

ELECTRONIC DICTIONARY PRODUCTION SYSTEM
(EDIPS)

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Dedicated to my family. Thank you very much being supportive and understanding.
Truly appreciate it.

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ABSTRACT

A dictionary is a reference book containing an alphabetical list of words, with information given for each word, usually including meaning, pronunciation, and etymology. A dictionary is a book composed of an alphabetical listing of words with their meanings. There are general dictionaries of English and other languages and specialized subject dictionaries in fields such as business, law, medicine and many more. In monolingual dictionaries, the words are explained and defined in the same language. In bilingual dictionaries, they are translated into another language. Dewan Bahasa dan Pustaka (DBP) or also known as Institute of Language and Literature Malaysia is the sole agency in Malaysia that is responsible for building, expanding and enriching Bahasa Melayu as the national language in Malaysia. Several steps are involved in producing a dictionary. The steps include “Perbahanan”, “Penyenaraian”, “Pengagihan”, “Pendrafan”, “Penyuntingan”, “Penyuntingan KAPI” and “Penjanaan”. An analysis of the current DBP business process, found weaknesses and constraints in the implementation of the current dictionary production processes. The production of a dictionary was time consuming and requires lots of effort. A prototype system of EDiPS was developed and has demonstrated and conclude that analysis can be done effectively and timely. EDiPS enables referencing and sharing of information among users. Generation of dictionary could also be performed in a more effective and flexible manner. The use of EDiPS can reduce the time and cost of dictionary production.

ABSTRAK

Kamus adalah rujukan yang mengandungi senarai perkataan, disertakan dengan maklumat bagi setiap perkataan yang lazimnya mengandungi makna, cara sebutan dan etimologi. Terdapat pelbagai jenis kamus dalam Bahasa Inggeris dan bahasa-bahasa lain. Terdapat juga kamus khusus mengikut bidang tertentu seperti kamus bidang perniagaan, perundangan, perubatan dan banyak lagi. Bagi kamus dwibahasa, perkataan asal diberi maksud yang sama menggunakan bahasa kedua. Dewan Bahasa dan Pustaka (DBP) yang juga dikenali sebagai Pusat Bahasa dan Penulisan Malaysia adalah institusi tunggal di Malaysia yang bertanggungjawab untuk membina, memperkembang dan memperkaya Bahasa Melayu sebagai bahasa kebangsaan Malaysia. Beberapa langkah terlibat dalam penghasilan sesebuah kamus. Langkah-langkah tersebut termasuklah Perbahanan, Penyenaian, Pengagihan, Pendrafan, Penyuntingan, Penyuntingan KAPI dan Penjanaan. Daripada analisa keadaan semasa, telah dikenalpasti terdapat beberapa kelemahan dan kekangan dalam penghasilan sesebuah kamus. Kesannya, penghasilan ini akan memakan masa yang lama serta usaha yang diperlukan adalah tinggi. Sistem prototaip EDiPS telah digunakan untuk membuktikan bahawa melalui proses percubaan, analisis dapat dilakukan dengan berkesan dalam tempoh yang telah ditetapkan. EDiPS juga membolehkan perkongsian dan rujukan maklumat dilakukan diantara pengguna. Penghasilan kamus juga kini dapat dilaksanakan dengan lebih efektif dan fleksibel. Penggunaan EDiPS dapat menyelesaikan masalah penggunaan masa dan kos berlebihan dalam penghasilan kamus.

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CHAPTER 1

PROJECT OVERVIEW

1.1 Introduction

Dictionary is a reference book containing an alphabetical list of words, with information given for each word, usually including meaning, pronunciation, and etymology. A dictionary is a book composed of an alphabetical listing of words with their meanings.

There are general dictionaries of English and other languages and specialized subject dictionaries in fields such as business, law, medicine and many more. Dictionaries are also produced for a certain targeted audiences such as dictionary for kids, school, universities and lots more. In monolingual dictionaries the words are explained and defined in the same language. In bilingual dictionaries they are translated into another language. Modern dictionaries usually also provide phonetic transcriptions, hyphenation, synonyms, derived forms, and etymology.

A dictionary is used as a tool for referencing. It is used to look up meanings for a word or might also be used to look up the pronunciation of that word. Nowadays there are a lot of dictionary being produced worldwide. These dictionaries could be found in all bookstores in various sizes.

1.2 Background of Problem

Dewan Bahasa dan Pustaka (DBP) or also known as Institute of Language and Literature Malaysia is the sole agency in Malaysia that is responsible for building, expanding and enriching Bahasa Melayu as the national language in Malaysia. DBP is also responsible for printing books, magazines, booklets and leaflets in the national language by its printing company, which is DAWAMA Sdn Bhd. This includes printing of dictionary too, which are produced by Bahagian Perkamusan, DBP.

Several steps is involved in producing a dictionary. The steps include Perbahanan, Penyenaraian, Pengagihan, Pendrafan, Penyuntingan, Penyuntingan KAPI and Penjanaan. Perbahanan is a process where personnel collect new words from various sources such as books, magazines, journals, articles, novels and many more. The determination of new word is by comparing the word with the general list of words. These new words will be saved with its sentence example. The words will then undergo certain filtering process until it is really accepted as a new word. A Project Manager will then list down the words for his project in the Penyenaraian process. He will search for the words and choose to list it in his list of words for his project. Usually there will be more than 500 words vary on dictionary target categories such as for student, general, university and many more. Pengagihan is a process of distributing and assigning the words gathered in the Penyenaraian process to the relevant personnel. With the assigned word, the personnel will draft the word under the Pendrafan process. Pendrafan involves the process of determining the meanings, synonyms, antonyms, sentences example and lots more. The outcome of Pendrafan will then be edited in the Penyuntingan process. Penyuntingan involves editing of meanings, synonyms, antonyms and many more. Penyuntingan KAPI is a process where the editor checks the rules for the output of the dictionary which involves rules of the symbols that are to be used. Lastly, the overall output will be seen in the Penjanaan process.

Currently, Bahagian Perkamusan doesn't have any computer system to support their business process in the production of a dictionary. Therefore, generation and

analysis cannot be done effectively and timely. For example, if someone wants to know the number of words with the label noun in a dictionary or list the words with the meanings from Negeri Sembilan dialect, currently, this query can only be answered with a time-consuming effort.

Bahagian Perkamusan keeps their data in a printed documents format. This method of storing data will take up lots of space to store the documents. Furthermore, the printed documents have to be referred manually by personnel in the department. Consequently, this method demonstrated some weaknesses of storing data and at the same time it is hard to share data among personnel in the department.

Bahagian Perkamusan usually carry out their meetings outside of DBP building. The places they meet vary from inside and outside of Kuala Lumpur. The problem in this scenario is that when the meeting is outside of DBP, they have to bring along the relevant references and bulky documents to accomplish their tasks. This requires a lot of endeavor and time.

At the moment, there is a process named Penyuntingan KAPI in the dictionary production business process. Penyuntingan KAPI is a process where editors verify the symbols and signs that are used throughout the dictionary to ensure that the symbols and signs are correct. The department performs this process in order to avoid typo errors caused by previous processes. This editing process is time consuming, costly and inflexible especially when there is a change in formatting requirements.

From the problem analysis of the current business process, there are weaknesses and constraints in the implementation of the dictionary production processes. As a consequent, the production of a dictionary requires long time with lots of effort.

1.3 Statement of the Problem

From the problem analysis of the current business process, there are weaknesses and constraints that are caused by inefficient and ineffectiveness of the dictionary production processes. The problems that arises from the current business process are:

- Analysis cannot be done effectively and in a timely manner
- Difficulties in referencing and sharing of information
- Implementation of current business process is time-consuming
- Generation of dictionary is very costly and inflexible especially when there is a change in formatting requirements

1.4 Project Objectives

The objectives of the project are as follows:

- To study and analyze the existing manual production processes of dictionary for Bahagian Perkamusan, DBP
- To design and develop Electronic Dictionary Production System (E-DiPS)
- To improve flexibility of dictionary generation and provide cost effective dictionary production process
- To formulate organizational strategy for the successful implementation of the system

1.5 Project Scopes

The scopes of the project are as follows:

- To develop a prototype for Electronic Dictionary Production System (E-DiPS) which include the following processes;
 - Perbahanan,
 - Penyediaan Spesifikasi,
 - Penyenaraian,
 - Pengagihan,
 - Pendrafan,
 - Penyuntingan, and
 - Penjanaan
- This prototype is specially designed for Bahagian Perkamusan, DBP
- The system will be developed in a web-based environment
- The prototype will be developed using structured approach
- Softwares that will be used are VB.Net, ASP.Net and Microsoft Access
- Data sources are from users at Bahagian Perkamusan, DBP

1.6 Project Importance

Dictionary production requires consolidated efforts from various parties inside and outside of DBP. As such, the current manual business process demonstrated inflexibility, ineffectiveness and time consuming activities. Therefore, it is evident that this study is much relevant and its importance can be re-stated as follows:

- Analysis can be done effectively and timely
- Enable referencing and sharing of information

- Generation of dictionary can be performed in a more effective and flexible manner
- Reduce time and cost of dictionary production

1.7 Summary

Nowadays, many organizations have moved towards using IT to perform their daily business. It is hope that the proposed system will help and assist DBP in producing dictionary in a much more efficient and effective manner. With the proposed system, it is hoped that the dictionary production time could be shorten. In addition, reporting and ad-hoc queries can be provided and facilitated in a more efficient and flexible way.

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