46
			910.92	910.93
			913	919.904
	Pets and Animals	ANI	590	599.9
			636	637

			639.34	639.344

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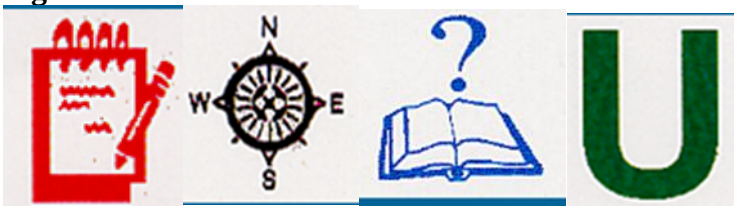
Figure 2: Icons for reference collection



Annual reports Directories Dictionaries University Calendars

library@orchard

In 1999, library@orchard was the first shopping mall library that was opened to the public just in the heart of Singapore's prime shopping district, Orchard road ,with a view to attract the 18 to 30 years old. The library closed in 2007 due to non-renewal of lease only to be open again on 23 October 2014 with a refurbished look and feel. Comparable to the other curated collections at the library@esplanade (performing arts), library@Chinatown (Chinese arts and culture), library@orchard hankers to reflect a customers' perspective in displaying its design themed collections with a focus on lifestyle, design and the applied arts.

The library@orchard is strategically located in Orchard Gateway which is a new shopping mall in Orchard Road, Singapore's bustling shopping belt. As Orchard Gateway delves to be the one stop for fashion aficonados, with numerous fashion retailers in the two tower building, library@orchard offers a design focused collection that appeals to all including design professionals, young adults, professionals and executives working around, tourists who may be passing through from all over the world with the objective to meet the information, recreation and leisure needs of these target groups.

During the year planning of the library, NLB involved Singapore Polytechnic in the design thinking process. A user-focused methodology was also employed. 100 people of whom worked or lived at Orchard Road were interviewed elaborately. Further, over 1, 000 persons responded in surveys at the prototype exhibition that was held in 2012 to study what the users want in the new library. (See, 2015)

The collection reflects a designer lifestyle. The collection also complements the collections in nearby libraries, Central Public Library and library@esplanade. The collection focuses on aspects of design namely, People, Space, Visual and Product and Lifestyle Design taking into consideration the user groups' lifestyle, interests and inspirations. In order to offer a customer centric perspective, NLB decided to take an innovative approach by applying a hybrid subject categorisation using a standard call number with Dewey Decimal Classification and by assigning design clusters and subject categories. Cautiously, only the non-fiction books are to be categorised.

Initially, there was a strong interest to adopt BISAC classification system for library@orchard's collection. Convincingly, after doing a feasibility study in March 2013, Resource Discovery and Management (RDM) group, the technical services arm of NLB proposed to adopt a hybrid categorisation approach instead. . A team comprising mainly

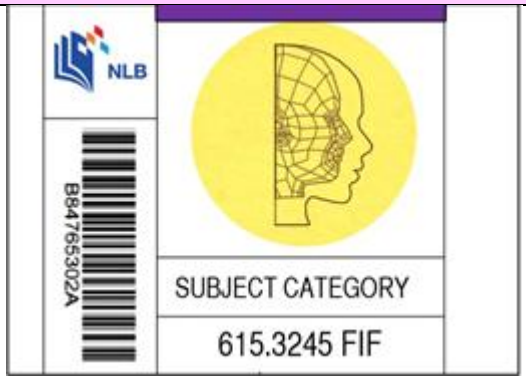
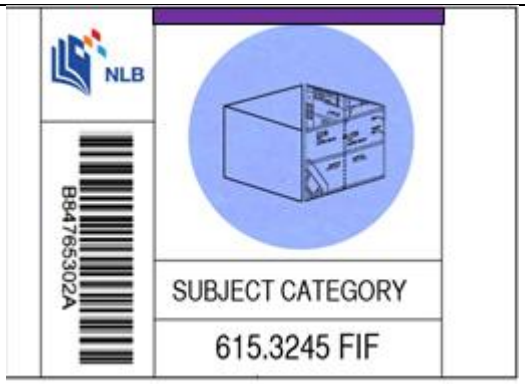
cataloguers from RDM was set up to embark on the project to re-categorise part of the collection for library@orchard. The team had to closely work with PLS and TNI group.

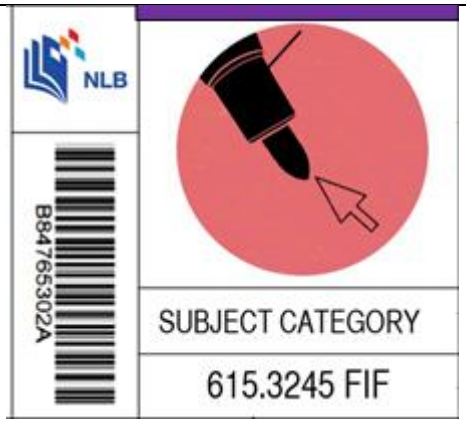
Hybrid Categorization

The team adopted a project management methodology in the planning process. It devised an implementation schedule by first identifying all the different tasks required to accomplish. It also clearly charted the objectives, the scope, key deliverables and completing criteria. The team decided to ensure that the processed books were made available on the library's shelves by March 2014.

The categorisation only applies to the non-fiction books. Fiction books, audio-visual materials and magazines are excluded. The team gathered user requirements regarding the clusters and categories. These requirements may have stemmed from the earlier user studies. More importantly, the manager and the librarians from library@orchard who understood the user needs almost precisely have defined the 5 clusters and 29 categories. Selection of books included works on various facets of fashion, costumes, photography, jewellery, other fashion accessories as well as comprehensive collection on designers and their works including other creative professionals in the design industries. The following are the clusters and categories. It is commendable that the clusters were designed by the librarian from library@orchard.

Figure 3

Clusters	Icons	Categories
People		• **Fashion** • **Portfolio** • **Entrepreneurs** • **People** • **Photography**
Space		• **Interior design** • **Architecture** • **Landscape design**

Product		• **Game design** • **Industrial design** • **Packaging** • **Furniture** • **Accessories** • **Handicrafts**
Visual		• **Printmaking** • **Typography** • **Advertising** • **Graphic design** • **Photography**
Lifestyle		• **Gastronomy** • **Self- enrichment** • **Cultures** • **Etiquette** • **Entertaining** • **Literary Pursuits** • **Travelogues** • **Miscellany** • **Wellness** • **Languages**
		•

The description of the hybrid categorisation suggesting a “mash-up” or “de-emphasized” cateogorization system that does not ditch DDC, albeit with user defined categories and clusters unique to library@orchard. As the categories are varied, the team had to clarify with

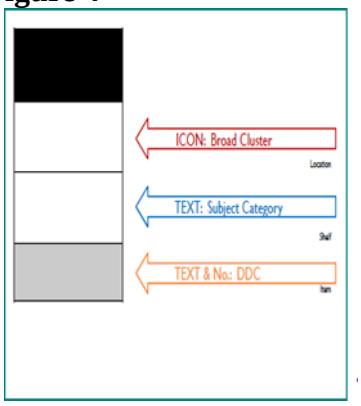
the PLS group on the understanding of the scope before the mapping table was created. The team met a few times in a month to gather such specific requirements. After consultation with the PLS group, the RDM project team of cataloguers met several times to study the given design clusters and categories and scrutinised the 23rd edition of the DDC laboriously. The cataloguers conscientiously identified the relevant DDC numbers to match the given categories. The final cut of mapping table was done to include new categories and refinements. It was completed in June 2013 and then was revised in July 2013. However, the team representative from TNI advised to test if the mapping logic works. The team had to test manually as the software could only be developed once the mapping logic is fixed. Cataloguers from the project team tested about 8, 000 titles that were catalogued for library@orchard. The team analysed the results and the feedback and decided to tweak the mapping table to further refine. As a result, the team made final iteration to the table in early Nov 2013.

The completed mapping table was then submitted to the TNI's team to create a software to accommodate the mapping requirements to generate standard call number with DDC and cutter number. The design clusters and subject categories are printed on the spine labels to facilitate shelving and browsing of the collection. The standard library classification and processing requirements are used for the fiction collections.

Hence, uniquely to library@orchard is then the display of call numbers in the OPAC and spine labels. The clusters and categories are being shown on the spine labels together with the existing library call numbers.

The following is an example of how the new spine label displays the cluster, category and DDC:

Figure 4



- English – Red colour band
- Chinese – Black colour band
- Malay – Green colour band
- Tamil – Blue colour band

The text of all categories is indicated in English. The language of the collection is indicated according to the colour band on the categories. For consistency, the colours representing the languages follow the current system.

The team submitted user requirements specifications to the TNI team and the document provided the information of LMS [Library Management System] Web Service enhancement (LMSWS) for library@orchard . The processing staff doing accessioning can then create or update Academic Course field (e.g. Visual Design/Typography) of the item in the item level information in the LMS. Based on the mapping rules below, LMSWS created and updated

the clusters and categories. Once the item information is updated by using LMSWS, existing academic course code can override according to mapping criteria.

The following is the mapping table that was created by the Hybrid project team**.**

Figure 5: Call Number Mapping Table

No	Cluster	Category	DDC range >=	DDC range <
1	Lifestyle Design	Culture & Society	300 338.09 338.9 382.456774 385 391.5 392 396 900 920	310 338.4 381.1 384.3 391 391.7 395 400 910.2 999
2	Lifestyle Design	Entertaining	642 793.2	643 793.4
3	Lifestyle Design	Etiquette	395	396
4	Lifestyle Design	Gastronomy	641 647.95 663	642 647.96 665
5	Lifestyle Design	Languages	400	500
6	Lifestyle Design	Literary Pursuits	800	900

7	Lifestyle Design	Miscellany**	Refer Rule 3	
8	Lifestyle Design	Self enrichment	100	300
9	Lifestyle Design	Travelogues	910.2	920
10	Lifestyle Design	Wellness	610 640 646.7 668.5 688.5 794	620 641 647 668.6 688.6 794.8
11	People Design	Entrepreneurs	338.01 338.4 381.1 384.3 650 657 658.51 658.567 658.7	338.09 338.9 382.456774 385 653 658.5038 658.564 658.575 658.823

12	People Design	Fashion	391 391.413 391.45 646 667 677 687 746.92 778.9974692	391.412 391.43 391.5 646.48 668 684 688 746.94 778.9974693
13	People Design	People Photography	779.2	779.3
14	People Design	Portfolios	621.3209 720.92 738.092 740.92 770.92 779.092	621.320929 720.929 738.0929 740.929 771 779.0929

15	Product Design	Accessories	391.412 391.43 391.7 646.48 685 688.2 739.27 745.5942	391.413 391.45 392 646.6 686 688.4 739.3 745.5943
16	Product Design	Furniture	684 745.1 749	685 745.2 750
17	Product Design	Game/Comp Design	004 006.7 776 793.932 794.8	006.7 006.8 777 793.96 795

18	Product Design	Handicrafts	666 688.7 730 738.1 739.4 745 745.5 745.7 746 748	667 688.74 738.092 739.27 740 745.1 745.59416 746 746.9 749
19	Product Design	Industrial design	658.5038 658.575 745.2	658.51 658.7 745.5
20	Product Design	Packaging	658.564 658.823 676 688.8	658.567 658.83 677 689
21	Space Design	Architecture	690 720 720.93	700 720.92 729

22	Space Design	Interior design	621.32 621.32093 645 729 746.94 747	621.3209 621.33 646 730 747 748
23	Space Design	Landscape Design	710	720
24	Visual Design	Advertising	658.83	660
25	Visual Design	Graphic design	700 741 750 791.4334	710 745 760 791.436
26	Visual Design	Photography	770 771 777 778.9974693 779.0929 779.3	770.92 776 778.9974692 779.092 779.2 780
27	Visual Design	Printmaking	760	770
28	Visual Design	Typography	686 745.6	686.4 745.7

Requirement on Logic Development

Besides mapping the categories to the DDC numbers, the team had to also think through the mapping logic to exact the categories. The following logic was developed to enhance the mapping.

Logic One:

> For the category "Game/Comp Design", map all titles falling within the DDC range as given into Game/Comp Design. In addition, MAP any titles (regardless of DDC) with a Tag 650 and values of either "$aComputer animation": OR $aComputer games$xDesign, INTO Games/Comp Design.

Logic Two: Define the cluster/category based on the call number mapping table

Please refer to call number mapping table

Logic Three: If the marc record has:

> i) Any of the DDC ranges for category Portfolio specified in the above mapping table OR
>
> ii) Tag 008/code 34 value a or b or c, do one of the following OR
>
> iii) Tag 600, or tag 650 has value "Biography" in subfield "$v",

System will continue to check 3(a) and 3 (b).

3 (a) If a title falls within any of the DDC Range specified for the categories Lifestyle Design,

PUT the title into the respective categories under Lifestyle Design DESIGN.

For example: Title "Profiles from the kitchen … " by Baker-Clarke, Charles Allen should be mapped to Gastronomy, although the Marc record has a Tag 650 $Cooks$zUnited States$vBiography.

3(b) if a title falls within any of the DDC Range specified for the categories under any of the following 4 clusters of

1) PEOPLE DESIGN;

2) PRODUCT DESIGN;

3) SPACE DESIGN and

4) VISUAL DESIGN, PUT title into the category "Portfolio" (Under PEOPLE DESIGN) ;

Logic Four: Any title that falls out of the DDC ranges given in the above table, it should be under category "Miscellany" (cluster "Lifestyle Design").

The project team conducted an audit on the collections of library@orchard prior to the opening. They found some gaps in the mapping and promptly activated other cataloguers to screen through the entire non- fiction books so that the team could study the possibilities of adding on more DDC numbers to the specific categories. The team spent a few days tirelessly to tweak the mapping table without any overlapping of DDC numbers. This had been in

actual fact a tedious process for the team. The team eventually amended the mapping table and repeated the whole process with TNI.

Although, the mapping table derived from DDC is not extensive but it was a bold attempt to categorise the non- fiction collection using the . In this undertaking, much effort was made by different divisions namely, RDM, PLS and TNI. The impact on backend and frontend processes is also seemingly considerable.

Early Literacy Library (ELL)

Another example of adopting the hybrid approach is ELL. The National Library Board of Singapore (NLB) has championed reading for decades as a basic skill for functional literacy. A child's success in school and throughout life depends largely on the ability to read. Furthermore, a child who learns to read in an engaging manner at a pre-school level is more likely to be a lifelong reader; developing lifelong readers is one of NLB's aims.

The concept of the Early Literacy Library (ELL) was thus conceived, with the target beneficiaries for this initiative being not only pre-schoolers but also their parents.

The ELL is to have 5 adjacent but distinct (in terms of décor and theme) sections, namely "Sense & Sensations", "Concepts", "Poetry and Rhymes", "Languages" and "Emergent Readers".

Overview of the Early Literacy Collections

NLB being a stalwart champion for reading and a leader in raising readers for life, has committed to provide a collection in the public libraries to motivate readers. Apart from being giving unwavering support to nurture readers in its reading strategies, NLB has also attempted to categorise the ELL collections.

Although, Singapore's literacy rate in 2014 was at 96.7%, invariably, NLB's objective is to nurture readers for life. The Early Literacy collections were then developed with the aim to nurture and develop pre-reading skills and inculcate the love for reading in children aged 0-6 years old.

The Early Literacy collections also included resources such as educational aids, toys and programmes that assist parents and educators to engage young children into reading.

The decision to categorise the ELL collections although was not directly driven by user studies, it was based on PLS librarians' suggestions to set up the 5 practices for Early Read and the concepts that children need to learn based on their development milestones. The librarians referred to the ALA Early Child Read to Read for the 5 practices as well as other research materials. They

also studied the borrowing patterns of the "Drop Everything and Read" (DEAR) service (need to give a short explanation of what this meant) for preschools to determine the popular categories that the users borrow.

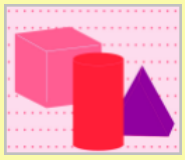
Overview of the Early Literacy Collections for the 0 - 3 years

The collections for the 0-3 years are curated to support the 5 Early Literacy Practices (ELP) of Playing, Talking, Singing, Reading and Writing.

The collections are translated into the categories "Sense & Sensation", "Concepts", "Languages", "Poetry & Rhymes" and "Emergent Readers", to help parents select material that supports their child's development, as highlighted in the tables below.

The Early Literacy Collections for the 0 - 3 years

Figure 6:

Books for children aged 0 – 3 years	**Types of books**
Sense & Sensations 	Books in special formats such as Flip-a-Flap, Touch & Feel, Pop-ups. Also Toy and Moveable Books.
Languages 	Books in "Mother Tongue" Languages, i.e. Chinese, Malay and Tamil
Poetry & Rhymes 	Books that include children's poetry, stories in rhyme, nursery rhymes
Concepts 	Books that include concepts such as numbers, alphabets, shapes, sizes, colours
Emergent Readers 	Books on a variety of topics that are suitable for the emergent readers in the 0-3 age group

The Early Literacy Collections for the 4 - 6 years

The Early Literacy collection for the 4 – 6 years is aligned with the Junior Lending Picture collections in other libraries. The usual categories are picture books in fiction, non-fiction and fairy tales or folktales.

Translating the Early Literacy collection to the 5 categories for the 0 – 3 years: The Mapping Table

A small team of cataloguers with the PLS librarians embarked on a project to categorise the collections. They created a mapping table to map the Early Literacy collection for the 0-3 years to the 5 categories of "Sense & Sensation", "Concepts", "Languages", "Poetry & Rhymes" and "Emergent Readers". In this way, when materials are sent for processing, the specific location code intended for ELL0 will trigger a mapping table created specifically for the Early Literacy collection for the 0-3years.

The mapping table uses the subject headings and the Dewey Decimal Classification (DDC) numbers in the catalogue record for each book to map books to the 5 categories.

For example, if the catalogue record for a book contains the subject heading "Colours" or the DDC number 535.6 (the DDC number for colours), the book will be mapped to the category "Concepts."

The full mapping table that maps subject headings and DDC numbers to each of the 5 categories is as follows.

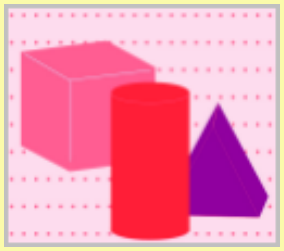
1. Languages

If the Language field in the catalogue record for a book contains the languages Chinese, Malay or Tamil, the book will map to the category "Languages".

2. Concepts

If the catalogue record for a book contains the subject headings or DDC numbers listed in the following table, the book will map to the category "Concepts".

Figure 7

Category	DDC nos	Subject Headings
Concepts 	>=152-154< =411 =513.2 =535.6 =534	Concepts in children Alphabet* Size perception Paired comparisons (Statistics) Body size Polarity* Opposites Comparison (Philosophy) Time*

		Sound* Counting* Number* Color* Shape* Sound*

* = wild card (everything following the asterisk will be included). The wild card applies to single words.

3. Sense & Sensations

If the catalogue record for a book contains the subject headings listed in the following table, the book will map to the category "Sense & Sensations".

Figure 8

Category	**DDC nos**	**Subject Headings**
Sense & Sensations 		Senses and sensation Senses and sensation in children Senses and sensation in infants Lift-the-flap books Toy and movable books Textured books Scented books Sound effects books Picture puzzles Split-page books

4. Poetry & Rhymes

If the catalogue record for a book contains the subject headings or DDC numbers listed in the following table, the book will map to the category "Poetry & Rhymes".

Figure 9

Category	DDC nos	Subject Headings
Poetry & Rhymes 	=398.8	Nursery rhymes
	=782.42	Counting-out rhymes
	=808.1	Stories in rhyme
	=808.81	Songs
	=811	Children's songs
	=821	Lullabies
	=828.1	Lullabies, English
		Poetry and children
		Poetry*
		Poetry for children
		Poetry and verse for urban children
		Children's poetry
		Children's poetry, American
		Juvenile poetry

* = wild card (everything following the asterisk will be included). The wild card applies to single words.

5. Emergent Readers

This is the default category. Books that do not fall into the other categories will map to this general category. The mapping table is based upon the Abridged 14th edition of the Dewey Decimal Classification (DDC) schedule. The mapping table uses the Library of Congress Subject Headings.

The mapping table is hierarchical. It searches for Languages first, and then it searches for Concepts, followed by Sense & Sensations, followed by Poetry & Rhymes. Anything that does not fall into any of these categories will then fall into the default category of Emergent Readers.

The table is hierarchical to ensure an even distribution of titles across the categories (based on the initial sample size of 300 records and later verified against the entire collection).

The Early Literacy collection for the 4 – 6 years: The Enhanced Call Number (ECN) table
In order to align the Early Literacy collection for the 4-6 years to the other Junior Lending Picture collections, the location "ELL4to6" was added to the Enhanced Call Number table. This ensured that the standard Junior Lending Picture collection suffixes would be generated for the Early Literacy collection for the 4-6 years.

Figure 10
The Early Literacy collection for the 0 – 3 years: Processing: Spine Labels (as shown below)

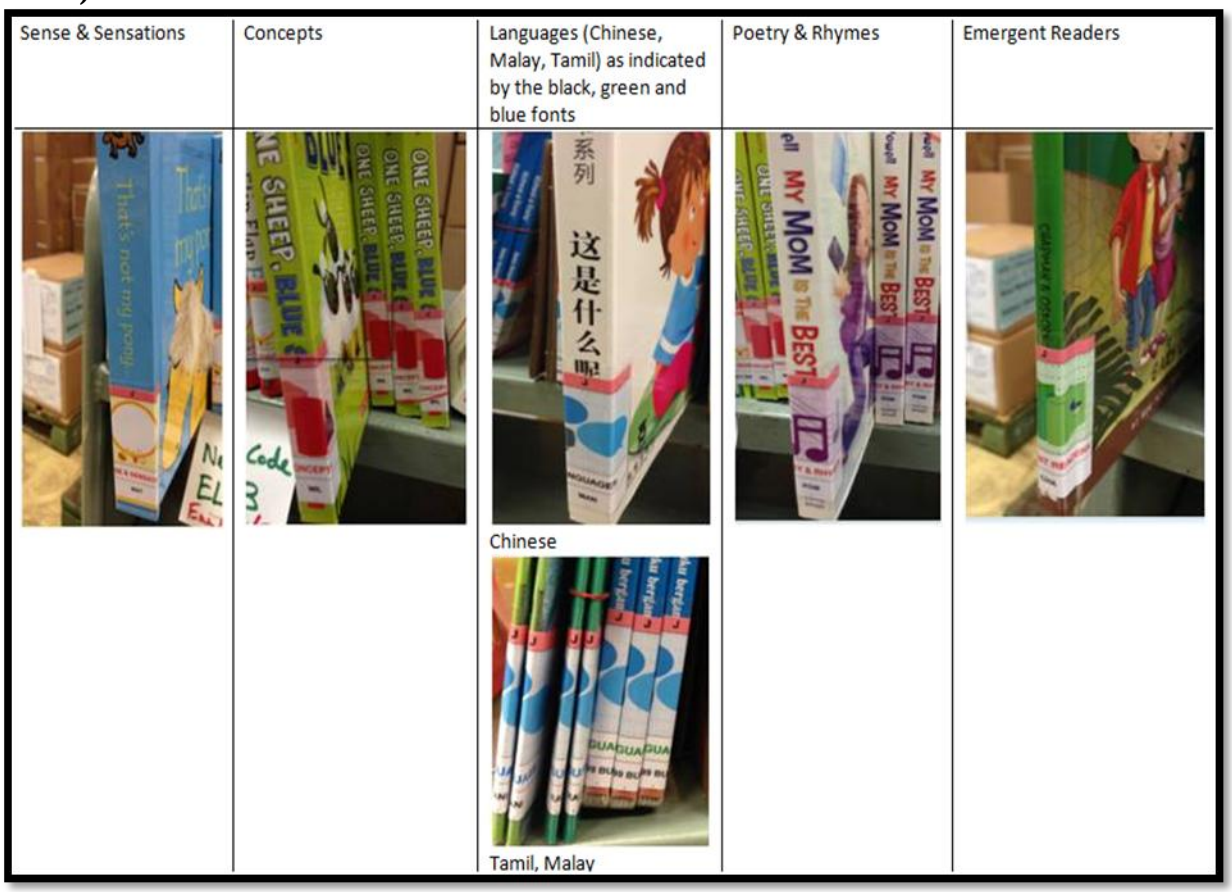
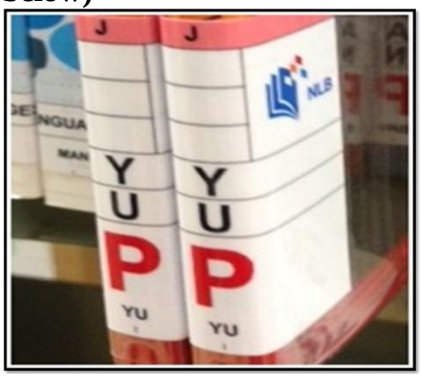


Figure 11
The Early Literacy collection for the 4 – 6 years: Processing: Spine Labels (as shown below)



The steps taken to facilitate the categorisation with TNI was similar to that of library@orchard. The ELL was launched in Jurong Regional Library and was rolled out to the newly revamped Sembawang Community Public Library. It will also be effected in Pasir Ris Public Library in November 2015.The categorisation of ELL collection is undoubtedly effective in nurturing early learners. Opportunely, the Ministry of Education in Singapore has also been recognising that the early years are indeed crucial for children's development and pre-school education that lays a firm foundation for children to become life- long learners. This is echoed in the following where MOE charters the competencies for the 21st century.

"To be future-ready, our young need to be able to think critically, assess options and make sound decisions, explore and be prepared to think out of the box."- Nurturing our Young for the future, competencies for the 21st century, MOE, 2010.

Consequently, the libraries in collaboration with the community will be able to foster more efficient use of the library's resources and in this instance the ELL collections and supporting the children's learning and development. The following is a compliment from one of the Ministry of Education (MOE) officials who appreciates the effort put into categorising the ELL collection.

"A few parents gave feedback that they are pleased when they visited the children's section of the Public Libraries. The books were categorised according to the age groups and this has been extremely useful. Their children can go to the relevant sections straightway." Mrs Cha-Lim Yen Ching, MOE.

Learning points

The project team of cataloguers felt that it was a meaningful project to have attempted an innovative approach to categorise the collections at both library@orchard and ELL. There was concerted effort shown by different groups of staff coming together to achieve a common goal.

Secondly, the team by adopting a project methodology was able to do careful planning in executing the various tasks. The project lead had to make sure that the timeline was met.

Thirdly, the group of cataloguers were able to scrutinise DDC 23rd edition in order to draw the mapping rules. They were also able to study the previous methodology of ECN where the ten popular categories were mapped.

Fourthly, the team had to make several iterations in order to refine the mapping process. However,the team had also found difficulties in mapping all of the categories perfectly. The categorisation was derived from DDC and DDC has its own limitations in defining categories that are defined by bookstores.

Fifthly, the team had also used LCSH to do the rule logic which had helped the categorisation to a certain extent.

Finally, the onsite audit brought all of RDM cataloguers together to screen through the entire non-fiction collection to spot the gaps in the mapping. The team would be doing a user survey to measure the responses from the library patrons. This can then be used in a feasible study in refining the categorisation for NLB in future.

Conclusion

The paper has discussed as to how NLB has endorsed a hybrid approach to categorise collections at library@orchard as well as ELL. Interestingly, library@orchard has a greater participation in the categorisation in a sense that the idea was mooted by the manger and the clusters were designed by one of the librarians from library@orchard. The project team of cataloguers too played significant roles in executing the mapping table that was chiefly used by TNI to convert into a program to generate the call numbers for item processing. A Spine Label Printing System (SLPS) had also interfaced with Materials Tracking and Management System (MTMS) for online label printing. The team had also ensured with the help of the processing team and TNI that a proper network connection was established between MTMS and SLPS. As observed by Connaway and Faniel (2014), increasingly our interpretation of Renganathan's "every book its reader" will then to focus "on increasing the discoverability, access and use of resources within users' existing workflows."

NLB is quite an innovator to allow the librarians to exercise their state of mind in the innovation process. In this project, the team learnt to work together with other divisions particularly in using technology to enhance the categorisation. In view of the fact that the categorisation is derived from DDC and the cataloguers felt that it was just not possible to exactly match certain categories. The categorisation of library@orchard and ELL may be a novel approach and it is by and large a variant of the DDC, retaining the notational system by an addendum of icons and text on the spine labels of the books. Although, it may not be extensive to address all of the users' needs, it did represent a considerable effort on the part of the team to implement.

The visitorship and loan patterns of the newly opened library@orchard are indeed promising. The project hailed NLB's efforts to improve the browsability and findability of the collections. It also shows that indeed Dewey does allow for efficient patron browsing of library materials and that after all it is not too complicated for contemporary library patrons as long as they are guided appropriately

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