

HEARING IMPAIRED STUDENT ACHIEVEMENT ON THE BAHASA MELAYU SUBJECT: ARE THESE TESTS APPLICABLE?

Diyana Kamarudin¹, Dahlya Kamarudin², Yasmin Hussain³

¹Faculty of Industrial Management, Universiti Malaysia Pahang, Lebuhraya Tun Razak,
Gambang, Pahang, Malaysia

²Western Michigan University, 1903 Western Michigan Avenue, Kalamazoo, MI, U.S.A

³Ministry of Education, Special Education Division, Block E2, Kompleks E, Pusat Pentadbiran Kerajaan
Persekutuan, Presint 1, Wilayah Persekutuan Putrajaya

DOI: <https://doi.org/10.37134/bitara.vol12.7.2019>

Received: 24 October 2019; Accepted 20 November 2019; Published 11 December 2019

Abstract

Hearing impairment is an area within special education. It is also one of the factors contributing to difficulty in learning at schools for children. Some students are also unable to communicate effectively with teachers. Linguistically, hearing impaired children are already having a tough time understanding the Malay subject, before adding on the two different hand codes. This study utilizes a quantitative descriptive research design where data was gathered from five schools in Malaysia, from different states. It would analyze hearing impaired student Bahasa Melayu achievement obtained from the five schools ranging from year 1 to year 6. The tests were divided into 2 sections which are comprehension and writing. Findings indicated that students did worse in their writing section compared to the comprehension section for both the mean and median analysis.

Keywords: *Bahasa Melayu, Hearing Impaired, Hand Signal, Language*

INTRODUCTION

Bahasa Isyarat Orang Pekak (BIOP) or Bahasa Isyarat Malaysia is the informal way of communication between teachers and students. Bahasa Malaysia Kod Tangan or BMKT is the code used by teachers to construct sentences using formal Malay language (Yusoff & Mohamed, 2004). In order to fully utilize this code, teachers need to have a good understanding of the topics and subjects. Previously in Malaysian curriculum, only Bahasa Melayu Kod Tangan (BMKT) is allowed in the curriculum. Bahasa Isyarat Malaysia (BIM) is the original language for the deaf people, where it is used by the deaf association in Malaysia. BIM is widely known and used in Malaysia. BMKT is not widely used, but it is associated and used to translate from oral or visual into formal Bahasa Malaysia. When used, a lot of people from the deaf communities would get confused with the hand signals (<http://sirkarami.tripod.com/bahasaisyarat.htm>, n.d). Now, in the *Akta Orang Kurang Upaya 2008 Akta 685*, BIM has been recognised as the official language for the deaf, which shows that BIM could be implemented in schools, though schools have yet to use BIM in their teaching curriculum (<http://www.jkm.gov.my/images/stories/pdf/oku2008scan.pdf>, 2008).

In Malaysia, the Bahasa Malaysia subject in the education system is extremely important. Hearing impaired/deaf children in Malaysia would also need to master the Bahasa Melayu on top of other subjects. Linguistically, deaf children have a harder time grasping Bahasa Malaysia as they are used to the informal way of communicating, using BIM (Yusoff & Mohamed, 2004). As a result of this, deaf children in Malaysia do not perform as well in their subjects due to not fully understanding the uses of nouns and pronouns. The purpose of this study is to examine student achievement in their Bahasa Melayu subject using BMKT and BIM as a support language. This research delves into looking at the ability of students in mastering the Bahasa Melayu subject.

Special Education

Special education is a specially designed education for those who need more, special or extraordinary attention. In addition to this, special education is also to teach and train children to be good and useful to themselves and to society. The importance of special education began in the 1920s among volunteers involved in the opening of visually impaired and hearing schools. According to the Ministry of Education Malaysia (2012) the Cabinet Committee Report on the implementation of education policy through Certificate 169 is a turning point that leads to greater emphasis and focus on the development of special education in Malaysia.

Additionally, Certificate 169 also emphasized on the awareness where the government aims to establish and streamline a special education system that focuses fully on the education of differently abled children. Hallahan, Kauffman and Pullen (2011) explained that Special Education means a specially designed lesson to meet the needs of an extraordinary child. Among these needs are special materials, teaching techniques, or equipment and facilities. Werts, Culatta and Tompkins (2006) agrees with the statement and added that special education is an individualized teaching designed to meet the needs of educational needs and in connection with differently abled students. Special education provides learning opportunities not provided in the usual curriculum or regular school services.

Tee (1970) identified that hearing-impaired students in Malaysia learned to follow the usual curriculum modified according to their needs and achievements. For compulsory school-age students, it is six years old in primary and 5 years in high school but for students with hearing problems they are given an extra two years. This has changed in recent years where students who are hearing impaired are all in the same grades as the normal hearing students.

Hearing Impairment

Hearing impairment is one disability contributing to the difficulty of learning in school, which could result in these students being left behind, which could also lead to societal problems later on. Understanding the hand signals or codes is extremely important as this is the main way of communication in class. Not understanding of the sign language could lead to problems for the students as all the teachings would be conducted in sign language (Wilbur, 2013). Manual signing has been one of the most widely used form of communication to both children and adult, not only for those who are hearing impaired but also to those who have intellectual or developmental disabilities which could affect their communication skills (Grove & Woll, 2017).

Deaf children have previously and continue to be at risk for maltreatment, with linguistic deprivation, sometime known as language deprivation being on top of the list, where these children have not been exposed to language, or have limited access to language (Humpries, et al., 2016). To the hearing impaired, sign language is one way of communicating with others that are used within their community. Signing has been said is the most effective form of communication for the hearing impaired, compared to other modes of communication. Signing could be used by people who have hearing problems, those who cannot talk, and those who have problems with talking (Wilbur, 2013). Sign language used by deaf people have their own grammatical structures unlike those to the spoken ones (Grove & Woll, 2017), which shows why students have a harder time processing the formal sign language in class, which utilizes Bahasa Malaysia Kod Tangan or BMKT, as they are used to Bahasa Isyarat Malaysia. Bahasa Isyarat Orang Pekak (BIOP) or Bahasa Isyarat Malaysia is the informal way of communication between teachers and students. Bahasa Malaysia Kod Tangan or BMKT is the code used by teachers to construct sentences using formal Malay language (Yusoff & Mohamed, 2004). In order to fully utilize this code, teachers and students need to have a good understanding of the topics and subjects. BMKT is the formal language of use in school because it conforms to the nouns and pronouns found in regular sentence structure, which also conforms to reading text. Nowadays understanding of written text is extremely important and crucial ability that children would need to acquire. This is because deficits in reading comprehension would have negative consequences in their future (Potocki, Sanchez, Ecalle, & Magnan, 2015). Studies by Potocki et al. (2015) have also found that one of the main reasons why students have a hard time understanding written text is because they are unable to decode those texts.

Researchers have found that there is a huge difference in the way hearing impaired/deaf and hearing students process information (Marschark, Leigh, Sapere, Burnham, Stinson, Knoors, Vervloed & Noble, 2006). It is important for teachers to know what type of method is suitable to teach students with hearing impairment or deaf children as this affects their future, but there little known on the best method to use in teaching these students (Marschark et al., 2006). Being able to communicate through reading and writing is challenging, especially to those with sensory impairment (Abdullah & Eng, 2012). It is not easy for hearing impaired students to read as these require certain skills along with them, such as being able to recode certain written symbols into correct sounds or the proper signing (Holmer et al., 2016). These skills are especially crucial when it comes to employment (Abdullah & Eng, 2012). Not being able to effectively communicate is one of the main reason why employment continues to be an elusive goal for people with disabilities. A study conducted by Abdullah and Eng, 2012 also found that there is a higher number of unemployed compared to the employed, where the unemployed have rated their reading skills as very weak. This could be due to the fact that there are different hand signal that they need to master, such as the American Sign Language, Bahasa Malaysia Kod Tangan, and Bahasa Isyarat Malaysia (Abdullah & Eng, 2012). Deaf/ hearing impaired students also have a harder time grasping abstract concepts, and have limited cognitive ability to understand what was taught (Zainuddin, Zaman & Ahmad, 2010).

Abdullah and Eng's (2012) study found that those who were employed had a higher rate in reading, writing and communicating. This is due to the fact that people with hearing impairment depends on their other skills as there are no or very little auditory information that could be processed. When people with hearing impaired have better writing skills, they are better equipt at communicating with others such as through social network. The study also found that better communication skills would benefit the hearing impaired by connecting them to other successful people with the same condition and learn to better themselves (Abdullah & Eng, 2012). Sign language were found to be an extremely important communication tool for people with hearing impairment, as they prefer to sign over writing. In Malaysia the main signing used in schools is the Bahasa Malaysia Kod Tangan (BMKT), which is similar to Sign Exact English when it comes to learning the English language (Zainuddin et al., 2010). Outside of the classroom though, students with hearing impaired very rarely use BMKT, as there are a lot of nouns and pronounces. These students prefer using the Bahasa Isyarat Malaysia (BIM), where everything is simplified (Zainuddin et al., 2010). This creates a conflict in understanding for these children, as nouns and pronouns are not present in BIM. Studies have found that deaf students learn significantly less than those of hearing children. This is because deaf students do not comprehend as much from lectures (Marschark et al., 2006). Marschark et al., 2006 argued that lectures and class structure are more in tuned with hearing children compared to deaf children, as the learning styles of deaf children are quite different to those of hearing children. Trussel and Easterbrooks (2017) also mentioned that deaf students constantly need to struggle to attain grade equivalent grades and that interventions are almost always needed to help these students.

Now, more and more technology has emerged to help deaf children in learning, as more deaf children has been integrated into the mainstream classrooms. Students have reported that there is more understanding in real time captioning compared to interpretations. Students have also reported that it is quite hard for them to process things that are quite fast, compared to if they were able to control it themselves (Marschark et al., 2006). A study by Francisco, Groen and McQueen (2017) found that there is a relationship in audiovisual processing to reading in an intervention program, showing that an application utilizing visual could help improve deaf student's understanding and help with their reading abilities.

Current Classroom Management in Special Education

According to a study conducted by Elliot and Thurlow (2006) the attention given to the appraisal of different assessments for the differently abled students has increased and this is no longer surprising, although in the Malaysian setting, examinations for the hearing impaired content are similar to the hearing students. Various actions have been made to assist these groups such as conducting tests that are compatible with their ability. People with disabilities cannot be excluded from the general education system on the basis of their inability. in such a way, to enable those with disabilities to

pursue education, adapting to the conditions and in accordance with the needs of disabled persons in terms of infrastructure, equipment and teaching materials, teaching methods, curriculum and other forms of support that meet their various needs need to be provided. These groups are entitled to equal treatment with fairly normal groups without any element of discrimination against their inability (Zainudin Mohd, 2009).

Mohd Salleh, Serajul, Mohd Ali and Bari (2001) explained that teaching and learning process depends on the competence and skills of special education instructors. This is especially important for hearing impaired students as they need a standardized language and teaching method to maintain the class in order for students to understand the mode of instruction. With the teaching that is appropriate with the level of ability and skill of the problematic learners, students can demonstrate the success of the teaching and learning process. The basic principles of teaching are determined by the change in behaviour because the learning process is a process of change and takes place all the time. It can be concluded that behaviour management and classroom management need to be mutually required, explains that effective classroom management can create conducive learning environment as room routines can run more smoothly and discipline can be controlled (Hashim, Razali & Jantan, 2007).

RESEARCH QUESTIONS

The research question that guides this research are:

RQ1. How do students from different grades perform in their Bahasa Melayu examination?

RQ2. Is there a difference in achievement between the different schools?

RQ3. Is there any difference in achievement from year 1 to year 6 in their Bahasa Melayu examination?

METHODOLOGY

This study utilizes a quantitative descriptive research design where data was gathered from five schools in Malaysia, from different states. It would analyze hearing impaired student results obtained from the five schools ranging from year 1 to year 6. The tests were obtained from a Malaysian public school, approved by the Ministry of Education, Special Education division and given to schools for testing.

Subjects

There subjects for this research are the hearing impaired/deaf students undertaking the Bahasa Melayu classes in the schools. The sampling method that would be undertaken for this study would be purposeful sampling as all the students are sampled for their ability to yield results for this study. The inclusionary criteria for the subject is that the students are hearing impaired or deaf, and are in the deaf program, implementing either both the BMKT and BIM or just the BMKT. The study does not discriminate whether a student has partial hearing or not.

Data Collection Method

The instrument used in this research are past examination papers collected from the Malaysian public schools from year 1 to year 6 on comprehension and writing. The tests would then be administered to the students from year 1 to year 6 in the hearing impaired program from the 5 different primary schools. The tests would then be collected back to be marked and interpreted.

Validity and Reliability

The instrument was collected from different primary schools in Malaysia, content validity has been verified by subject matter experts which are the special education teachers on the level of instrument questions by

grade. The instrument was also submitted to the Ministry of Education, Special Education Division and went through a rigorous process of examining the content.

RESULTS

The tests are divided into two sections which are comprehension and writing. The 5 different schools were analyzed for the mean separately according to year and school. As this is the special education program, some classes might not have the students for each grade (please refer to table 1 and table 2). The tests were marked over a 100%. When comparing student achievement between comprehension and writing, results indicated that almost a majority of the students did worse in the writing section compared to the comprehension section. Analysis of the median indicate similar results where after year 2, the writing achievement for Bahasa Melayu is lower than the comprehension section (please refer to table 3 and 4). Results also indicate that there is not much variability in result between the different schools.

Figure 1: Flow Chart of Data Collection Method and Analysis

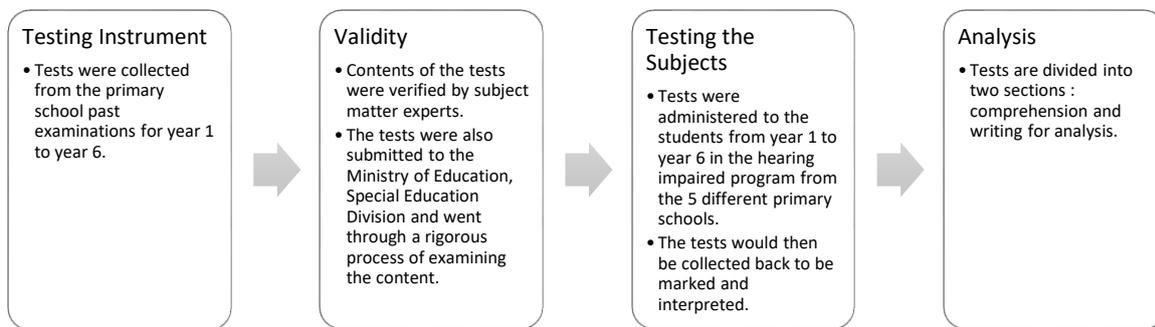


Table 1: Mean for Year 1 to Year 3 for Bahasa Melayu Achievement

	Year 1		Year 2		Year 3	
	Comprehension	Writing	Comprehension	Writing	Comprehension	Writing
School 1	47.0	50.7	32.7	41.3	28.5	0.0
School 2						2.5
School 3						
School 4	25.0	15.0	40.0	58.0		
School 5	53.6	14.8	36.5	11.0	33.5	11.7

Table 2: Mean for Year 4 to Year 6 for Bahasa Melayu Achievement

	Year 4		Year 5		Year 6	
	Comprehension	Writing	Comprehension	Writing	Comprehension	Writing
School 1	21.2	17.6	23.0	4.5	22.0	2.7
School 2	0.0	5.3	0.0	9.3	19.8	9.8
School 3	10.0	10.0	16.4	5.0	22.7	5.0
School 4	19.5	2.0	19.3	8.3	24.6	2.4
School 5	17.2	8.8			17.0	3.6

Table 3: Median for Year 1 to Year 3 for Bahasa Melayu Achievement

	Year 1		Year 2		Year 3	
	Comprehension	Writing	Comprehension	Writing	Comprehension	Writing
School 1	43	54	30	38	28	0
School 2						
School 3						
School 4	25	15	40	58		
School 5	50	16	36.5	11	30.5	6

Table 4: Mean for Year 4 to Year 6 for Bahasa Melayu Achievement

	Year 4		Year 5		Year 6	
	Comprehension	Writing	Comprehension	Writing	Comprehension	Writing
School 1	22	20	22	5	23	3
School 2	2		6		9.5	19
School 3	10	10	14	5	23	2
School 4	19.5	2	22	6	25	2
School 5	18	7			15	8

DISCUSSION

From the results, both the mean and median indicate that students in year 3 to year 6 has lower achievement in writing compared to comprehension. This might be due to the fact that they have not mastered the hand signal codes. Deaf and hearing impaired students might also have difficulty acquiring the knowledge and skills to reach their full potential which might be attributed to mastery of language and their lack of signed or spoken language (Marschark, Shaver, Nagle & Newman, 2015). Mastery of language is quite difficult for a

child with hearing impairment. The results of this study also agrees with research by Nuttaya, Surachai and Wacheerapan (2011). Their research on hearing impaired students in Thailand also scored lower than the national average by 52 to 54%. This indicates that there is a need to further enhance language learning for the hearing impaired as their achievement is quite low compared to the national average, which raises the question whether these students should move up a grade if they have not mastered the language. The higher the grade, the tougher the level of testing, which might not be applicable to these students.

RECOMMENDATION

From the finding of this research, a policy on suitability of student ability and testing level should be further researched and implemented. This can help educators progress with students better, rather than having to adept to the tests. Students would also be able to master language if going at their own pace.

REFERENCE

- Abdullah, M. N. L. Y., & Eng, T. K. (2012). Perceived communication skills of persons with sensory impairment: a comparison by employment status. *Procedia – Social and Behavioural Sciences*, 31, 794-799.
- Elliot, J. L., & Thurlow, M. L. (2006). *Improving test performance of students with disabilities: On district and state assessments (2nd ed.)*. Thousand Oaks: CA: Corwin Press.
- Francisco, A. A., Groen,, M. A., Jesse, A., & McQueen, J. M. (2017). Beyond the usual cognitive suspects: The importance of speechreading and audiovisual temporal sensitivity in reading ability. *Journal of Learning and Individual Differences*, 54, 60-72.
- Grove, N., & Woll, B. (2017). Assessing language skills in adult key word signers with intellectual disabilities: Insights from sign linguistics. *Journal of Research in Developmental Disabilities*, 62, 174-183.
- Hallahan, D. P., Kauffman, J. M., & Pullen, P. C. (2011). *Exceptional Learners: An Introduction to Special Education (12th Edition) 12th Edition*. Virginia: Pearson Education.
- Hashim, S., Razali, M., & Jantan, R. (2007). *Psikologi pendidikan*. Kuala Lumpur: PTS Publication & Distributor Sdn. Bhd.
- Holmer, E., Heimann, M., & Rudner, M. (2016). Evidence of an association between sign language phonological awareness and word reading in deaf and hard-of-hearing children. *Research in Developmental Disabilities*, 48, 145-159
- Humphries, T., Kushalnagar, P., Mathur, G., Napoli, D. J., Padden, C., Rathmann, C., & Smith, S. (2016). Avoiding linguistic neglect of deaf children. *Social Service Review*, 90(4), 589-619.
- Marschark, M., Leigh, G., Sapere, P., Burnham, D., Stinson, C. C. M., Knoors, H., Vervloed, M. P. J., & Noble, W. (2006). Benefits of sign language interpreting and text alternatives for deaf students' classroom learning. *Journal of Deaf Studies and Deaf Education*, 11, 421-437.
- Marschark, M., Shaver, D. M., Nagle, K. M., & Newman, L. A. (2015). Predicting the academic achievement of deaf and hard-of-hearing students from individual, household, communication, and educational factors. *Except Child*, 81(3), 350–369.
- Ministry of Education (2012). *Dasar Pendidikan Kebangsaan*. Putrajaya: Giga Wise Network.
- Mohd Salleh, N., Serajul, H. F., Mohd Ali, M., & Bari, S. (2001). Pendidikan khas di Malaysia: Kepelbagaian pengajaran dan pembelajaran. *Prosiding seminar pendidikan khas kebangsaan. Universiti Kebangsaan Malaysia*.
- Nuttaya, I, Surachai, S, & Wacheerapan, K. (2011). The Learning Achievement in Thai Language for Hearing Impaired Students in Thailand. *US-China Education Review*, 7, 1023-1029.
- Potocki, A., Sanchez, M., Ecalle, J., & Magnan, A. (2015). Linguistic and Cognitive Profiles of 8- to 15-Year-Old Children With Specific Reading Comprehension Difficulties: The Role of Executive Functions. *Journal of Learning Disabilities*, 50(2), 128-142.
- Trussell, J. W., & Easterbrooks, S. R. (2017). Morphological Knowledge and Students Who Are Deaf or Hard-of-Hearing: A Review of the Literature. *Communication Disorders Quarterly*, 38(2), 67-77.
- Tee, C. T. (1970). Special Education in Malaysia. *Jurnal Kementerian Pelajaran Malaysia*, 95-98.

- Werts, M. G., Culatta, R. A., & Tompkins, J. R. (2006). *Fundamentals of Special Education: What Every Teacher Needs to Know (3rd Edition)*. Pearson; 3rd edition edition.
- Wilbur, R. (2013). Changing How We Think About Sign Language. Gesture and Agreement. *Sign Language and Linguistics*, 16(2), 221-258.
- Wilbur, R. (2013). Changing how we think about sign language, gesture, and agreement. *Sign Language Syntax from a Formal Perspective: Selected Papers from the 2012 Warsaw FEAST*, 221-258. Retrieved 6 20, 2019, from <https://doi.org/10.1075/sll.16.2.05wil>
- Yousoff, A., & Mohamed, C. R. (2004). Penguasaan Bahasa Melayu dalam kalangan murid pekak: Suatu sorotan dari perspecktif linguistic. *Jurnal Dewan Bahasa*, 1, 639-680.
- Zainuddin, N. M. M., Zaman, H. B., & Ahmad, A. (2010). Developing Augmented Reality Book for Deaf in Science: The Determining Factors.