

Research Article

The Development of a Medicinal *Nadir* Glossary through the #Lancsbox 6.0 of Wizard Software

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Abstract: By investigating the treasures of numerous disciplines found in Malay manuscripts, it is possible to track and study the intellectuality, scholarship, "weltanschauung," and civilization of the Malay traditional practitioners. The advantages of this information can be seen in the field of Malay medicine, which offers a wealth of medical expertise to be used in treatment as an element of preventing and curing disease among the Malay community, and thus becoming an exclusive information medium for the nation, especially the Ministry of Health of Malaysia (MOH) to provide pertinent information related to health and well-being of the people. This main objective of this study is to develop a glossary for the Malay traditional medicinal terminology dataset using the Ethnosemantic-Medical Framework. The methodology of this study uses the corpus software #Lansbox 6.0 developed by Lancaster University as a data collection tool and the Wizard software to transform the dataset for further analysis. Thus, 7 manuscripts from the Malay World's collection of traditional Malay medicine were acquired through the National Library of Malaysia. Through this study, a glossary dataset that provides multipurpose traditional Malay medicinal terminology was developed. The findings of this research can help assist Malaysia's Ministry of Health in meeting the UNESCO's mission to promote manuscripts as the country's intellectual legacy as well as the NKEA's objective in the digital economy of health and medical information.

Keywords: Glossary; Malay Medicine; Wizard.



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1. INTRODUCTION

It appears that the Malaysian government's efforts to disseminate health information have gained strong traction. To date, the Malaysia's Ministry of Health (MOH) is a premier institution and a point of reference for Malaysian health and medicine. Health Care Service and Health Care System (<http://moh.gov.my>), among other information system devices, are examples of how medical science-related information is disseminated. These two services are the primary examples of how knowledge is changing as we move toward the digital economy and the MOH goal of disseminating knowledge and health care. Such an endeavor is seen as the idea of knowledge indigenization, or revitalizing medicine in a regional context. Unquestionably, the Malay world's collection of medicine comprises the intellectual elements of earlier societies in an endeavor to treat disease. In the Malay world, medical

knowledge is divided into two categories externally and internally, which cover the use of herbs, plants, animals, and other substances that are only found in the surrounding environment.

In this light, it is evident that the collection of nadir materials includes the medical resources and treatments that earlier societies used as a beneficial alternative endeavor. In an effort to mix traditional and contemporary medicine to improve people's health, the Ministry of Health (MOH) can use the medicinal information derived from this study. Eight principles have been earmarked by the MOH as a cornerstone of sound health services as follows: i) wellness-focused, ii) person-focused, iii) informed person, iv) self-help, v) care provided at home or close to home vi) seamless, continuous care, vii) services tailored as much as possible, and viii) effective, efficient and affordable services. Embracing such principles, the Ministry of Health has been able to carry out a holistic approach in ensuring the well-being of the people. Against this backdrop, this study was conducted to examine the health and medicinal practices through the collection of the nation's heritage, which needs to be preserved in an exclusive form of knowledge, namely the nadir Glossary of Traditional Malay Medicine. The creation of a complementary MOH information source can be achieved by the fusion of conventional knowledge and contemporary medical knowledge.

2. METHOD & MATERIALS

The purpose of this software is to thoroughly analyze textual data using known corpus statistical standards. The concordance tool, collocation graphs, network tool, description tool, wordlist and keywords tool, n-gram tool, text tool, GraphColl, and wizard are among main six features. This statistical program offers a novel introduction to scientific language analysis and a tool for that analysis. In order to substantiate any claim made about language, the analyst must present empirical proof in the form of data derived from language corpora. Replicability is a prerequisite for linguistic corpus according to its principle. The results of the initial study must be confirmed, and more research is required. Making the corpora available to other researchers so they can examine the same or additional datasets and increase our understanding of corpus linguistics is also an excellent corpus linguistics practice.

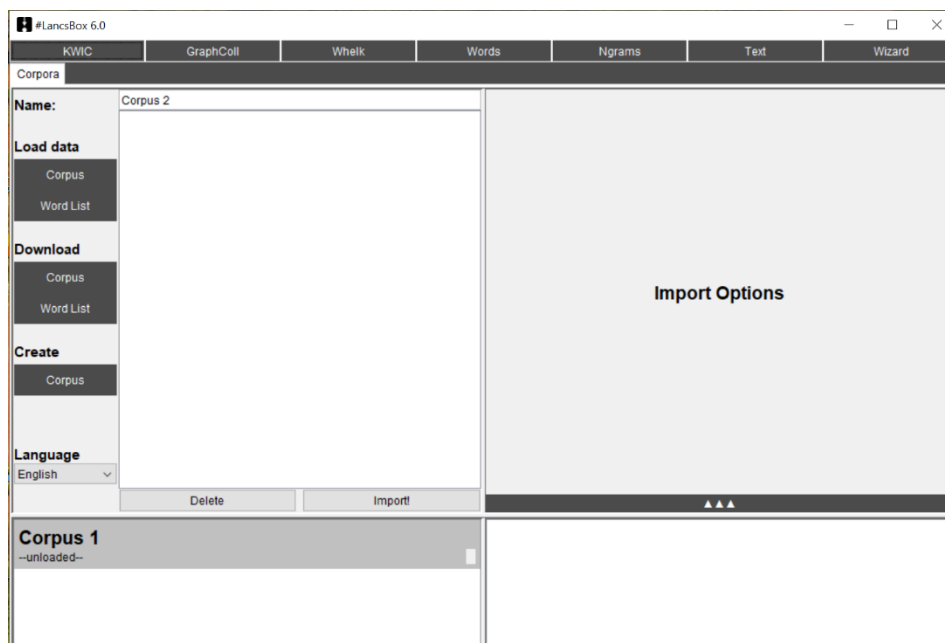


Figure 1: Display #Lancsbox 6.0

2.1 Analysis Phase

The Ethnosemantic-Medicine Framework was used in the analysis of this study. While lexis is viewed from the semantic perspective as a "champion" who is selected to represent a concept in a corpus approach using #lancsbox 6.0 software, the perspective of the corpus looks at the heterogeneous lexical distribution from the aspect of size, genre, and text quality that highlights the lexical motivation of a nation's thought. In this study, the wizard software was used to transform the dataset into a multipurpose form. The collection of Malay World manuscript data was performed by analyzing the contents of medical manuscripts obtained from the National Library of Malaysia. A total of 7 manuscripts related to traditional medicine were used and examined as the corpus materials. The analysis process involved several stages as follows:

Phase 1:

The screening process for quality manuscript materials involved the selection of undamaged manuscript materials. Figure 2 shows the process of screening, scanning, and digitizing the essential materials, which was carried out with an iPad Pro device.



Figure 2: The screening process of manuscript materials using iPad Pro

Phase 2:

The second stage involved the process of uploading *nadir* materials, which had been previously screened, for analysis into the #lancsbox 6.0 software. This software consists of six windows, namely the concordance tool, collocation graphs and network tool, description tool, wordlist and keywords tool, n-gram tool, text tool, GraphColl, and Wizard.

Phase 3:

The process of analyzing *nadir* materials of traditional Malay medicine was carried out in the third phase based on the Ethnosemantic-Medicinal Framework (Aliwy & Nakhilawi, 2016) and the Malay Epistemological Framework (A. Samad Ahmad, 2005).

3. FINDINGS

In the Malay society, the usage of herbal plants in healing has undergone a long history. They continue to employ herbal elements as a source of medicine today to treat illnesses and promote overall health. The wisdom of the Malay community in relation to health care and the treatment of various diseases is reflected in the preserved Malay medical knowledge. (Nik Zanariah Mahmood, Nik Musa' adah Mustapha, 2017). Based on a study carried out in 2008 by the World Health Organization (World Health Organization-WHO), 80 percent of traditional medicines worldwide were derived from plants (AR Rohana, Z Nur Fazreen, AB Ariff Fahmi, M Marzalina, A Nur Syazni, Pin, KY, MA Mohd Shahidan, Ong, BK, Lim, HF, S Siti Zubaidah, 2017). Specifically, most of the plants used were herbal plants that have medicinal values, which are commonly found in one's dwelling, such as *bunga raya*, *bunga tahi*

ayam, senduduk, pokok kapal terbang, sirih, daun kesom, and pinang. These herbal plants are typically used to prevent and treat a wide range of illnesses, including chronic illnesses like heart and liver conditions. It is evident that when mainstream populations look for alternate methods of treating a variety of maladies, the advantages of some plant species that were previously only known to the local or indigenous people have made their way into their consciousness.

3.1 Contextual Meaning of Herb Plants

A little plant with a soft, non-woody stem and leaves that can be used for food, medicine, or fragrance is what is referred to as a herb. Herbs and other plant-based items have been used extensively by humans for thousands of years to treat and prevent disease as well as to enhance health and wellbeing. Small flowering plants known as herbs are valuable for their therapeutic qualities. There are, however, five different categories of herbaceous plants: leafy, fruiting, tuberous, rooted, and flowering. To date, there are more than 8,000 kinds of flowering trees with known therapeutic uses.

Each component of the herbal plants has a certain purpose, such as stems, leaves, roots, fruits, and so forth, which have a number of beneficial therapeutic properties. In traditional medicine, elements from plants that are purported to be medicinal or nourishing are generally employed by the medicinal practitioners. Their benefits are evident in the speech of the Malays, who have long used plants for medical purposes, whether they are farmed specifically for medicine or are taken from the forest or the immediate vicinity. There are, however, some plant species that can and cannot be taken orally.

3.2 Search Analysis for Herbal Plants using the Wizard of the #Lancsbox 6.0 Software

The #LancsBox 6.0 software's Wizard tool, in practice, gives the analyst access to a number of strong tools that may be used to do simple or sophisticated searches and create a draft report. By highlighting the collocations based on a specific medicinal context, this application allows users to swiftly screen herbal plants utilized in Malay medicine. The distribution of data via the wizard in this study made it possible to swiftly filter the manuscript data using the lexicon of herbal plants, which was done in stages. Essentially, the #LancsBox 6.0 software, as shown Figure 3, provides an analyst with an effective tool for searching and analyzing data embedded in manuscripts.

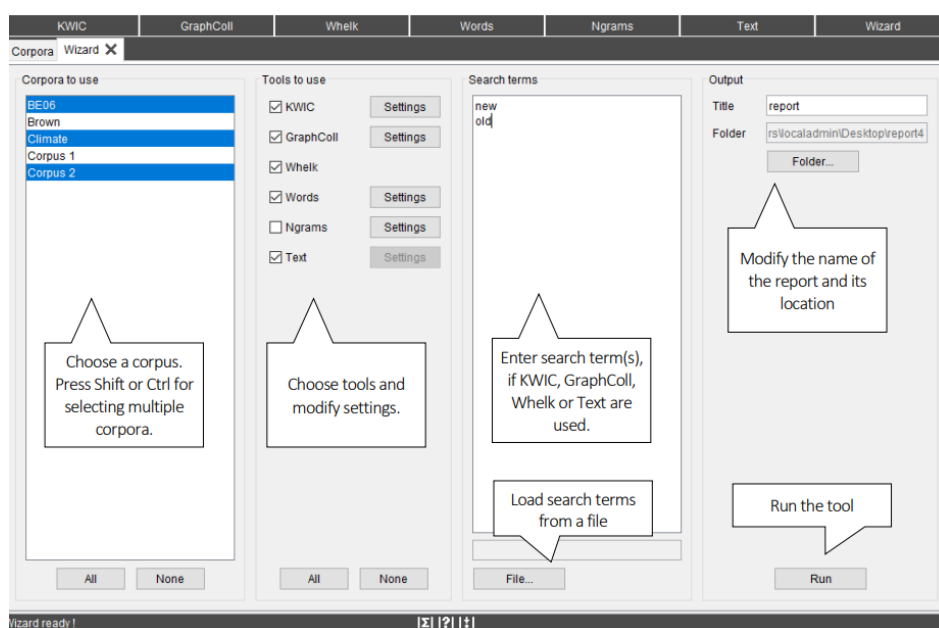


Figure 3: Wizard analysis device

The researchers were able to filter the necessary data using such a tool, such as the lexical collocation of herbal plants. However, it should be noted that the collocation search procedure had been carried out in several phases as follows:

Phase 1:

The screening of the manuscript data was performed by removing all herbal plant lexical items as highlighted in Table 1.

Table 1: List of herbs in Kitab Perubatan Melayu: *Al-Rahmah fi al-Tibb wa al-Hikmah*

A-Z List of Herbs				
Adas	Bunga narjis	<i>Halilaj Kabuli</i>	Kelambir	Sabir
Al-Rumman	Bunga pekan	Harrah	Lubia	Safarjal
Asal	Campli	Hintah	Lawz	Shih
Afyun	Chamchurus	Hinggu	Lakum	Summaq
Air gaca	Sandal	Hums	Manjakani Tarfa	<i>Sha'ir</i>
Al-Sana	Dhurrah	Hubb al-qara	Mawz	Arak
Aruzz	Dukhun	Inab	Mustaki	Simsim
Bakong	Qasab al-Sukkar	Ishkal	Mentul	Tarum
Baqalla	Fulful	Ishnan	Mud	Tarfa
Basal	Fujl	Jeura putih	Mur	Tamar
Rubik	Gelagaru	Jullab	Nawah	Terung
Bittikh	Gamgama	Jumayz	Pala	Tela
Bizr qatun	Jira hitam	Ketapang	Dum	Thufa
Bidara	<i>Habb al-Rashad</i>	Ketela	Qisha	Thum
Bunga seruni	Halba	Ketumbar	Bunga lawang	Timun phang
Rum	Keledai asfar	Khawkh	Reuteuk	Tin baladi
Me	Aswad	Kundur	<i>shudhdb</i>	Zayt
				Zaytun
				Zanjabil

Phase 2

This software offers a search wizard that was used to filter the herbal plant entries from the selected manuscript, namely Kitab Perubatan Melayu: *Al-Rahmah fi al-Tibb wa al-Hikmah*, as shown in Figure 4.

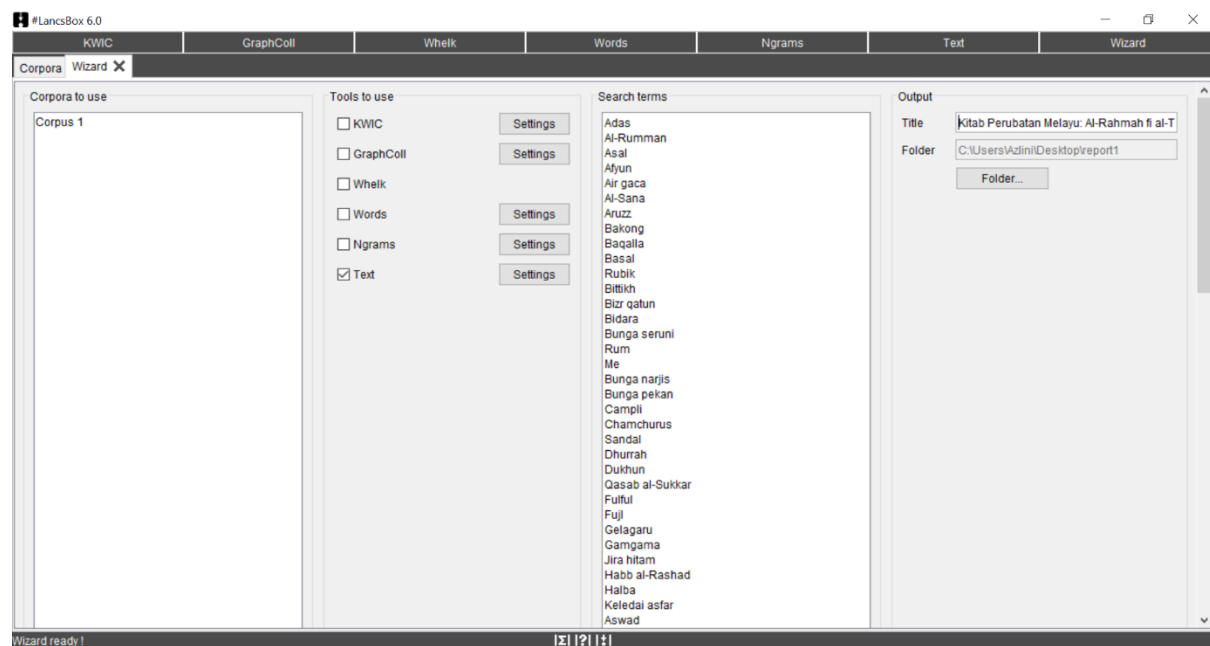


Figure 4: The process of uploading herbal plant entries in the #LancsBox 6.0 software

Phase 3:

A report of the results of the herbal search analysis was generated by the software, which shows the frequency of Tokens, Types and Lemmas, as summarized in Table 2.

Table 2: Corpus used

Name	Language	Texts	Tokens	Additional information
Corpus 1	English	1	31,147	Types: 2,899 Lemmas: 2,978

In this study, Corpus 1 (*Kitab Perubatan Melayu: Al-Rahmah fi al-Tibb wa al-Hikmah*) was used for the analysis, which revealed a total number of 31,147 running words (tokens) extracted from the texts. A full description of the corpora is available at [data/tsv/corpora](#).

Phase 4:

Concordance Analysis

The researchers were able to perform the collocation analysis process on the concordance list produced by the software using the #LancsBox 6.0 software, as indicated in the following list:

The following search terms were used: "Adas", "Afyun", "Air bawang merah", "Air buah limau", "Air buah limo", "Air buah Mentul", "Air gaca", "Air hinai", "Air kulit delima", "Air madu", "Air mawar", "Air pupati", "Air tebu", "Air tepung gandum", "Al-jullab ma u al-wardi", "Al-Rumman", "Al-Sana", "Anak jagung", "Anak padi", "Aron", "Aruzz", "Asal", "Asali", "Aswad", "Aweuh-aweuh", "Bak mula",

"Bakong", "Baqalla", "Basal", "Bawang merah", "Bawang putih", "Beras", "Bersugi", "Biji ganja", "Biji inab", "Biji kapas", "Biji labu", "Biji lenga", "Biji reutek", "Biji sawi", "Biji-bijian yang mentah", "Bittikh", "Bizr qatun", "Boeh arun", "buah anggur", "Buah asfar", "Buah delima", "Buah delima masam", "Buah kayu tarfa", "Buah kedekai", "Buah kelambir", "Buah keledai asfar", "Buah keledai hitam", "Buah keledai kabuli", "Buah ketapang", "Buah ketela", "buah khawkh", "Buah lakum", "Buah lawang", "buah limo", "Buah me", "Buah Mentul", "Buah meuntul", "Buah mil", "Buah Pala", "Buah pisang", "Buah rum", "Buah safarjal", "Buah tarum", "Buah terung", "Buah timun kemiki", "Buah timun panjang", "Buah timun phang", "Bunga lawang", "Bunga pekan", "Bunga seruni", "Campli", "chamchuruih", "Chamchurus", "Daun bidara yang muda", "Daun hinai", "Daun sanamakki", "Daun tin", "Dhurrah", "Dukhun", "Fanid", "Fuji", "Ful", "Fulful", "Galagaru", "Gamgama", "Gandarukam", "Gandum", "Gelagaru", "Getah kayu raja penawar", "Getak rubik", "Habb al-Rashad", "Habbat al-Sawda", "Halba", "Halbah", "Halia", "Halia Kering", "Halijar", "Halilaj al-aswad", "Halilaj Asfar", "Halilaj Aswad", "Halilaj Kabuli", "Haras-haras", "Harisah", "Harrah", "Hawas-hawas", "Hilf", "Hilit", "Hinai", "Hinggu", "Hintah", "Hubb al-qara", "Hums", "Huruf", "Inab", "Ishkal", "Ishnan", "Isi biji timun kemiki", "Isi biji timun panjang", "Isi buah mil", "Isi jagung", "Isi pelepak raja penawar yang hijau", "Jagung", "Jera hitam", "Jeumuju", "Jeura", "Jeura putih", "Jintan", "Jira hitam", "Jullab", "Kanji", "Kanji halba", "Kanji tepung gandum", "Kanji tepung jagung", "Kasturi", "Kayu arak", "Kayu tarfa", "Kedekai asfar", "Kedekai aswad", "Keledai asfar", "Keledai aswad", "Keledai kabuli", "kesturi", "Ketumbar", "Khawkh", "Khummus", "Kuah buah labu", "Kulit bawang merah", "Kulit buah delima", "Kulit buah mula", "Kulit-kayu-kayu", "Kundur", "Kundurkam", "kurma", "Lada", "Lada kering", "Lawz", "Lubia", "Lughah", "Manjakani", "Martik", "Mawz", "Mentui", "Mentul", "Minyak kelambir", "Minyak lenga", "Minyak sandal", "Minyak zaytun", "Mud", "Mur", "Mustaki", "Nala", "Nawah", "Pisang", "Pohon dum", "Pohon jumayz", "Pohon mula", "Pohon sage", "Pohon seribu guna", "Pohon shadab", "Pucuk kayu tarfa", "Pucuk Khummus yang kuning", "Pucuk lubia yang merah", "Pucuk reuteuk Panjang yang merah", "Pupati biji kapas", "Pupati Bunga narjis", "Pupati bunga pekan", "Pupati mula", "Putik kurma", "Qarangful", "Qasab al-Sukkar", "Qisha", "Raja penawar", "Raja penawar hijau", "Raja peunawar", "Raja peunawar yang muda", "Rempah-rempah", "Reutek", "Reuteuk Panjang", "Reuteuk- Reuteuk", "Roti gandum", "Roti jagung", "Roti Sha'ir", "Roti tepung gandum", "Roti Tepung jagung", "Rumput", "Rutab", "Sabir", "Safarjal", "Sana makki", "Sanamakki", "Sha'ir", "Shadab", "Sharbat jagung", "Shifa", "Shih", "Shudhab", "Simsim", "Sugi", "Sukkar", "Sukkar putih", "Summaq", "Sunti halia", "sunti inab", "Tamar", "Tebu", "Tela", "Tepung gandum", "Tepung halba", "Tepung jagung", "Tepung lada", "Tepung Manjakani", "Tepung Manjakani Tarfa", "Tepung mudd", "Terung", "Thufa", "Thum", "Tin baladi", "Tin jabali", "Zabib", "Zanjabil" and "Zayt".

Phase 5:

The search term "adas" appears five times (1.605 per 10k) in Corpus 1 in one of the texts. A sample of 10 concordance lines, chosen at random, are displayed in Table 3 together with the search term's most recent contexts.

Table 3: A random set of concordance lines for the term “*adas*” in Corpus 1

Filename	Left	Node	Right
Kitab Perubatan Melayu Al-Rahmah.docx	makanan yang keberatan tabi'ahnya sawdawi seperti ikan dan jagung dan	'adas	dan buah terung dan reutek dan barang sebagainya daripada makanan
Kitab Perubatan Melayu Al-Rahmah.docx	atau bijinya yang sudah disale nescaya menghilang akan cirit perut	Adas	iaitu bijian-bijian, kuning isinya, besarnya seperti biji reuteuk kecil, tiada
Kitab Perubatan Melayu Al-Rahmah.docx	makanan yang memberi pusaka penyakit sawdawi lagi berat tabi'ahnya, seperti	adas	dan nala dan sha'ir dan reuteuk-reuteuk dan daging lembu dan
Kitab Perubatan Melayu Al-Rahmah.docx	apabila banyaklah insan dimakan makanan yang jadi sawda itu seperti	'adas	dan jagung dan daging lembu dan kerbau dan buah terung
Kitab Perubatan Melayu Al-Rahmah.docx	antara dua makanan yang tabi'ahnya basah keduanya, seperti dukhan dan	'adas.	Dan lagi jangan dimakan oleh insan akan makanan yang keras

The search term “*Afyun*” appears 4 times (1.284 per 10k) in Corpus 1 in one of the texts. Table 4 shows a random sample of 10 concordance lines, showing the most immediate contexts in which the search term was used.

Table 4: A random set of concordance lines for the term “*Afyun*” in Corpus 1

Filename	Left	Node	Right
Kitab Perubatan Melayu Al-Rahmah.docx	pada awwal kitab. Bermula ubat suda' dan shaqiqah itu diambil	afyun	dan gamgama dipipis akan keduanya dengan cuka dan air mawar.
Kitab Perubatan Melayu Al-Rahmah.docx	Ta'ala sekarang, dan menghilang akan kembung-kembungnya. Dan apabila dicampur akan	afyun	dengan cuka, kemudian maka bubuh pada suda' ya'ni peurimpieng yang
Kitab Perubatan Melayu Al-Rahmah.docx	Ta'ala Dan jika tiada sembuh dengan demikian itu maka diambil	afyun	dan shudhdb qadar satu uqiyah air madu beratnya kemudian maka
Kitab Perubatan Melayu Al-Rahmah.docx	atau badan. Maka apabila dikehendaki buang akan dia maka diambil	afyun	dan biji ganja yang sudah dipipis maka dikhamir dengan cuka

Phase 6:

Based on the display of the wizard, users would be able to modify the data according to their requirements. In this study, researchers used the wizard to examine the characteristics of herbal features in the traditional Malay medicine, as shown in Table 5.

Table 5: Glossary display of herbal use

No.	Nama Tumbuhan Dalam Kitab	Nama Tempatan	Famili	Nama Saintifik	Bahagian yang digunakan	Cara Penyediaan	Penghuraian	Rujukan
10	146-Bakong	146-Bakong		146- <i>Crinum asiaticum</i>			146-Sejenis pokok bunga yang dikenali juga sebagai bunga tembaga suasa. Daun digulung untuk menjadi rokok daun	(Mohd Affendi Mohd Shafri & Hermansyah Muhammand Yahya, 2017)
		65-Bakong Bawang tembaga (E) <i>Giant crinum lily</i>		<i>Crinum asiaticum</i>				(Dr. Mohd Hilmi Bin Abdullah, 2022)
		484- Tembaga Suasa (Pahang, Johor, Selangor, perak), - Meluang (Kedah, Pahang, perlis, Pulau Pianag), - Mulung (Kedah) - Bakun - Bakuh - Bunga tembaga suasa - Bawang tembaga - Bawang hutan - Bawang tanah - Selendap - Landap - Selendap	<i>Amaryllidaceae</i>	<i>Crinum asiaticum L.</i>				(Nik Musa'adah Mustapha, Nik Zanariah Mahmood, 2017)

Phase 7:

Based on the wizard display, users can modify the data based on the examination of the work processes involved. In this study, the researchers used the wizard to examine the work processes involved in the traditional Malay medicines, as summarized in Table 6.

Table 6: A summary of the work processes in the Malay traditional medicine

leksikal kata kerja	konteks manuskrip	Penyakit	Cara	Proses kerja	Kesan	Masa
pipis 3	[1.2] Bab ini ubat budak jangan pilu. Ambil lempoyang ² , maka pipis ³ , airnya cuka masam, bedakkan pada budak itu, 'afiyat. Ini 'azimat disurat pada daun lontar.(ms5)	Pilu	Lempoyang daun lontar (adunan yang dibulatkan menjadi bulatan-bulatan kecil menggunakan tangan)	pipis + daun lontar (melumatkan dengan batu giling) + air cuka masam + bedakkan pada budak		
	[2.3] Sebagai lagi ubat cacing, ambil akar mambu ⁶ , maka tutuk ⁷ pecah-pecah, maka rendam pada air, maka beri air itu, diminumnya, jika demam ⁸ pun baik. [2.4] Sebagai lagi ambil daun remungai ⁹ dan kapur ¹⁰ maka pipis, tempelkan pada perut budak. (ms 6)	ubat cacing	ambil daun remungai dan kapur	pipis daun remungai dan kapur + tempel pada perut		
	[4.3] Sebagai lagi ubat balgham, ambil terung perat ²⁵ masak, lima buah atau tujuh buah maka pesamkan ²⁶ ke api, perah airnya, maka pipis bubuh minyak bijan ²⁷ , maka minum. Setelah sudah minum nescaya keluar balgham itu. (8)	kahak atau lendir (balgham)	ambil terung perat (sejenis tumbuhan <i>Solanum sultatissimum</i>), kemudian masak lima buah atau tujuh buah + pesamkan ke api (dipanaskan dengan sederhana panas dengan mendekatkan pada api atau menggunakan air suam) + perah airnya	pipis + bubuh minyak bijan (minyak yang diperbuat daripada biji bijan atau lenga, sesamum indicum) + minum	Keluar balgham (kahak atau lendir)	
	[6.2] Sebagai lagi ubat ngilu, ambil akar remungai dengan nasi dingin, maka pipis airnya cuka masam, barutkan pada ngilu itu, 'afiyat. (ms10)	ubat ngilu	ambil akar remungai + nasi dingin	pipis + air cuka masam + barutkan pada ngilu itu	afiat	
	[6.2] Sebagai lagi ubat ngilu, ambil akar remungai dengan nasi dingin, maka pipis airnya cuka masam, barutkan pada ngilu itu, 'aliyat. [6.3] Sebagai lagi ambil batang mawar ³⁶ , kupas kulitnya, maka ci(n)cang, dan nyiur dikukur maka tutuknya keduanya lunak-lunak, maka rendang ³⁷ pula. Setelah sudah, maka seka ³⁸ kan pada ngilu itu, 'afiyat. [6.4] Sebagai lagi ambil daun kecubung hitam ³⁹ tujuh helai dan kerak	ubat ngilu	ambil daun kecubung hitam (tumbuhan <i>datura metal</i>) tujuh helai + kerap arang segenggam + lengundi tujuh tarik + pokok renek (<i>vitec trifolia</i>) + cuka dua gantang	pipis semuanya + perah diperahi hingga dipergelangan tangan kaki	afiat	

4. DISCUSSION

The results of this study can improve the MOH of Malaysia's medical services by providing high-quality datasets pertaining to traditional medicine, which when combined with current medical knowledge can provide better health information to help improve the society's well-being. This has the impact of making it easier to pass legislation protecting the manufacture of traditional medicines that meet the requirements of the Ministry of Health. The geographical environment of the Malay world reveals a priceless treasure trove of natural resources of medicinal plants, as this study has shown. In order to help preserve this natural legacy, increased efforts are entailed to protect the natural environment from harm. Many researchers have provided substantial support for the traditional medicinal practices employing natural resources, particularly herbal plants, as an alternative method for the treatment, rehabilitation, and prevention of diseases through the analysis in prior studies (Mohd. Affendi Mohd. Shafri & Intan Azura Shahdan, 2017). Therefore, all parties involved must continue to collaborate to make sure Malaysia is ready to emerge as a center for Malay medical care. Such a venture would undoubtedly require additional research to look at manuscripts of Malay traditional medicine that had been recorded by prior practitioners and are available from the National Library of Malaysia. Through such studies, the legacy of Malay medicinal manuscripts can be preserved to highlight the wisdom and knowledge of Malay intellectuals and practitioners who excel in the field of traditional medicine.

5. CONCLUSION

The creation of a medical nadir glossary using the wizard software #LancsBox 6.0 can assist in educating the public about the value of protecting, preserving, and nourishing the legacy of Malay medicinal manuscripts that highlight the diverse fields of Malay ethno-medicine. It can also serve as a roadmap for further research into the legacy of Malay traditional medicinal manuscripts in order to uncover the wealth of information and secrets that are hidden there. This will help researchers gain a better understanding of the implicit and explicit philosophical meanings of the texts, which will open the door to new medical research and alternative treatments. As a result, the Malaysian Ministry of Health can play a key role in promoting and encouraging more studies on Malay traditional medical manuscripts based on the ethno-medicine framework in order to uncover more knowledge that can be used to enhance the practises of treating diseases as they are currently done. From an economic standpoint, such knowledge can be used to create herbal medications, whose marketing and sales can assist all the major players gain income. Additionally, the creation of the novel nadir glossary can assist in educating the public about the value of appreciating and protecting the natural environment, which is where herbal plants thrive and where the wisdom and thoughts or "weltanschauung" of early Malay intellectuals and practitioners in the field of traditional medicine using local resources flourish.

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References

- Abainia, K. (2019). DZDC12: a new multipurpose parallel Algerian Arabizi–French code-switched corpus. Language Resources and Evaluation. <https://doi.org/10.1007/s10579-019-09454-8>.
- Abd. Azam, A. dan Yatim, O. (2012). Manuskrip lama: Asas keupayaan dan kearifan Melayu tradisi. *International Journal of the Malay World and civilisation*, Vol. 30, No, 1, pp. 29 – 39.

- Al-Thubaity, A. O. (2015). A 700M+ Arabic corpus: KACST Arabic corpus design and construction. *Language Resources and Evaluation*, Vol. 49, No. 3, pp. 721–751. <https://doi.org/10.1007/s10579-014-9284-1>.
- AR Rohana, Z Nur Fazreen, AB Ariff Fahmi, M Marzalina, A Nur Syazni, Pin, KY, MA Mohd Shahidan, Ong, BK, Lim, HF, S Siti Zubaidah, R. R. (2017). *Direktori Pengusaha Produk Herba di Semenanjung Malaysia*. Forest Research Institute Malaysia (FRIM).
- Beare, Kenneth. (2018). What Is Collocation? Retrieved from <https://www.thoughtco.com/what-is-collocation-1211244>
- Belinkov, Y., Magidow, A., Barrón-Cedeño, A., Shmidman, A., and Romanov, M. (2019). Studying the history of the Arabic language: Language technology and a large-scale historical corpus. *Language Resources and Evaluation*, Vol. 53, No. 4, pp. 771–805. <https://doi.org/10.1007/s10579-019-09460-w>.
- Benvenuti, S., Maggini, R. & Pardossi, A. (2017). Agronomic, Nutraceutical, and Organoleptic Performances of Wild Herbs of Ethnobotanical Tradition. *International Journal of Vegetable Science*, Vol. 23 No.3, pp. 270-281, DOI: 10.1080/19315260.2016.1258605
- Bimba, A., Idris, N., Khamis, N., and Noor, N. F. M. (2016). Stemming Hausa text: Using affix-stripping rules and reference look-up. *Language Resources and Evaluation*, Vol. 50, No. 3, pp. 687–703. <https://doi.org/10.1007/s10579-015-9311-x>.
- Boryło, A., Grzegorz Romańczyk, G., Kaczor, M. & Skwarzec, B. (2019). 210Po in popular medicinal herbs from Poland, *Isotopes in Environmental and Health Studies*, Vol. 55 No. 3, pp. 308-316, DOI: 10.1080/10256016.2019.1609960
- Boschetti, F. (2015). Barbara McGillivray: Methods in Latin computational linguistics. (Brill's studies in historical linguistics). *Language Resources and Evaluation*, Vol. 49, No. 4, pp. 927–931. <https://doi.org/10.1007/s10579-015-9305-8>.
- Bourhis, R.Y.; Barrette, G. (2006). "Ethnolinguistic Vitality". *Encyclopedia of Language & Linguistics*. pp. 246–249
- Brezina, V. (2018). *Statistics in Corpus Linguistics*. In Cambridge University Press (First). <https://doi.org/10.1017/9781316410899>.
- Bruening, B. (2019). Idioms, collocations, and structure. In *Natural Language & Linguistic Theory*. <https://doi.org/10.1007/s11049-019-09451-0>.
- Chen, X., Xie, H., Wang, F. L., Liu, Z., Xu, J., and Hao, T. (2018). A bibliometric analysis of natural language processing in medical research. *BMC Medical Informatics and Decision Making*, Vol. 18(Suppl 1), 1–14. <https://doi.org/10.1186/s12911-018-0594-x>
- Cherniss, C., Roche, C., & Barbarasch, B. (2015). Emotional Intelligence. In *Encyclopedia of Mental Health: Second Edition* (pp. 108–115). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-397045-9.00207-X>
- Cobley, Paul. (2001). *Semiotics and language*. London: Routledge
- Ding Choo Ming (2003). *Kajian manuskrip Melayu: Masalah, kritikan dan cadangan*. Kuala Lumpur: Utusan Publications & Distributors Sdn Bhd.
- Djellab, M., Amrouche, A., Bouridane, A., and Mehallegue, N. (2017). Algerian Modern Colloquial Arabic Speech Corpus (AMCASC):Regional accents recognition within complex socio-linguistic environments. *Language Resources and Evaluation*, Vol. 51, No. 3, pp.613–641. <https://doi.org/10.1007/s10579-016-9347-6>.
- Eckhoff, H., Bech, K., Bouma, G., Eide, K., Haug, D., Haugen, O. E., and Jøhndal, M. (2018). The PROIEL treebank family: A standard for early attestations of Indo-European languages. *Language Resources and Evaluation*, Vol. 52, No. 1, pp. 29–65. <https://doi.org/10.1007/s10579-017-9388-5>.
- Eryiğit, G., Eryiğit, C., Karabüklü, S., Keleş, M., Özkul, A., Pamay, T., ... Köse, H. (2019). Building the first comprehensive machine-readable Turkish sign language resource: methods, challenges and solutions. *Language Resources and Evaluation*. <https://doi.org/10.1007/s10579-019-09465-5>.
- Faisal@Ahmad Faisal, A. H., & Nurul Wahidah, F. (2012). *Perubatan Melayu Tradisional: Kitab Tibb Pontianak* (Malay Traditional Medicine: Kitab Tibb Pontianak). *Jurnal Al-Tamaddun*, Vol.7 No.1, pp. 149–162.

Mohamed Redzwan, H. F., Bahari, K. A., Sarudin, A. & Osman, Z. (2020). Strategi pengukuran upaya berbahasa menerusi kesantunan berbahasa sebagai indikator profesionalisme guru pelatih berasaskan skala morfofonetik, sosiolinguistik dan sosiopragmatik. *Malaysian Journal of Learning & Instruction*, Vol. 17, No. 1, pp. 187-228.

Mohd Shafri, M. A & Shahdan, I. A (2017). *Malay Medical Manuscripts: Heritage From the Garden of Healing* (Pnyt.). Kajang: The Islamic Manuscript Association.

Mohd Shafri, M. A & Muhammand Yahya, H. (2017). *Kitab Perubatan Melayu Al-Rahmah Fi Al-Tibb Wa Al-Hikmah*. Akademi Jawi Malaysia.

Mohd Shafri, M. A (2020). *Sudah Gaharu Cendana Pula*. Bangi: Akademi Jawi Malaysia Klasika Media.

Mustapha, N.M, Mahmood, N Z, N. A. M. A. & N. H. (2017). *Khazanah Perubatan Melayu: Tumbuhan Perubatan Jilid 2*. Forest Research Institute Malaysia (FRIM).

Sarudin, A., Mohamed Redzwan, H. F., Osman, Z., Raja Ma'amor Shah, R. N. F., and Mohd Ariff Albakri, I. S. (2019a). Menangani kekaburan kemahiran prosedur dan terminology awal Matematik: Pendekatan leksis berdasarkan Teori Prosodi Semantik. *Malaysian Journal of Learning and Instruction*, Vol. 16, No. 2, pp. 255-294.

Sarudin, A., Mohamed Redzwan, H. F, Osman, Z., & Mohd Ariff Al-Bakry, I. S. (2019b). Using the Cognitive Research Trust scale to assess the implementation of the elements of higher-order thinking skills in Malay Language teaching and learning. *International Journal of Recent Technology and Engineering (IJRTE)*, Vol. 8, No. 2S2, pp. 392-398.