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CONSERVE AND PRESERVE NATIONAL HERITAGE : THE ROLE OF NATIONAL LIBRARY OF MALAYSIA

By

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Introduction

Malay manuscripts are regarded as national documentary intellectual heritage that clearly reflects the minds and the thinking of the Malay of the past centuries. Malay manuscript is defined as a handwritten document in the Malay language which surfaced in the beginning of the fourteenth century and ended in early twentieth century. Thousands of Malay manuscripts were written since the Malays first learnt to write particularly during the period when Islam penetrated into the Malay world. Malay manuscripts cover a wide range of topics and genre that entails its own classification such as literature (romance, poetry), astronomy, mathematics, horoscope and astrology (forecast, interpretation of dreams), biology, physics, Sufism, Philosophy and engineering technology.

Manuscripts Collection in Malaysia

Realizing the importance of preserving Malay manuscripts as a documentary heritage, the government, in 1983 named the National Library of Malaysia (NLM) as the Centre for Malay Manuscripts. Two years later, in 1985 the Centre for Malay Manuscripts was established in the NLM as a national centre with the following specific functions:

- i) Trace, retrieve and acquire Malay manuscripts irrespective of forms within and outside the country;
- ii) Document and maintain a principal catalogue and publish bibliographies;
- iii) Provide facilities for storage, preservation and conservation of Malay manuscripts;
- iv) Provide facilities for research; and
- v) Disseminate knowledge available in the Malay manuscripts through research, publication and exhibition.

Since the establishment of the Centre, the tracing and acquisition of Malay manuscripts has actively carried out . Presently, the centre has proudly accumulated 4,778 items of

Malay manuscripts in its original form available in NLM. This can be considered as the world's largest repository centre for the Malay manuscripts.

The acquisition of Malay manuscripts is not as simple as purchasing a book. It is mostly done through direct purchase from suppliers who dedicate their business activities selling historical artifacts (such as *keris*, *limar*, coins and ceramics) and manuscripts. Some of them were purchased from private individuals owning manuscripts. Many of the suppliers are from East Coast Malaysia, mainly Kelantan and Terengganu.

The collecting of Malay manuscripts is not confined only to the acquisition of original manuscripts. For Malay manuscripts that have been placed in repositories in Europe, copies in the form of microfilm were made for important titles. Similarly, copies are made of the collection of manuscripts kept in museums and libraries within the country to be kept by the Centre of Malay Manuscripts in the form of microfilm.

In building the collection, the main purpose of tracing is to document the manuscripts in order to maintain a comprehensive Malay manuscripts databases, with the aim of building a union catalog of Malay manuscripts available throughout globalization. The task is not only limited within the country but extended to other countries that have been identified as keepers of Malay manuscripts through historical findings. Tracing in all the states within country covering institutions such as museums, state libraries, royal families of *ulama* (Islamic Scholar) and individuals owning manuscripts inherited from the past generations have been successfully carried out.

The arrival of Westerners into Malay world, brought the invaluable heritage back to their home countries and kept them in good condition in repositories in Europe. The tracing outside the country started in 1985 in the Netherlands, followed by Library of Congress U.S.A (1990), Singapore (1991), Brunei Darussalam (1993, 2015), Indonesia (1995), South Africa (1998) and Australia (2001).

Preservation

Generally, Malay manuscripts was found are in poor condition. Many factors contribute to their deterioration. The NLM gives high priority to preservation of this intellectual materials. The existence of the Conservation Division is a proof of its commitment to preservation. This is advantage to the National Centre for Malay Manuscript as damaged manuscripts can be restored immediately. With the Division lies the decision of the right technique of preservation which is based on the physical condition of the material and degree of deterioration. There is also a Preservation policy which has already been endorsed and provides guidance on preservation works.

All works on conservation and preservation of manuscripts in NLM are carried out by the staff of the Conservation Division for security reasons. The division often referred to as “hospital” for library materials is equipped with the necessary machinery for preservation works and staff who are trained and skilled in preserving manuscripts. The preservation works done in-house observe international standards practiced in preservation.

Preservation is done either by traditional repair or leaf casting approach depending on the physical condition of the material. The leaf casting machine is a device improved by the staff of the Conservation Division using existing technology. Materials with papers which are still strong but require repair due to destruction by insects undergo this kind of treatment.

The newly acquired materials are fumigated prior to storing them with the rest of the collection as a preventive measure of spreading destructive agents. To ensure that proper storage conditions conducive to extending the shelf life of the manuscripts are implemented, manuscripts are stored in a strong room (special room) in which the temperature is between 20-23 C, humidity at 50-60% RH, and with 24 hours air conditioning. The room is also equipped with dehumidifiers and Thermo hygograph and FE-13 fire extinguisher which will trigger gas when fire occurs. Smoke detectors are placed strategically in the whole building.

Further precaution is also undertaken in storing the manuscripts in acid-free boxes. Materials are shelved flat in mobile compactors. Materials that show signs of disintegration or destruction are repaired immediately in-house by the staff of the Conservation Division. Microfilming the collection is another method of preserving the information. It is advisable that each manuscript acquired by any institution be reproduced in a microfilm copy, one to be kept as a master copy and another one to be used for reference by researchers. Collections of manuscripts kept in repositories traced outside the country are made available in microfilm to facilitate research and reference work on these manuscripts to minimize the need for researchers to visit the repositories overseas.

Researchers are required to use microfilm copies as constant mishandling will hasten damage to the original manuscript. At the same time, it is also preferable to produce paper print from the microfilm to meet the demands of researchers.

In this digital era, the NLM has embarked on project that are ICT driven to enrich local contents in electronic and multimedia format. One of the significant projects is the Malay Manuscript online whereby 1458 titles of selected Malay manuscripts have been digitized and will be made available online. As most Malay manuscripts are written in Jawi script, they are captured in pdf format which presents problem of indexing. Metadata will

Documentation

Manuscripts are acquired and documented according to rules specified in the *Guide on Documentation of Malay Manuscripts* which was formulated in 1988. Entries are accessible through OPAC of NLM. Simultaneously, a catalogue is published entitled *Katalog Manuskrip Melayu Koleksi Perpustakaan Negara Malaysia*. Besides manuscripts in NLM, documentation of manuscripts in other institutions or individuals owning collection also have carried out during tracing with the aim of building a union catalogue of Malay manuscripts available throughout the globe. And also, documentation of the manuscripts have been done for Malay manuscripts collection in Sri Lanka in 1980's, Saint Petersburg, Russia (1988), France (1990), Library of Congress, U.S.A (1990), Singapore (1991), South Africa (1996) all of which resulted in the publication of a catalogue.

Promotional activities

Malay manuscripts as intellectual heritage materials should not remain hidden. Activities to bring these invaluable materials to "life" such as publications and exhibitions are conducted continuously in disseminating the knowledge in manuscripts to be researched and appreciated by present and future generations.

The NLM has embarked on production of CD-Rom and multimedia CDs of heritage materials. A CR-ROM entitled *Glorious Legacy of Malay Manuscripts*, highlights on the subject coverage, and preservation methods with the aim of educating the public on the importance of preserving the intellectual heritage material.

A Guest Scholar Program which was introduced in 1994 is another initiative to encourage research on Malay manuscript. Under this program, NLM invites a notable scholar to study and transliterate a selected Malay manuscript in the collection for the advantage of the public. Since the inception of the program, eight important manuscripts have been studied, transliterated, and published. Transliteration work on manuscript *per se* is another form of publication, However, it requires a person with a background knowledge in Malay philology and familiarity with Jawi script.

Exhibition of manuscript presents a platform to reach out to the people which can be highly successful with extensive and aggressive promotion through the mass media. The NLM carries out exhibition in its premise and mobile exhibition. For the latter activity, originals are avoided, instead photographs of the manuscripts are exhibited.

Human Resource Development

Resizing the needs of preserving Malay manuscripts as heritage materials and to ensure the preservation works comply to the standards, the Preservations Divisions has been equipped with staff who are trained and skilled in preservation and conservation of manuscripts. There are 22 Assistant Conservator in the Division to do conservation and restoration works. And also, to develop skills and expertise in preservation of manuscripts, officer and staff of NLM were sent for short courses, seminar and workshops on preservation and conservation organized within the country and overseas including India, Germany, United Kingdom, Thailand and Laos. In 1998, an expert in the conservation of manuscripts was invited from Italy to conduct a workshop for the staff of NLM and also staff of the National Archive and other institutions in the Klang Valley.

Conclusion

Preserving the past for the future of intellectual heritage is an effort that will continue for as long as there is civilization. Librarians are faced with challenging and daunting task of being custodians to intellectual materials. As librarians, we have an enormous challenge to leave behind a legacy that we have inherited from our previous society and present day society. We must formulate policy and design programs to ensure continuing access to the recorded knowledge for the future while at the same time pursuing our efforts in salvaging the heritage of the past.

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CURATING THE MALAY MANUSCRIPT OTHER THAN PAPER: AN INTRODUCTION TO BAMBOO SLIPS MSS 1496 KITAB TIB

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ABSTRACT

The Conservation and Preservation Division, National Library of Malaysia over the years has been the centre of resource sharing in restoration of rare books and manuscripts by most tertiary educational establishments, namely The International Islamic University Malaysia (IIUM), Universiti Teknologi MARA (UiTM), Sultan Idris Teachers' University (UPSI), Science University of Malaysia (USIM) and National University of Malaysia (UKM). Both academicians and students through the Division for a deeper insight of hands-on on both approaches of conservation, remedial and preventive. This paper is an effort by the Division to explore the art in curating the bamboo slips through traditional methods based from personal observations, experience and knowledge. It took me four months to find the correct ink used by the scribe and the proper way to restore the ink to its original form. This could only be done with the assistance of our Special Grade Assistant Conservator (S26), Zainuddin bin Daud.

Keyword : Conservation, remedial, preventive, curating bamboo slip

Introduction

Bamboo has been the medium of writing even before the dawn of civilisation. History records the earliest bamboo slips were written circa 305 BC before the infamous Qin Dynasty that burnt manuscripts to cinders but some of them survived the onslaught and somehow surfaced more than 2300 years later when private excavator of the famous Tsinghua Bamboo Slips or in Chinese known as *Qinghua jian* (清华简) excavated more than 2300 slips where the latter were acquired by Zhao Weiguo and donated the slips to Tsinghua University. Some other similar bamboo slips were excavated from Guodian tomb, one of the emperors during Qin Dynasty where both collections drew their dates based from radio carbon dating done by the Department of Research,

Tsinghua University.

Burning and burying of books and written manuscripts and even to include scholars were famous during Qin, especially its infamous emperor Shih Huang that affirmed by many Sinologists that the emperor would like everything to be buried with him once he expired.

Bamboo slips are one of the many mediums used by humans of all races to record important elements especially among the learned. In the Malay Archipelago too there are a colossal number of bamboo slips used to record important things, from genealogy to traditional medicine. While the West during Judaism and Biblical era tend to use parchments (scrolls) for their medium of writing, the Eastern region, especially in Asia and the Far-East initially would use bamboo slips, foldable like parchments of the Dead Sea Scrolls in the Valley of Qumran. The hymns of the Mantra in the monasteries of Buddhism we could find scrolls of bamboo slips but how unfortunate due to the way the slips are kept, over the time as well as due to weathering, most of those invaluable bamboo slips were badly affected by its surroundings, many of them were damaged by mold and fungus. The writing part started to blur and the colour of the ink faded. It is the only setbacks for any bamboo slip that it would easily be affected by temperature and improper surrounding especially with high relative humidity, infested by fungus and molds.

These phenomena are similar with the bamboo collections of the National Centre for the Malay Manuscripts where the slips are affected with fungus as well as the ink faded. It may due to the age of the bamboo used during the making of the slips, where the best bamboo would be between the age of 3-7 years. Younger or older than the recommended ages, the slips would not last long, either they could be easily brittle and broken or wilted. The scribes would be intelligent enough in choosing bamboo to make slips and what type of ink to be used. Both very young and old bamboo have weaker mechanical properties thus usually scribes would choose bamboo around 5 years and chose near the bottom part as it has stronger properties thus lasts longer. The



bamboo then cut into slips which later dried in the sun. Each slip will be rubbed with fine sands until the surface is smooth. The slips probably were used by the traditional vilage doctor, carried from one place to another during his treatment visits, as the bamboo slips were not easy to get damaged by either rain or shine.

Physical Description

MSS1496 Kitab Tib is a manuscript on bamboo with 27 slips with each slip having a size of 3.3cm x 34cm with typical black naskhi (khat naskh) script.

There are three visible colours used by the scribe namely black, red and gold. The black ink was already corrosive with yellow stains over some of its writing due to the presence of ferrous oxide.¹

Some of the slips have awfaq, hizib and numerals written for spells in its process of treatment by the respective Malay-Muslim traditional doctor. The slips are clearly defined the types of sickness and treatments for certain illnesses and purpose. Each new topic or treatment is written in red colour.²

The Ink

Traditionally ink was made from edible and natural resources with easy access. Most colours were used for decorations except red and black, usually for writing. In Malay manuscript usually red ink was used for Arabic writing or starting a chapter. There are many natural ways of preparing ink for writing manuscripts. The traditional scribes would use four basic elements in preparing an ink, namely i) source of the ink (usually leaf, herb or wood), ii) gum Arabic (as coagulator or thickening agent), iii) salt, and iv) vinegar as stabiliser. Sometimes the natural ingredients like squid ink and egg yolk would cause indirect damage to the paper as protein is well-liked by silverfish that burrows holes through papers. Honey is sometimes added to the mixture but it was rather hard to fathom the reason for it to be added to the mixture as honey may damage the paper. However strange it may seem to be but honey is one of the ingredients in making colour for the ink. The ink also may produce corrosive ferrous oxide when exposed to

1. Simple test for bleeding ink was done by putting a few drops of neutral water onto the ink and dabbed with blotting paper where some of the slips were having bleeding ink.
2. The red colour is believed derived from the stem of red sepang tree.

the weather with high humidity.³ This is due to the mixture of ferrous sulfate to make a brown ink.⁴

Black is usually derived from charcoal, soot of the chimney, ink of the squid or even from the skin of the mangosteen or burnt rice.

Blue is derived from indigo leaf.

Red is usually derived from the stem of a red sepang tree.⁵ Red colour depends on other natural resources used (besides the stem of the sepang tree). In Sabah for example the natives used rattan fruit, kesumba fruit, or even turmeric mixed with Indian mulberry fruit or noni fruit (mengkudu) to provide a bright red colour.⁶ In some parts of Indonesia, pitaya fruit or locally known as buah naga or dragon fruit is used. Sometimes certain scribes used candlenut for the red colour.



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3. Both IFLA and ICA recommend temperature for manuscripts at 18-20°C with relative humidity at 45-55%RH.
 4. Ferrous sulfate is rather a pale green crystal when add to hot or boiling water, it turns to brownishin colour. In the old days iron or ferrous sulfate is also used as a dyeing agent in batik making and printing.
 5. Formally traditional batik maker used the stem of red sepang tree to produce bright red colour. There are two types of sepang tree, red sepang and black sepang.
 6. See: Mohammad Puad Bebit, "Warna Tradisional Sabah: Konteks Tradisi Lisan dan Penghasilan Kraf." *Kearifan Tempatan: Pengalaman Nusantara: Meneliti Kosmologi dan Adat Istiadat*. Jilid 2 / editor Mohd Kipli Abdul Rahman, Nazarudin Zainun, Rahimah A. Hamid (Pulau Pinang: Universiti Sains Malaysia, 2013).

Gold colour is derived from gold leaf that turned to dust mixed with thick solution of gum Arabic and sometimes honey was added. Gold ink usually is used in writing the charms and spells⁷ as well as illuminations of the Qur'an. In most manuscripts of the Qur'an, each ending of the verse was painted with gold.⁸ For this manuscript, gold colour is used to illuminate the flower petals on each slip of the bamboo.

Basically to prepare for the ink, the source of the colour is boiled until the suitable colour is produced. The longer the process, the thicker would be the colour. Take the stem of the red sepang tree for instance, boiling it would take about half a day until the water becomes red. Red sepang tree is also used as a dye for fabric. Traditionally there are indeed various types and ways of making natural colours but mostly from fruits and fruit trees.⁹ Sometimes boiling process may take days or even a few months in order to attain stable colours.

Tests were done on the bamboo slip to determine the origin of the black colour or ink. Traditional Malay scribe would use either squid ink or lampblack soot or even the skin of the mangosteen. From the chemical test done none of the protein was present thus it shows that both fruit and squid were not used as the main ingredient of the ink. The probable solution is charcoal and salt were used as the test showed some carbonate of sodium were present (Na_2CO_3). Indeed in those days, common salt was used as a stabiliser.

Restoring the Bamboo Slips and the Ink

Through our simple test based from our initial intuition, the slips are cleansed with hydrogen peroxide (H_2O_2) solution¹⁰ and DCP, which the granules are made from a mix of pure and artificial rubber. DCP or Draft Clean Pad (UK) or Document Cleaning Pad (US) functions two ways, one to remove the fungus from the slips and two,

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7. See: Wan Hussin bin Wan Ismail and Noor Lela binti Osman, *The Terengganu Royal Charms and Cures*. This article can also be viewed at Silam Bara Antik blogspot. The article explores about charms and cures by using certain words and numbers to treat certain illnesses among the Malay-Muslim traditional doctors.
 8. Illumination generally means light but in manuscript study, illumination initially means decoration around the text (usually in gold and silver). Most of the illuminations today are mere decorations and illustrations with colours besides gold and silver.
 9. For further reading, see: Maznah Mohamad, *The Malay Handloom Weavers: a Study of the Rise and Decline of Traditional Manufacture* (Singapore: Institute of Southeast Asian Studies, 1996), 303-305, Appendix 1: Methods of Preparing Natural Dyes.
 10. Hydrogen peroxide solution is used for treating fungus infections, including printed materials.

to clean the slip from other dusts and impurities. DCP in the National Library is usually imported from the Archival Aids, UK. The sack is squeezed and the rubber gran-



ules that fell on the bamboo slips would be brushed off slowly with soft bristles. This process continues a few times until the slips are free from impurities. Usually ordinary bamboo slips affected with fungus would be treated with vinegar but those fragile slips may damage the ink due to its acidity. Besides DCP, solution of hydrogen peroxide (6%) may be applied to affected areas.

The bamboo slips are aired and kept within the room temperature. It would be advisable to keep the slips from the shining light as illumination could cause the deterioration of the weak ink. We used acetate to stop the corrosiveness as well as for bleeding ink. Besides acetate we can also use the present texicryl to be temporarily pasted onto the surface of the bamboo slips until the ink stops bleeding. The candlenuts were dry-fried at home and its oil would be used to apply softly onto the bamboo slips. The best candlenuts would be the old ones as they would provide better oil that will not damage the artefact. At first we used onto one particular slip for an experiment and when the original black colour emerged brilliantly, we applied the candlenut oil to every slip. The same method can be used to restore the ink of the Palmyra manuscript. The oil from candlenuts not only strengthen the texture of the bamboo, it also enabled the old ink to merge with the oil thus revitalised its original black colour. In the past, many a time, the oil of the candlenuts is used for additional and optional black dye for fabric printing.¹¹

11. From our two tests conducted, candlenut produces both red and black colours. When it is dry-fried for longer time, the seeds would become black and after boiling for three days, those dry-fried seeds would produce brilliant black colour. If the candlenut is not dry-fried, by mere boiling, the seeds would produce red colour.

Traditionally, both candlenut seeds and its bark were used for making black ink. The bark would be burnt to cinders and to be added with the dry-fried candlenut seeds.¹² Both elements would be boiled for a few days before they were added with gum Arabic that functions as stabiliser. The oil is also used as natural varnish as well as for other health treatments by the Malays. The restorers of Palmyra manuscripts often use the oil of the candlenut seeds to enhance the fading writings as well as to polish the surface of the ancient palm-leaf manuscripts to make them readable.

Strangely, candlenut can be very toxic if uncooked. It is said that the raw seeds contain phorbol and saponin. While saponin has many uses such as lowering down cholesterol level and reduces risk of heart disease as well as a additional sweetener and emulsifier, but phorbol has high content of toxin and can be injurious to human body. In both Malaysia and Indonesia candlenut seeds are used as part of the ingredients for cooking.

After restoring the ink, the slips need to be studied accordingly in order to arrange according to its sequence. In any Malay-Muslim traditional manuscripts, especially those relating to charms and cures, the awfaq, hizib and numerical spells, like other spells and charms, are almost identical. Awfaq should follow before hizib, or numerical spells should be after awfaq. Though it is tedious but not really that delicate to find out its arrangement as long as one is able to read the Jawi scripts. The typical naskhi script especially after the writings are visible (after applying the oil of the candlenut), the bamboo slips are then completely arranged to its original sequence.

Cat-gut strings made from combined cloth-nylon strips which according to most conservators would last for years, are attached to every bamboo slip, entwined in between.



The slips can either read by putting on the table

Or reading while standing like in the old days



12. Frederick O'Brien, "The Front and Back of Paradise." *Facing the Pacific: Polynesia and the American Imperial Imagination* (2007): 160.

Storing the Manuscript

A box similar to the concept created by Daniel Solander is made for this very manuscript in order to stop the slips from further deterioration for both the ink and the bamboo slips.



Bamboo slips restored to its original colour



Cat-gut strings are attached to the slips



Special manuscript box is made to store the slips



Putting the slips in the manuscript box



Taking out Bamboo slips from the box



Front view of the Manuscript Box for Bamboo Slips

Based from the historical fact, the box proposed and created by Daniel Solander (1733-1782), a Swedish botanist who rendered his service at the British Museum has proven that it keeps acidity at bay and for almost more than 250 years. Most of those establishments in the Western world, especially in Europe and the United States of America were adapting to what Solander has created, producing better sturdy boxes with modifications. The Conservation and Preservation Division of the National Library of Malaysia,

like any other international establishments modified the boxes with extra borders to provide better cavity for the loose manuscripts to be safely kept against the onslaught of probable acidity from its tropical climate and its undulated temperature conditions.

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vShare For iOS 9

vShare 

KNOSROCKS

vShare iPad

iOS 8 - 8.0.2



SYSTEM AND INNOVATION IN NATIONAL LIBRARY OF MALAYSIA : KNOWLEDGE MANAGEMENT (KM)

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ABSTRACT

KM PNM: VShare – *Smart Way To Work Together*

The development of Knowledge Management (KM) system was to to optimise knowledge sharing, expertise and best practices amongst National Library staff in creating knowledgeable workers for the department. Using Microsoft Sharepoint platform, VShare Portal was developed as a formal communication channel to make information within the department easily and effectively accessible anytime and anywhere. This Portal is used in managing meetings, executing projects and sharing information by uploading documents besides using forum discussion and individual blogs for exchange of ideas and opinion.

The main challenges are in terms of acculturation and usage amongst the National Library staff. After two (2) years of implementation, usage by the management team and professional staff is considered positive, however, percentage of usage can be further improved. The National Library hopes that with this developed Knowledge Management system and its best practices can be a benchmark to other libraries in Malaysia in the implementation of KM in the institutions.

Kata kunci:

VShare, SharePoint, Knowledge Management, Pengurusan Ilmu, Perpustakaan Negara Malaysia

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PENGENALAN

Pelaksanaan pembangunan sistem pengurusan ilmu atau *knowledge management* KM Perpustakaan Negara Malaysia (PNM) telah dirancang secara strategik dan termaktub dalam Pelan Strategik Teknologi Maklumat PNM 2010-2013. Pelaksanaan Projek Pembangunan *Knowledge Management* (KM) PNM telah bermula pada 11 Mac 2013 dengan kerjasama daripada Unit Pemodenan Tadbiran dan Perancangan Pengurusan Malaysia (MAMPU) sebagai perunding. Pembangunan Portal KM bermula pada 29 Oktober 2013 dan berakhir 27 Disember 2013 serta mula digunakan pada bulan Februari 2014.

Semasa pelaksanaan pembangunan KM, beberapa siri bengkel telah diadakan bagi memastikan pembangunan KM PNM berjalan dengan lancar dan mantap. Bengkel Penetapan Visi, Misi dan Objektif KM PNM telah diadakan yang dikendalikan Perunding ICT dari MAMPU dan Bengkel Pembangunan Kandungan dan Komuniti KM yang dikendalikan oleh perundingan KM dari syarikat swasta bersama Perunding dari MAMPU.

Portal KM telah dibangunkan oleh syarikat yang telah berjaya dilantik melalui sebut harga dengan dibantu oleh pasukan-pasukan *Subject Matter Expert* (SME) PNM dengan kerjasama pasukan perunding MAMPU.

OBJEKTIF PEMBANGUNAN PENGURUSAN ILMU (KM)

Budaya perkongsian ilmu dikalangan warga PNM telah diwujudkan secara rasmi. Platform rasmi ini dilihat mampu menggalakkan penglibatan lebih ramai kakitangan PNM dalam perkongsian ilmu terutamanya *taxit knowledge*. Pengurusan ilmu yang cekap bukan sahaja dapat membantu PNM mencapai misi dan visi yang ditetapkan malah dapat menyokong wawasan dan halatuju kerajaan dalam menjayakan inisiatif transformasi sektor awam yang menuntut perubahan minda dan cara bertindak seluruh penjawat awam.

Pembangunan KM di PNM telah dirangka bagi memenuhi objektif seperti berikut:

1. Membolehkan perkongsian pelbagai jenis maklumat organisasi (fakta, sumber informasi, penyelesaian masalah) yang amat tinggi nilainya di kalangan warga jabatan.
2. Dapat melincinkan pengurusan Jabatan di mana maklumat senang didapati oleh semua peringkat staf bagi memudahkan membuat keputusan yang tepat dalam kerja seharian untuk membantu meningkatkan perkhidmatan dan produktiviti.

3. Mengelakkan daripada berlakunya kerugian kos, masa dan tenaga akibat pertindihan proses kerja dan juga mengulangi semula proses sedia ada (*avoid re-inventing the wheel*).
4. Meningkatkan budaya perkongsian ilmu berkaitan amalan kerja terbaik dan memastikan semua kakitangan mendapat ilmu pengetahuan dan pengalaman yang sama untuk dipraktikkan.
5. Mewujudkan sistem repositori ilmu berpusat untuk menyimpan semua ilmu pengetahuan berkaitan jabatan merangkumi ilmu tanpa bertulis (*tacit*) dan eksplisit.
6. Meningkatkan kompetensi pegawai PNM dari aspek pengurusan ilmu
7. Untuk mengurangkan masa bagi melatih pekerja baru.
8. Maklumat intelektual dapat disimpan, dikekalkan dan dipelihara dalam Jabatan walaupun pekerja telah meninggalkan Jabatan kerana bersara, berhenti kerja atau pertukaran.
9. Mengurus dan mengiktiraf ilmu pengetahuan sebagai aset jabatan yang sangat bernilai.
10. Mengurangkan jurang antara pengetahuan *tacit* dan *explicit* dalam jabatan.
11. Menyokong misi kerajaan dalam meningkatkan pembangunan ekonomi berasaskan ilmu pengetahuan.

Secara asasnya, melalui KM sesebuah organisasi dapat mengenalpasti kekuatan dan kelemahan serta merangka strategi untuk penjajaran semula pelan tindakan dan hala tuju yang lebih efektif.

PEMBANGUNAN KM DI PNM

a) Carta Tadbir Urus

Bagi memastikan pelaksanaan pembangunan KM berjalan dengan lancar, satu carta tadbir urus telah diwujudkan. Carta ini merangkumi Jawatankuasa Pemandu KM, Pasukan Perunding ICT MAMPU, Jawatankuasa Pelaksana KM, Pejabat Pengurusan Projek serta tiga (3) Pasukan SME telah ditubuhkan iaitu Pasukan Pembangunan Kandungan (SME), Taxonomi & Proses KM, Pasukan Infrastruktur ICT, Sistem dan Aplikasi KM dan Pasukan *Community of Practice* (CoP), Kawalan Akses dan Pembudayaan KM. Bidang tugas Jawatankuasa dan Pasukan yang terlibat adalah seperti berikut:

Jawatankuasa Pemandu KM PNM

- i) Menetapkan visi, misi, strategi dan hala tuju KM PNM.

- ii) Mengesahkan tadbir urus pembangunan KM PNM.
- iii) Mengesahkan pelan pembangunan KM PNM.
- iv) Mengesahkan pelan tindakan, program dan aktiviti KM PNM.
- v) Meluluskan peruntukan kewangan bagi pembangunan dan pelaksanaan KM PNM.
- vi) Membuat keputusan atas isu dan masalah yang dibangkitkan oleh JK Pelaksana KM PNM.

Pasukan Perunding ICT MAMPU

- i) Memberi khidmat perundingan dalam pembangunan KM PNM.
- ii) Memberi khidmat nasihat dalam pelaksanaan KM.
- iii) Memberi khidmat nasihat dalam pembudayaan KM di PNM.

Jawatankuasa Pelaksana KM PNM

- i) Memantau pembangunan dan pelaksanaan projek KM PNM.
- ii) Menyelesaikan isu-isu teknikal KM PNM.
- iii) Merujuk kepada JK Pemandu untuk keputusan (jika perlu).
- iv) Memantau dan menyelaraskan pasukan-pasukan kerja KM PNM .
- v) Memastikan kelestarian projek KM PNM.
- vi) Memastikan pelaksanaan KM selari dengan visi, misi, strategi dan hala tuju KM PNM.

Pejabat Pengurusan Projek

- i) Menguruskan mesyuarat, bengkel, program dan aktiviti berkaitan KM PNM.
- ii) Menyelaraskan dan menyimpan dokumentasi berkaitan projek KM PNM.
- iii) Menyelaraskan komunikasi antara semua pihak yang terlibat dalam projek KM PNM.

Pasukan Pembangunan Kandungan (SME), Taxonomi & Proses KM PNM

- i) Menentukan *knowledge* aset PNM.
- ii) Menyelaraskan dan muat naik kandungan yang berkaitan.
- iii) Menentukan taxonomi yang sesuai untuk KM PNM.
- iv) Melengkapkan metadata berdasarkan taxonomi.
- v) Menyediakan dokumentasi bagi proses KM yang terlibat.

Pasukan Infrastruktur ICT, Sistem dan Aplikasi KM PNM

- i) Mengkaji keperluan sistem dan aplikasi KM PNM.
- ii) Menentukan keperluan keselamatan sistem KM PNM.

- iii) Menentukan kapasiti perkakasan dan perisian bagi sistem KM PNM.
- iv) Menyediakan spesifikasi teknikal KM PNM.
- v) Memantau penggunaan sistem KM PNM (*bandwidth, response time, dll*)
- vi) Membuat penyelidikan dan meningkatkan sistem KM PNM dari semasa ke semasa.
- vii) Menyediakan dokumentasi sistem KM PNM.

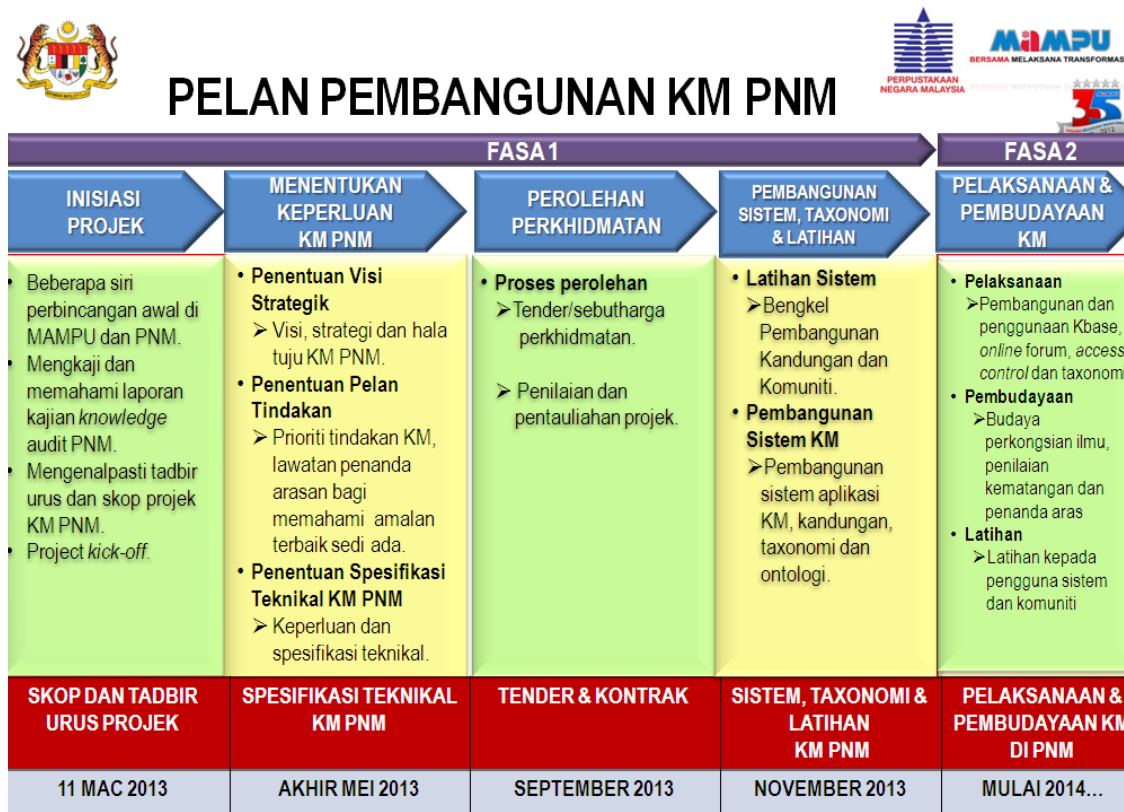
Pasukan *Community of Practice (CoP)*, Kawalan Akses dan Pembudayaan KM PNM

- i) Mewujudkan senarai CoP, ketua CoP, moderator dan keahlian.
- ii) Menjadi KM *broker* antara komuniti.
- iii) Memantau dan menggerakkan komuniti.
- iv) Mengendalikan aktiviti bagi merencanakan pembudayaan KM PNM.
- v) Mempromosikan KM PNM dari semasa ke semasa.
- vi) Menentukan kawalan akses bagi setiap CoP.
- vii) Menyediakan dokumentasi bagi proses CoP KM PNM
- viii)



Gambarajah 1 : Carta Tadbir Urus Pembangunan KM di PNM 2013

b) Carta Pelan Pembangunan Pelan Pembangunan KM di PNM melibatkan dua (2) Fasa merangkumi pembangunan, pelaksanaan dan pembudayaan seperti gambarah di bawah:



Gambarajah 2 : Pelan Pembangunan KM PNM

PELAKSANAAN KM DI PNM (PORTAL VSHARE)

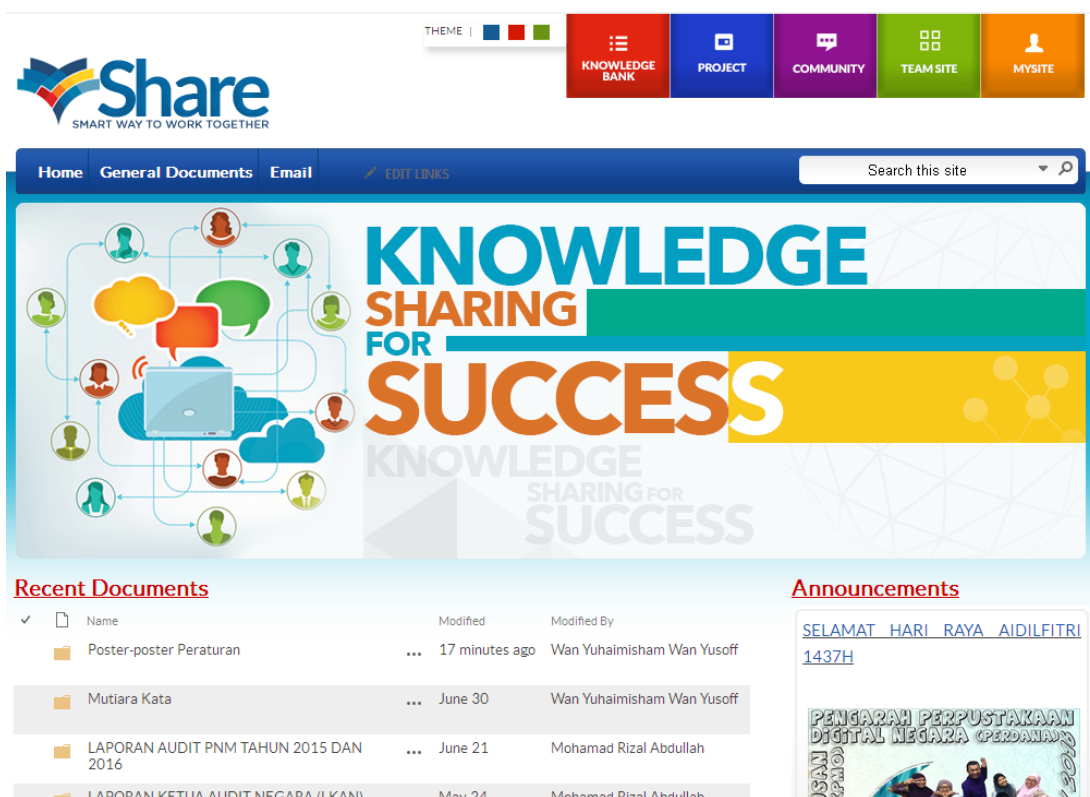
PNM telah membangunkan satu portal khas bagi membangunkan KM ini, Portal tersebut dinamakan *VShare*. Nama *VShare* tersebut diambil daripada perkataan *Virtual Share* yang mana ia menggambarkan perkongsian ilmu di antara individu dan jabatan serta bahagian-bahagian di PNM. Simbol V telah direka dengan gambar buku bagi menunjukkan elemen asas di PNM. Logo *Vshare* adalah seperti berikut:



Gambarajah 3 : Logo Portal VShare

Portal VShare ini menggunakan platform *SharePoint* (Microsoft) dan portal ini digunakan sebagai salah satu saluran komunikasi formal untuk memudahkan pegawai PNM berkomunikasi secara berkesan di mana-mana sahaja dan pada bila-bila masa.

Portal VShare adalah *web-based* yang boleh diakses oleh pegawai PNM yang telah diberikan *log in ID*. Ciri-ciri utama portal ini adalah *cloud based*, tepat, efisien, mesra pengguna, peribadi dan mempunyai enjin carian. Kemudahan yang disediakan oleh portal ini adalah *document library*, pengumuman, forum, galeri foto, *newsfeed*, *task list* dan *blog*. Sekiranya ada dokumen yang dikongsi bersama, notifikasi akan dihantar melalui e-mel. Muka depan utama Portal VShare adalah seperti gambarajah di bawah:



Gambarajah 4 : Portal VShare

Terdapat lima (5) modul dalam Portal VShare yang membolehkan ahli-ahli berkongsi dan berinteraksi. Modul-modul tersebut adalah:

a) Knowledge Bank (KB)

Dokumen yang dikongsikan dalam portal ini akan disimpan dalam KB dan dokumen yang disimpan ini telah ditaxonomi. Pengguna boleh memuat turun dokumen-dokumen yang terdapat dalam KB.

b)Project Site

Halaman ini digunakan untuk mengurus dan memantau pelaksanaan projek oleh pasukan projek yang ditubuhkan. Setiap *project site* akan memberi kebenaran akses hanya kepada ahli projek yang telah ditentukan. Ahli-ahli boleh berkongsi dokumen projek, merancang pengurusan projek, memantau perjalanan projek menggunakan carta gantt dan berinteraksi melalui forum.

c)Community Site

Halaman ini digunakan untuk membincangkan topik, berkongsi dokumen dan merancang aktiviti berkaitan komuniti yang ditubuhkan. Setiap *community site* akan memberi kebenaran akses hanya kepada ahli komuniti yang telah ditentukan. Ahli-ahli komuniti juga boleh berinteraksi melalui forum yang terdapat dalam halaman ini.

d)Team Site

Halaman ini digunakan untuk merancang aktiviti, membincangkan topik dan berkongsi dokumen berkaitan kumpulan yang ditubuhkan. Halaman ini juga hanya membenarkan akses kepada ahli kumpulan yang telah ditentukan. Ahli-ahli juga boleh berinteraksi melalui forum yang terdapat dalam halaman ini.

e)My Site

My Site merupakan laman peribadi yang boleh dikongsi dengan individu tertentu dan ianya berfungsi sebagai blog. Pelbagai boleh dikongsikan dalam halaman ini.

STATISTIK

Pada tahun 2014, jumlah dokumen yang dipindahkan dari *Knowledge Bank* sedia ada PNM ke *Knowledge Bank* dalam Portal VShare adalah 709. Sehingga hari ini setelah tiga (3) tahun penggunaan, jumlah dokumen yang telah dimuat naik dan dikongsi oleh pegawai PNM adalah sebanyak 2,916 dokumen. Dalam *KM Gallery* pula sebanyak 138 gambar telah dimuat naik dan dikongsi dalam portal. Peningkatan ini menunjukkan bahawa secara berperingkat pegawai PNM telah mula dapat menyesuaikan diri dengan perubahan budaya kerja masa kini. Selain daripada itu, jumlah *hits*, *visitors* dan *page views* Portal VShare bagi tahun 2015 dan 2016 adalah *hits* 476,234, *visitors* 1,346 dan *page views* 4,889.

STRATEGI PROMOSI KM

Bagi mempertingkatkan penggunaan KM PNM, pelbagai siri promosi KM telah dirancang seperti berikut:

a) Sesi Perkongsian Ilmu

Menjemput personel dari jabatan atau agensi yang mempunyai pengalaman dalam pelaksanaan KM, pegawai dalaman PNM yang mempunyai pengalaman atau pengetahuan setelah menghadiri kursus berkaitan dan juga personel yang mempunyai kepakaran dalam bidang KM.

b) Bahan Promosi

Penerbitan bahan promosi dalam bentuk bercetak seperti poster atau *flyer* untuk edaran dalaman di PNM atau promosi melalui e-mel Jabatan.

c) Lawatan Penandaarasan

Mengadakan lawatan penandaarasan ke jabatan atau agensi yang telah berjaya mengamalkan pembudayaan KM dalam organisasi masing-masing.

d) Latihan

Sesi latihan *hands-on* Portal VShare yang melibatkan pegawai PNM yang akan dilaksanakan secara berterusan.

e) Pengiktirafan/Ganjaran

Pengiktirafan/ganjaran merupakan perkara terpenting yang menjadi landasan berkesan dalam memastikan warga organisasi menggunakan KM sebagai salah satu saluran komunikasi utama.

CABARAN

Cabaran utama dalam mengaplikasikan penggunaan sistem baru ini adalah pembudayaan gaya kerja baru kepada pegawai PNM. Pelbagai program dan aktiviti telah dirancang dan dilaksanakan dalam usaha untuk mencapai hasrat PNM untuk meningkatkan kompetensi pegawai PNM dari aspek pengurusan ilmu. Antara program dan aktiviti yang telah dilaksanakan adalah:

- a) Sesi latihan *hands-on* Portal VShare yang melibatkan pegawai PNM.
- b) Sesi Perkongsian Ilmu bersama Jabatan Peguam Negara yang telah melaksanakan *Chambers Virtual Office (CVO)*.
- c) Pelancaran Portal VShare dan Forum Perkongsian Ilmu "Knowledge Management (KM): Change Management" bersama ahli panel jemputan dari PETRONAS dan perunding KM dari syarikat swasta serta moderator dari MAMPU.
- d) Lawatan penandaarasan ke Bank Negara yang telah melaksanakan KM di agensi mereka.
- e) Memberi sijil penghargaan kepada semua Ahli Jawatankuasa yang terlibat dan member pengiktirafan kepada pegawai-pegawai yang aktif menggunakan VShare semasa perhimpunan bulanan PNM.

PENUTUP

Komitmen yang tinggi dari peringkat pengurusan tertinggi merupakan satu permulaan yang tepat bagi memastikan amalan dan penggunaan yang lebih aktif dan berkesan di kalangan pegawai PNM. Hasrat PNM adalah untuk menjadi penanda aras dalam pelaksanaan sistem pengurusan ilmu bagi semua institusi perpustakaan di Malaysia dan keupayaan Portal VShare ini masih boleh dipertingkatkan pada masa hadapan agar penggunaan lebih mudah dan cepat seperti pembangunan *library virtual office*.



SYSTEM AND INNOVATION IN NATIONAL LIBRARY OF MALAYSIA : SAMSUNG SMART LIBRARY (SSL)

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ABSTRACT

National Library of Malaysia (NLM) unveiled Malaysia's first Samsung SMART Library at its premise in June 2014 making this first of its kind digital-book reading zone ensued from an unprecedented public-private partnership between NLM and Samsung Malaysia Electronics (SME) Sdn. Bhd. The Samsung SMART Library at NLM is poised to provide a new and interactive reading experience for Malaysians, especially children and youth, within an enhanced technology-enabled library environment. NLM has been tasked to make information available to all and encourage the cultivation of reading habit amongst Malaysians. The SMART Library has been designed to enhance knowledge accessibility and learning through the use of the latest technology for all. In line with the Malaysian Vision to become a developed country in 2020, the Samsung SMART Library is an initial effort built to support the Government's transformation of Malaysia into a knowledge-based society that is powered by ICT know-how by the year 2020. The users of Samsung SMART Library have the opportunities to explore Samsung's technology and use this facility for leisure readings and researches.

Kata kunci:

Perpustakaan Bestari Samsung, Perpustakaan Negara Malaysia, Perpustakaan Digital

PENDAHULUAN

Seiring dengan perkembangan teknologi pada masa kini, Perpustakaan Negara Malaysia (PNM) telah menjalinkan kerjasama dengan Samsung Elektronik Malaysia bagi Program

* Kertas persidangan di bentangkan di *PERPUN International Conference: System and Innovation in Libraries* pada 26-27 Julai 2016 di Felda Residence Hot Springs, Sg Klah, Sungkai, Perak.

Sosial Korporat mewujudkan Perpustakaan Bestari Samsung (Samsung Smart Library). Perpustakaan Bestari Samsung telah dipilih sebagai transformasi perkhidmatan Jabatan Perkhidmatan Awam Malaysia. Perpustakaan ini merupakan satu transformasi perpustakaan digital yang memberi peluang kepada masyarakat menggunakan perkhidmatan secara elektronik menggunakan peranti berjenama Samsung yang terkini dan canggih. Penubuhan Perpustakaan Bestari Samsung ini merupakan satu-satunya perpustakaan yang mempunyai buku digital di Malaysia.

Perpustakaan ini juga bermatlamat untuk meningkatkan budaya membaca menerusi medium teknologi maklumat dan komunikasi (ICT). Perpustakaan Bestari Samsung telah dilengkapi peralatan terkini yang boleh diakses oleh pengguna secara percuma di PNM. Direka dan dibina dengan kelengkapan e-Buku dengan kawasan seluas 1,300 kaki persegi ini dengan memiliki empat konsep khusus. Terdapat 67 peranti Samsung yang terdiri daripada pelbagai saiz tablet serta skrin berformat besar. Perpustakaan Bestari Samsung menyediakan pengalaman pembacaan yang baharu dan interaktif untuk rakyat Malaysia terutamanya kanak-kanak dan remaja dalam persekitaran perpustakaan digital berkeupayaan teknologi.

Perpustakaan Bestari Samsung telah dilancarkan pada 16 Jun 2014 dan telah dirasmikan oleh Menteri Pelancongan dan Kebudayaan, Y.B. Dato' Seri Mohamed Nazri bin Tan Sri Abdul Aziz, turut dihadiri oleh YBhg. Dato' Raslin bin Abu Bakar, Ketua Pengarah Perpustakaan Negara Malaysia, dan En. Lee Dong Yong, Presiden, Samsung Malaysia Electronics (SME) Sdn. Bhd.

KAJIAN TERDAHULU

Konsep perpustakaan kini telah berubah dan melalui peralihan mengikut keperluan zaman dan arus teknologi. Perkembangan teknologi maklumat membolehkan bahan boleh diakses dalam bentuk elektronik. Perpustakaan digital adalah langsung kepada perpustakaan elektronik di mana bahan tidak hanya boleh diakses dari perpustakaan sahaja tetapi juga secara global menerusi internet. Perpustakaan digital merangkumi sebuah entiti yang merangkumi semua aktiviti perpustakaan termasuk koleksi bahan, perkhidmatan, kemudahan dan kakitangan yang mempunyai kepakaran masing-masing untuk memilih, menyusun, memberi akses intelektual dan menyebarkan maklumat kepada masyarakat (Ruzita, 2015). Kepsatan teknologi maklumat dan komunikasi (ICT) memberi cabaran kepada perpustakaan kini dalam memberi dan menyebarkan maklumat kepada pengguna. Perkhidmatan sumber elektronik boleh ditakrifkan produk yang menyampaikan data dalam teks, nombor, grafik sebagai produk komersil yang terdapat dalam bentuk digital termasuk

pangkalan data yang penuh teks, jurnal elektronik, koleksi gambar dan produk multimedia (Mamtora, 2013).

Cabaran utama bagi perpustakaan yang semakin berkembang dengan pesat dengan lambakan maklumat yang menjadikan kesukaran untuk menguruskan maklumat. Pustakawan menghadapi cabaran dalam pengurusan perpustakaan untuk menyediakan maklumat yang berkualiti bagi memenuhi keperluan pelanggan. Satu kajian menemui bahawa penggunaan sumber elektronik dipengaruhi oleh faktor manusia dan organisasi. Mereka mendapati bahawa penggunaan sumber elektronik dipengaruhi oleh literasi maklumat dan kemahiran dalam mengakses maklumat oleh pengguna. Perpustakaan bertanggungjawab menyediakan perkhidmatan sumber elektronik yang mencukupi serta memainkan peranan penting untuk menggalakkan dan membolehkan pengguna untuk mengakses kepada sumber-sumber digital perpustakaan. Perpustakaan perlu dilengkapi dengan peralatan dan perisian teknologi terkini bagi menyokong dan memupuk tabiat membaca dalam kalangan masyarakat, (Wu, 2006).

PERKHIDMATAN YANG DISEDIAKAN

Perpustakaan Bestari Samsung menyediakan perkhidmatan digital secara percuma kepada pengguna kanak-kanak dan dewasa. Perkhidmatan yang disediakan adalah perkhidmatan buku elektronik, majalah elektronik dan surat khabar elektronik. Perkhidmatan dibuka dari pukul 10.00 pagi sehingga 7.00 malam dan Ahad pada 10.00 pagi sehingga 6.00 petang manakala ditutup pada hari Isnin.

Perkhidmatan ini menawarkan empat konsep khusus iaitu Zon Interaktif yang menyediakan perkhidmatan pembacaan e-suratkhabar (Malay Mail dan The Star) dan e-majalah (Life is Beautiful, Jelita, Dashboard, Dinar & Darham, Cube, Keluarga Aman, Afro Rider, Yours, Discovery, National Geographic). Zon Kerja pula menawarkan perkhidmatan kesetiausahaan seperti MS Office, *E-Studio* dan *Cloud Reader*. Pengguna kanak-kanak boleh menggunakan perkhidmatan yang disediakan di Zon Kanak-kanak yang menawarkan perkhidmatan buku elektronik, permainan interaktif dan portal pendidikan yang bersesuaian dengan tahap umur kanak-kanak. Pengguna boleh menggunakan Zon Pembaca untuk mengalami sendiri pembacaan buku elektronik dalam pelbagai subjek antaranya seperti fiksyen, perniagaan, agama, akademik, gaya hidup & kesihatan, keluarga, motivasi, teknologi dan lain-lain menggunakan tablet yang disediakan.

PENUBUHAN PERPUSTAKAAN BESTARI SAMSUNG DI ZON UTARA DAN TIMUR

PNM dan Samsung Malaysia Electronics telah mengeratkan lagi hubungan kerjasama ini dengan menubuhkan Perpustakaan Bestari Samsung yang kedua Zon Utara di

Perpustakaan Negara Malaysia Cawangan Perlis. Perpustakaan Bestari Samsung ini berkeluasan 752 kaki per segi dan terdapat 35 peranti Samsung untuk pengguna Perpustakaan ini telah dirasmikan pada 12 Januari 2015 dan telah dirasmikan oleh DYTM Tuanku Raja Muda Perlis, Tuanku Syed Faizuddin Putra Jamalullail. Penubuhan perpustakaan ini memberi peluang kepada masyarakat di negeri Perlis untuk menggunakan peralatan ICT dan gajet sumbangan Samsung Malaysia Electronics secara percuma.

Di bawah Program Sosial Korporat ini juga, Samsung Malaysia Electronics Sdn Bhd telah memberi sumbangan sebuah lagi Perpustakaan Bestari Samsung di Maktab Polis Diraja Malaysia (PDRM), Cheras Kuala Lumpur pada 4 Februari 2015, perpustakaan dilengkapi dengan 40 peranti jenama Samsung terdiri daripada tablets, televisyen dan skrin besar boleh sentuh. Perpustakaan Bestari Samsung ini memberikan inisiatif kepada warga PDRM untuk membuat kajian, carian maklumat serta dapat membantu tugas operasional polis dengan pantas tanpa terlalu merujuk kepada buku teks.. Aplikasi ini dapat mempelbagaikan kemudahan pencarian maklumat dalam kalangan warga PDRM dalam usaha memperkasakan modal insan yang lebih cemerlang. Kewujudan Perpustakaan Bestari itu akan mempercepatkan tugas PDRM dalam penyelidikan dan pembelajaran atas talian dalam menyelesaikan tugas warga PDRM. Majlis pelancaran yang diadakan di Maktab Polis Diraja Malaysia (PDRM) yang disempurnakan oleh Ketua Polis Negara, Tan Sri Khalid Abu Bakar dan disaksikan oleh Presiden Samsung Malaysia Electronics Sdn Bhd, Mr. Lee Sang Hoon.

Memandangkan permintaan terhadap perkhidmatan perpustakaan secara digital semakin meningkat daripada masyarakat, Samsung Malaysia Electronics telah menaja sebuah lagi Perpustakaan Bestari Samsung yang keempat di Perpustakaan Awam Negeri Terengganu. Perpustakaan ini mempunyai 1,000 kaki persegi keluasan dan dilengkapi dengan 48 peranti yang boleh digunakan pengguna. Perpustakaan ini telah dirasmikan oleh Pengerusi Jawatankuasa Pendidikan, Sains, Teknologi dan Tugas-tugas Khas Negeri, Encik Ghazali Taib pada 17 Jun 2015. Perpustakaan Bestari Samsung adalah satu perkembangan positif ke arah menjadikan Terengganu sebagai hab ICT di pantai timur, Semenanjung Malaysia.

ISU DAN CABARAN KEPADA PERPUSTAKAAN BESTARI SAMSUNG

Penubuhan perpustakaan digital ini memberi cabaran kepada pentadbiran perpustakaan dalam transformasi perpustakaan digital. Perpustakaan digital telah mengubah persekitaran perpustakaan tradisi yang memfokuskan kepada bahan-bahan bercetak kepada bahan elektronik yang boleh dicapai setiap masa pada bila-bila masa sahaja. Namun begitu, akibat perkembangan teknologi yang terlalu pantas, data dan maklumat perpustakaan dig-

ital akan menjadi bahan menjadi usang kerana maklumatnya tidak dapat dicapai oleh teknologi yang lapuk. Antara cabaran terhadap perpustakaan digital adalah seperti berikut::

i. Jurang Teknologi antara Bandar dan Luar Bandar

Kerajaan telah melaksanakan pelbagai program Penyediaan Perkhidmatan Sejangat bagi memastikan masyarakat luar bandar mendapat akses kepada Teknologi Maklumat dan Komunikasi (ICT) menerusi pusat komuniti, sekolah, perpustakaan desa dan klinik. Ianya merupakan usaha untuk merapatkan jurang digital serta meningkatkan penggunaan ICT. Dalam era globalisasi ini, peningkatan penggunaan teknologi gajet yang berlaku di persekitaran kini adalah semakin tinggi. Cabaran dalam dunia perpustakaan digital dalam kepesatan teknologi ini iaitu jaringan Internet merupakan salah satu kemudahan asas kepada masyarakat pada masa kini. Namun begitu, masyarakat luar bandar kebanyakannya tercicir dalam arus pemodenan ini. Ketiadaan kemahiran asas tersebut menyukarkan mereka untuk menyesuaikan diri dan berkemungkinan menghilangkan minat mereka untuk mengetahui perkara yang berkaitan dengan ICT berkenaan. Perkara ini berlaku kerana pengguna di luar bandar kurang terdedah kepada peralatan ICT dan gajet dalam kehidupan seharian.

ii. Jurang kemahiran ICT di antara generasi belia dan generasi terdahulu

Masyarakat luar bandar kurang menerima pendedahan terhadap penggunaan teknologi maklumat dan komunikasi (ICT). Untuk menangani isu ini, kerajaan telah menetapkan beberapa objektif yang perlu dicapai dalam konteks pembangunan luar bandar khususnya untuk melahirkan masyarakat yang celik IT. Penggunaan teknologi lebih didominasi oleh generasi belia kerana golongan ini lebih berminat kepada kemudahan dan teknologi ICT yang lebih cepat dan pantas bersesuaian dengan perkembangan pada masa kini. Generasi belia lebih berkemahiran dalam penggunaan teknologi berbanding dengan generasi terdahulu. Cabaran kepada Perpustakaan Bestari Samsung yang menyediakan perkhidmatan secara elektronik kurang digemari oleh generasi terdahulu kerana ianya memerlukan kemahiran menggunakan peralatan ICT dan tidak lagi menggunakan bahan-bahan perpustakaan secara bercetak. Masyarakat luar bandar juga harusnya didedahkan dengan pelbagai pengetahuan teknologi komunikasi untuk membolehkan masyarakat luar bandar mendapat ilmu pengetahuan yang mendalam terhadap penggunaan teknologi maklumat dan komunikasi (ICT). Pendedahan ini dapat melahirkan komuni-

ti masyarakat luar bandar berpengetahuan dan berdaya saing dalam menghadapi cabaran globalisasi dan liberalisasi.

iii. Perkembangan Teknologi yang pantas

Perkembangan teknologi yang pantas terutamanya terhadap pengeluaran produk dan perisian berasas teknologi memberi cabaran besar kepada perpustakaan dalam memberi perkhidmatan terbaik kepada pengguna. Cabaran kepada Perpustakaan Bestari Samsung perlu adalah untuk memastikan peralatan yang disediakan adalah terkini dan canggih mengikut arus teknologi di pasaran. Kandungan maklumat digital memerlukan perisian yang terkini dan peralatan yang canggih bagi memastikan maklumat dapat diakses dengan cepat dan tepat. Kekangan mengakses maklumat digital sekiranya peralatan ICT tersebut telah ketinggalan zaman dan perisian tidak lagi menyokong kepada teknologi terkini.

iv. Memperkasakan Promosi perkhidmatan perpustakaan digital

Bagi menggalakkan guna perkhidmatan digital ini, promosi yang berkesan perlu dilakukan bagi meningkatkan penggunaan serta menarik minat pengguna untuk menggunakan perkhidmatan ini. Berdasarkan statistik penggunaan Perpustakaan Bestari Samsung pada tahun 2014 adalah 5,987 orang pengguna dan 8,166 orang pengguna pada tahun 2015 adalah didapati penggunaannya agak rendah dan promosi yang hebat perlu dilaksanakan. Program promosi yang menyeluruh harus dilaksanakan bagi memberi hebahan dan menarik minat pengguna untuk menggunakan kepada perkhidmatan yang disediakan ini.

PERANCANGAN MASA HADAPAN

Menyedari perkembangan teknologi yang semakin pantas, PNM terus mengorot langkah meningkat mutu perkhidmatan seiring dengan perkembangan teknologi pada masa kini. Bahan kandungan digital telah mengambil alih bahan bercetak di perpustakaan sebagai bahan bacaan pada masa kini. Seiring dengan itu, PNM berhasrat untuk memberi yang terbaik kepada pengguna mengikut arus perubahan zaman terkini. Antara perancangan PNM adalah seperti berikut:

i. Menambah bilangan Perpustakaan Bestari Samsung

PNM merancang untuk memperluaskan bilangan Perpustakaan Bestari Samsung di Zon Selatan tanah air. Ini bertujuan memberi peluang kepada seluruh rakyat Malaysia menikmati perkhidmatan perpustakaan berkonsepkan kandungan digital yang

boleh diakses menggunakan tablet atau peralatan terkini serta merapatkan jurang teknologi seluruh masyarakat.

ii. Memperhebatkan pelan promosi perkhidmatan

Bagi meningkatkan galak guna perkhidmatan, pelan promosi yang hebat perlu dilaksanakan bagi menggalakkan orang ramai menggunakan perkhidmatan Perpustakaan Bestari Samsung. Hebahan yang meluas harus dilakukan bagi menguar-uarkan perkhidmatan yang disediakan ini kepada pengguna.

iii. Menambahbaik mutu perkhidmatan

PNM sentiasa bersedia memberi perkhidmatan yang terbaik kepada pengguna. Pengguna digalakkan memberi sumbangan idea dan pandangan dalam meningkatkan mutu perkhidmatan bagi memberi kepuasan yang maksimum kepada pelanggan. PNM akan terus menambahbaik mutu perkhidmatan Perpustakaan Bestari Samsung dengan mempelbagaikan perkhidmatan dan kemudahan kepada pengguna bagi menarik minat sertamemberi peluang kepada masyarakat untuk menggunakan perkhidmatan digital menggunakan peralatan terkini dan canggih.

iv. Mengeratkan jalinan persepakatan pintar dengan pihak swasta

PNM akan meneruskan jalinan persepakatan pintar dengan pihak swasta bagi berkongsi kepakaran dan sumber yang ada bersama-sama dengan agensi swasta. Program seperti ini dapat memanfaatkan kepada semua pihak dalam perkongsian sumber ilmu dan kepakaran oleh pihak luar. Sumbangan pihak swasta turut memberi impak yang besar kepada masyarakat dalam mengejar arus perkembangan teknologi yang semakin pesat dan maju ini. Usaha jalinan persepakatan pintar oleh pihak swasta harus diteruskan di masa-masa akan datang dalam membina kerjasama yang jitu ke arah memaju dan mendidik masyarakat berilmu pengetahuan. Kerjasama ini perlu diteruskan bagi menyokong saranan kerajaan untuk melahirkan masyarakat celik IT dan berilmu pengetahuan dan menarik minat membaca dalam kalangan masyarakat Malaysia.

PENUTUP

Perkhidmatan Perpustakaan Bestari Samsung dapat memberi peluang kepada masyarakat untuk menggunakan perkhidmatan digital dan mengalami sendiri menggunakan peralatan terkini yang disediakan oleh Samsung Elektronik Malaysia. Perpustakaan Bestari Samsung banyak memberi manfaat kepada masyarakat dalam pendedahan penggunaan ICT dan

memberi peluang untuk menggunakan teknologi terkini hasil sumbangan di bawah Program Sosial Korporat daripada Samsung Malaysia Electronics. Penubuhan Perpustakaan digital dapat mempertingkatkan keupayaan pengguna dalam meneroka ilmu pengetahuan secara maya. Pembelajaran sepanjang hayat akan dapat diterapkan dalam kalangan masyarakat bermula dari usia muda.

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