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## A Review on the Teaching and Learning Resources for the Deaf Community in Malaysia

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### ABSTRACT

**A**t present, there are more than 26,500 deaf people in Malaysia whose main mode of communication with other hearing people is via the Malaysian Sign Language. There is a lack of teaching and learning aids to assist the deaf community in the learning process as well as for those who are interested to learn Malaysian Sign Language. This paper reviews some of the teaching and learning resources that are available for the deaf community in Malaysia. More efforts in publishing and developing teaching materials for the deaf community are required to help bridge the communication gap between them and the hearing community.

**Key words:** Teaching and learning resources, Deaf community, Malaysia.

### INTRODUCTION

**D**eafness is the result of damage to any part of the ear. The degree of hearing loss depends on the severity of that damage. The causes of hearing loss vary from person to person and are related to the individual's circumstances. It could be caused by many factors which include diseases (e.g.; mumps or meningitis), drugs (e.g.; aspirin in high doses or antibiotics called aminoglycosides), frequent exposure to loud noise, serious head injury or aging (progressive deterioration of hearing in older people which is a natural part of the aging process). The only way to communicate with this hearing-impaired group is via sign language. In Malaysia, there is only one proper deaf school, the Federation School of the Deaf, located in the state of Penang (Malaysian Federation of the Deaf, 2001). Facilities for the deaf community, specifically the teaching aids, are still lacking and need to be looked into. Thus, a project was initiated to study the resources that

are available to assist the deaf community in the teaching and learning of Malaysian sign language in Malaysia.

### DEAF COMMUNITY IN MALAYSIA

Based on the data compiled by the Social Welfare Department Malaysia (SWDM), there were 17,692 registered hearing-impaired in Malaysia in 2000 (e-pek@k, 2002). The distribution of the deaf population in Malaysia, according to state and race, is shown in Table 1. It is obvious that the deaf population is on the rise. By the end of 2002, the number of hearing-impaired who registered with the SWDM had increased to 21,981 (Hari Orang Pekak disambut hari ini, 2003). In late 2004, this figure had reached 23,000 and in 2006, it is reported at 26,500 (Bridging the gap for the deaf, 2006). As registration is not mandatory, the actual number could possibly be over 26,500.

Table 1: Registered Deaf Population in Malaysia (2000).

State	Races						Total
	Malay	Chinese	Indian	Muslim Bumis	Non-Muslim Bumis	Others	
Johor	1,419	679	257	-	-	81	2,436
Selangor	1,037	560	346	-	-	15	1,958
Perak	958	579	175	2	2	11	1,727
WP Kuala Lumpur	745	680	250	-	-	6	1,681
Sarawak	350	672	-	-	337	-	1,359
Sabah	-	11	-	-	1,341	-	1,352
Penang	534	627	123	-	-	4	1,288
Kedah	939	154	68	-	-	10	1,171
Terengganu	1,122	13	2	-	-	-	1,137
Kelantan	1,074	36	1	-	-	2	1,113
Negeri Sembilan	462	201	97	-	1	3	764
Malacca	423	233	63	-	1	5	725
Pahang	526	111	31	-	-	6	674
Perlis	255	13	3	-	-	2	273
WP Labuan	17	13	-	1	3	-	34
<b>Total</b>	<b>9,861</b>	<b>4,582</b>	<b>1,416</b>	<b>3</b>	<b>1,685</b>	<b>145</b>	<b>17,692</b>

Source: Social Welfare Department Malaysia, 2002.

In an article published in the *News Straits Time* on 28 August 2006, entitled, "Bridging the gap for the deaf" (2006), the deaf community is very much dependent on interpreters to help them bridge the communication and information gap. The services of interpreters are needed in job interviews, medical check-ups and even in court. The Malaysian Federation of the Deaf (MFD) stated that, in general, the majority of the deaf depends on visual communication, that is, the Malaysian Sign Language (Bahasa Isyarat Malaysia in Malay), and they have low proficiency in the Malay language, which is their second language. As a result, there is less opportunity for them in socio-economic development of the country and they also have less access to information due to the communication gap between them and the hearing community (Open your heart, 2006).

### EDUCATION FOR THE DEAF IN MALAYSIA

Education is very important for everyone including the deaf community. In Malaysia, education for the deaf started in 1954 when the first fully residential school, the Federation School for the Deaf, was established in Penang. In 1963, special integrated classes for the deaf were established to accommodate more deaf children nationwide. The current education trend is now moving towards streaming and normalisation in a less restricted setting (History of Deaf Education in Malaysia, 1991).

Both the residential and special day schools, together with the special classes in the mainstreamed schools, are run in parallel to cater to the needs of the deaf children. These special schools fulfill the regional special educational needs of the rural and isolated deaf children. These schools are also engaged in community education about deafness and in promoting communications among the non-handicapped. They also function as centres for pre-school parent guidance and provide vocational awareness, training and guidance for the deaf adolescents. In 1991, there were 27 special schools and 38 special classes for the deaf (Table 2) (Current Special Education Provision for the Deaf, 1989). Besides the 27 special schools for the deaf, deaf students including those with substantial hearing losses are receiving their basic education in regular primary or secondary schools.

**Table 2:** Special Schools and Special Classes for the Deaf People in Malaysia (1991).

	Regular Schools All Types	Special Schools for the Deaf	Special Classes for the Deaf
Primary	6,763	25	23
Secondary	1,292	2	15
Total	8,055	27	38

Source: Schools Division, Ministry of Education, Malaysia, 1991.

### MALAYSIAN SIGN LANGUAGE

The Malaysian Sign Language (MSL) is the most-widely used method of sign communication in Malaysia. It is also known as “Bahasa Isyarat Malaysia (BIM)”. MSL uses both manual and non-manual components: hand shapes and movements, and facial expression and shoulder movements. It has many ‘dialects’ that vary from state to state. The American Sign Language (ASL) has a strong influence on MSL, but both are different enough to be considered as separate languages. In addition, there are some other variations of the MSL used in Malaysia, which are described below.

#### *a. Penang Sign Language (PSL)*

PSL was developed in Malaysia by the deaf children themselves outside the classroom, when oralism was predominant. It is now mainly used by older people, although many younger people can understand it (Gordon Jr., 2005a).

#### *b. Selangor Sign Language (SSL)*

SSL is also known as Kuala Lumpur Sign Language (KLSL), and was originally based on the American Sign Language (ASL) but has diverged significantly from the latter and it can now be considered as a language on its own. As it is used mainly in the state of Selangor, rather than Kuala Lumpur, the deaf themselves call it Selangor Sign Language. Like Penang Sign Language, it is mainly used by the older people although many younger people can understand it (Gordon Jr., 2005b).


#### *c. Manually-Coded Malay*


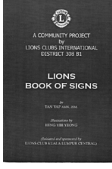

It is the only form of sign language recognised by the Malaysian government as the language of communication for the deaf. It is also referred to as Kod Tangan Bahasa Malaysia (KTBM), which is the form found in the Ethnologue. KTBM is adapted from the American Sign Language, with the addition of some local signs and grammatical signs representing affixation of nouns and verbs that are used in the Malay language. It is used in the deaf schools for the purpose of teaching the Malay language (Gordon Jr., 2005c).





## REVIEW ON THE TEACHING AND LEARNING RESOURCES FOR THE DEAF COMMUNITY IN MALAYSIA

Some non-governmental organizations (NGOs) in Malaysia such as the Malaysian Federation of the Deaf (MFD), the Lions Club, research institutions and a number of voluntary community services have put in a lot of efforts to publish books on the Malaysian Sign Language (MSL) for the use of the deaf community. As sign language involves hand motions and facial expressions, signs illustrated (drawn) in the books cannot ‘truly’ show the sequence of hand motions. Hence, a number of community projects that were initiated use the electronic media to assist in the teaching and learning of MSL. These electronic teaching and learning aids include MSL learning packages available in video compact disc (VCD), compact disc (CD) or accessible on-line from the Internet. Table 3 shows a comparison of some of the MSL teaching and learning resources (printed and electronic) that have been published locally. Besides these resources, there are non-governmental organisations such as YMCA (Community Sign Language Courses for Adults, 2006) which conduct MSL classes for its members only, and Majudiri Y Foundation for the Deaf (Kuala Lumpur) (Bahasa Isyarat Malaysia (BIM) for Educators & those who work with the Deaf, 2006). Every participant pays a small fee (per level) to attend the Malaysian sign language classes.

**Table 3:** A Comparative Look at Some Teaching and Learning Resources for MSL.

Title	Contents	Price (RM)	Publisher/ Producer	Year Published
Learn Sign Language in Ten Hours (Tan, 1998)	<p>The book is authored by Mr. Tan Yap who was the president of the: Society of Hearing-Impaired of the Selangor and Federal Territory, Interpreters Society of the Selangor and Federal Territory, etc., in 1998. The signs were drawn by Mr. David Tay, a deaf student of Mr. Tan Yap.</p> <p>It is a good and simple teaching and learning aid for the deaf people and others who are interested to learn MSL.</p> <ul style="list-style-type: none"> <li>• Contains more than 240 signs that cover more than 600 words.</li> <li>• Covers alphabets (A-Z), numbers (1-23, fractions, 30, 40, 50, 60, 70, 80, 90, 100 and 1000).</li> <li>• Ten chapters: covering signs for everyday use.</li> <li>• Meanings are in Chinese, English and Malay.</li> <li>• The signs are clear and easy to follow.</li> </ul>	5.00	Academe Art & Printing Services Snd. Bhd.  	First published in 1998

Bahasa Isyarat Malaysia (Malaysian Sign Language) (Bahasa Isyarat Malaysia, 2000)	<p>First book initiated by the Malaysian deaf people and contains signs that are used by the deaf community in Malaysia.</p> <ul style="list-style-type: none"> <li>• Contains more than 1,000 signs and has 30 chapters.</li> <li>• Arrangement of graphics is clear; easy to read.</li> <li>• Small size and easy to carry.</li> </ul>	10.00	<p>MDF</p> 	First published in 2000
Lions Book of Signs (Tan, 2001)	<p>The book is authored by Mr. Tan Yap who was the president of the: Society of Hearing-Impaired of the Selangor and Federal Territory, Interpreters Society of the Selangor and Federal Territory and others in 2001. The signs were drawn by Mr. Heng Yih Yeong, a student of Mr. Tan Yap's sign language class.</p> <p>This book was initiated and sponsored by the Lions Club Kuala Lumpur Central. About 1,500 copies were printed and distributed for free to Lions Club members for teaching of sign language as a community service to assist the deaf people in Malaysia.</p> <p>It is a good and simple teaching and learning aid for the deaf people and others who are interested to learn MSL.</p> <ul style="list-style-type: none"> <li>• Contains more than 250 signs that cover more than 680 words.</li> <li>• Covers alphabets (A-Z), numbers (1-23, fractions, 30, 40, 50, 60, 70, 80, 90, 100 and 1000).</li> <li>• Twelve sections: covering signs for everyday use.</li> <li>• The signs are clear and easy to follow.</li> <li>• Meanings are in Chinese, English and Malay.</li> </ul>	Free	<p>Lions Club, Kuala Lumpur Central (District 308 B1 Malaysia)</p> 	First published in 2001
Communication In Sign (Tan, 2003)	<p>The author is Mr. Tan Yap who was the president of the: Society of Hearing-Impaired of the Selangor and Federal Territory, Interpreters Society of the Selangor and Federal Territory and others in 2003. The signs were drawn by Mr. Heng Yih Yeong, a student of Mr. Tan Yap's sign language class.</p> <p>This book was sponsored by the Lions Club of Serdang as a community project. About 1,500 copies were printed and distributed free to Lions Club members to teach them sign language as community services to assist the deaf people in Malaysia.</p> <p>It is a good and simple teaching and learning aid for the deaf people and others who are interested to learn MSL.</p> <ul style="list-style-type: none"> <li>• Contains more than 430 signs that cover more than 800 words.</li> <li>• Covers alphabets (A-Z), numbers (1-23, fractions, 25, 30, 40, 50, 60, 70, 80, 90, 100 and 1000).</li> </ul>	Free	<p>Lions Club of Serdang (District 308 B2 Malaysia)</p> 	First published in 2003

	<ul style="list-style-type: none"> <li>• Eighteen sections: covering signs for everyday use.</li> <li>• The signs are clear and easy to follow.</li> <li>• Meanings are in Chinese, English and Malay.</li> </ul>			
Malaysian Sign Language Book 2 (Buku BIM Jilid 2, 2003)	<p>Suitable as a complete reference for the deaf people and others who are interested to learn MSL.</p> <ul style="list-style-type: none"> <li>• Contains more than 1,000 signs.</li> <li>• 42 chapters: communication, education, economic, etc.</li> <li>• Simple and easy to understand sign.</li> <li>• Signs for words in Malay language and English.</li> <li>• Sample sentence for each sign.</li> <li>• Attractive and systematic sign illustration.</li> <li>• Small size and easy to carry.</li> </ul>	20.00	MDF 	First published in 2003
ICT Signs (Buku BIM: Isyarat-isyarat ICT, 2003)	<p>Suitable for use as teaching aids for deaf students, deaf adults, teachers and parents to understand basic ICT and to learn MSL.</p> <ul style="list-style-type: none"> <li>• Contains more than 200 ICT signs.</li> <li>• Signs for ICT terminologies in Malay and English.</li> <li>• Attractive and systematic sign illustration.</li> <li>• Provides ICT illustrations and further explanations.</li> <li>• Small size and easy to carry.</li> </ul>	8.00	E-Pekak Unit, MFD 	First published in 2003
CD-ROM Panduan Bahasa Isyarat Malaysia (Malaysian Sign Language Guide) (CD-ROM Panduan BIM, 2001)	<p>Developed by Asia Pacific Institute of Information Technology (APIIT).</p> <ul style="list-style-type: none"> <li>• Contains more than 350 words.</li> <li>• Includes alphabets A-Z, integers 0-9 and selected integers up to 99.</li> <li>• Preset fingerspelling and phrases.</li> <li>• Exercises are provided to enhance vocabulary and fingerspelling.</li> <li>• Instruction in Malay language with captions in English (selected words).</li> <li>• Signs are represented using video recording of human model and narration is in text mode.</li> </ul>	5.00	APIIT 	2001
Malaysian Sign Language Guide VCD (Video CD (VCD) Panduan BIM, 2003)	<p>A 60 minute CD. System requirements include television or computer and a VCD player.</p> <ul style="list-style-type: none"> <li>• Contains 24 chapters.</li> <li>• Signs are easy to learn and understand.</li> <li>• Humorous presentation of the deaf actor.</li> </ul>	20.00		2003
e-pek@k (e-pek@k, 2006)	<p>e-pek@k is a national project to promote ICT awareness among the deafs. This website provides:</p> <ul style="list-style-type: none"> <li>• General information about the deaf.</li> <li>• Bahasa Isyarat Malaysia (Malaysian Sign Language) which covers Introduction, Alphabets (A-Z), Numbers (2-20, 25, 30, 40, 50, 100, 1000, 10,000, 1,000,000) and BIM dictionary.</li> </ul>	Free	MDF	Since 2001

In the process of learning a new language, it is also important that a learner understands and masters the vocabulary well before he is able to use the language correctly. A dictionary is thus needed in the learning process. Similarly, in the learning of sign language, a dictionary is needed to understand the meaning(s) of the word (sign) and to know its pronunciation if the learner is not a deaf person (up to 20 dB) or who suffers from mild hearing loss (20-45 dB). A survey of sign language dictionaries shows that there are many foreign sign language dictionaries but there is yet to be available a comprehensive, printed electronic dictionary of the Malaysian Sign Language. The following section presents a review of some examples of foreign electronic sign language dictionaries.

### REVIEW OF SOME ELECTRONIC SIGN LANGUAGE DICTIONARIES

Table 4 shows the features of four foreign sign language dictionaries. Some of these dictionaries can be accessed freely on the Internet.

**Table 4:** Features of Some Sign Language Dictionaries.

Title	Contents	Price (RM)	Publisher/ Producer	Year Published
ASLPRO. COM Dictionaries (2006)	It is a Web-based American Sign Language video dictionary. The signs are presented by a model in a video recording. Features: <ul style="list-style-type: none"> <li>• Covers over 7000 ASL signs.</li> <li>• Have different models to illustrate the signs.</li> <li>• Consists of 4 types of dictionaries: Main Dictionary (over 4000 signs), Religious Dictionary (over 1200 interdenominational signs), Conversational Dictionary (over 2000 commonly-used phrases) and Babies Dictionary.</li> <li>• Provides controller for the video (play, pause, stop, etc.).</li> <li>• English version only.</li> <li>• Signs cannot be viewed from different angles (no rotation function).</li> <li>• Meaning of the words not provided.</li> <li>• Although it has speed control, the signing speed is rather fast, thus not easy to follow.</li> <li>• No searching by category.</li> <li>• No sound.</li> </ul>	Free	ASLPRO. COM	Not Available
American Sign Language Dictionary (2006)	It was developed by Martin L.A. Sternberg. It combines text, video examples, and animated illustrations to create a rich reference tool for learning ASL. It consists of 2 CD-ROMs and can run on Windows 2000/Me/98/NT/XP. Features: <ul style="list-style-type: none"> <li>• Has over 2600 signs with video demonstrations and illustrations.</li> <li>• Has fingerspelling games and quizzes.</li> </ul>	US\$ 11.95	Multi-media 2000 Inc. (M2K)	Version 2.1 was released in 1996



	<ul style="list-style-type: none"> <li>• Has video demonstrations and illustrations</li> <li>• Listen to audio explanations or read the descriptions on-screen</li> <li>• Progress through signs by subject.</li> <li>• Searching capabilities in 5 languages.</li> </ul>			
British Sign Language Dictionary (Welcome to the BSL Dictionary Online, 2006)	<p>It is an online Web application of the British Sign Language Dictionary (BSL). It was developed by Stories in the Air assisted by Dunedin Multimedia, Donaldson's College, The National Deaf Children's Society and the City of Edinburgh Council Education Department.</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Contains 20 categories of sign: food, clothes, days, feelings, weather, medical terms, animals, colours, etc.</li> <li>• Include facial expression for each sign.</li> <li>• Provides speed control on the animation of the sign at any time.</li> <li>• Cannot search for a sign by entering the word.</li> <li>• Signs cannot be viewed from different angles (no rotation function).</li> <li>• Meaning of the words not provided.</li> <li>• Must install the QuickTime software to watch the sign.</li> <li>• No sound.</li> </ul>	Free	Stories in the Air	2006
American Sign Language Dictionary-Flexi (Sternberg et al., 2006)	<p>The authors are Martin L. Sternberg, Marin Sternberg, Herbert Rogoff (Illustrator). It is an illustrated abridgment of the most authoritative reference book on sign language, with well-written and easily-understood instructions for the use of each sign</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Has more than 5,000 signs and 8,000 illustrations.</li> <li>• Third edition includes more than 500 new signs and 1,500 new illustrations.</li> <li>• Provides a mixture of both English and ASL words</li> </ul>	US\$ 19.96	Harper-Collins Publishers	First published in 1998

### DISCUSSION AND CONCLUSION

Presently, there is no dictionary on MSL available for teaching and learning MSL. One such dictionary could be developed based on the system functions and features of the foreign sign language dictionaries reviewed above. As Malaysia is a multi racial country, the MSL dictionary shall be developed to incorporate elements of the cultural and social norms of the Malaysian society. Basically, the MSL dictionary to be developed should have the following features:

- a. a bilingual system (provides instructions in Malay and English).
- b. stores 600 signs (words) that are commonly used by the deaf community in Malaysia, and index the signs in alphabetical order and group them according to specific categories such as fruits, occupation, vehicle, etc.

c. explains one or more basic meaning(s) of each sign and provides links to other related signs (words) such as synonyms and antonyms.

d. the meanings of the signs shall be illustrated in text and in graphics (if suitable pictures are available).

e. provides functions which include "Administration of Database" and "Search" function. The "Administration" function is to allow an administrator to maintain the database of the sign language dictionary.

f. "Search" function will be provided to allow users to search for any commonly-used signs (words) stored in the dictionary.

The target users of this system include people from all walks of life, ranging from the teachers of deaf school and students, medical officers, police officers, court translators to the home-users including families with deaf children and Hence, any user who wishes to learn Malaysian Sign Language. The development of this bilingual Malaysian sign language dictionary will be timely and it should certainly be a very useful tool in the teaching-learning process in the deaf schools. It will certainly help bridge the communication gap between the hearing-impaired people and the general public in Malaysia.

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