THE EFFECT OF USING MALAYSIAN SIGN LANGUAGE IN THE CONSTRUCTION OF PROPER MALAY SENTENCE STRUCTURE: A CASE STUDY OF YEAR 5 STUDENTS WITH HEARING PROBLEMS IN BATU PAHAT

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ABSTRACT

Selected research topic is “The Influence of the Malaysian Sign Language (BIM) in the construction Malay Sentence Structure Proper Among Students Hearingimpaired Year 5 in Batu Pahat”. Keywords for this study is the effect of Use Sign Language Malaysia (BIM), sentence structure Bahasa Melayu (BM) of the right and pupils with hearing problems (MBD). This case study examines the effectiveness of use of BIM relevant in determining the ability of deaf students in building the structure of sentences right. A quantitative approach was used in this study with pre and post test sets administered to 26 students aged 10–12 years. The data obtained were analyzed in determining the pattern of effectiveness of the use of BIM in the construction of complete sentences. The findings of this study are expected to help further researchers in exploring related to this issue.

Keywords: Influence of Malaysian Sign Language (BIM), sentence structure Bahasa Melayu (BM) of the right and pupils with hearing problems (MBD)

I. INTRODUCTION

Malaysian Sign Language (BIM) is the official language for the deaf community in Malaysia in their daily communication. In fact, the use of BIM has actually spread widely both in the market and in their official affairs. According to Siew Hock et al (2007), more than 26,500 deaf people in Malaysia use this BIM in various matters including Hearing Impaired Pupils (MMBD) in schools. BIM is a sign language created and introduced by the Malaysian Association of the Deaf (MFD). Following that, the deaf community in the country is more affected in the slightest use of it to explain the sentence structure in the writing of the Malay language in schools. According to Savita & Nur Athirah (2007), BIM is a form of signal communication that emphasizes meaning, not sentence structure.

According to Siew Hock et al (2007,168), 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. This shows that BIM is not only about hand gestures, but also involves a whole host of other communication skills such as facial mimicry and shoulder movements. Up to now, despite the introduction of the Code Watch English (KTBM) introduced widely in schools, the effect of using BIM is still of interest to menamalkannya MBD.

II. LITERATURE REVIEW

The structure of sentences in English would reflect the beauty of the language itself. Proper arrangement not only makes a sentence beautiful and orderly, but it will also facilitate the reader’s understanding. In the Malay

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language, the wording basically starts with the subject followed by a predicate that describes the related subject. Sentence expansion can occur by inserting reinforcing words or auxiliary words that will connect the subject and predicate. Like this example- Ahmad likes to eat. In this verse, Ahmad is the subject, while liking to eat is the predicate that describes Ahmad's actions. The structure of this sentence is correct and complete because it achieves the basic conditions of subject and predicate. However, it can be developed by including other language elements such as verbs, adjectives, conjunctions, auxiliary words, augmentative words and so on.

The basic structure of this sentence is not all that can be understood and used by MMBD. They are more into understanding the meaning behind the verse. This happens as a result of their communication routines that make meaning the primary purpose of communication, not the laws of language. If we take the example above, MMBD will construct a sentence as follows. Ahmad likes to eat. This happens because Bahasa Isyarat Malaysia (BIM) only cares about the recipient understanding the meaning to be conveyed. This is a common problem for MMBD during formal learning in school. This needs to be taken into account because MMBDs can be taught to construct sentences in a strong structure because they only have difficulty in hearing, not in their intellectual terms.

According to Jamila et al (2012), the problem of low academic achievement is closely related to English proficiency among students with hearing problems. Abdullah (2006) conducted a study of 67 hearing impaired students aged 15 to 17 years old in reading English. The study found that 36 students could read at the Year 4 reading level, while 31 students could not read even a simple single sentence. This situation will somehow make MBD behind in terms of overall academic achievement for the country, English is the foundation of education where it is the national language. Interventions as early as possible should be carried out to alleviate these problems. Coupled with the factors of their sign language practice during meaning-conscious communication, this problem will continue to plague.

Hearing plays an important role in mastering speech. A child with hearing problems can make it difficult to master speech and in turn master language. Failure to master the language results in difficulties in interacting, learning and also adapting to the social environment. Safani et al (2015) emphasized that hearing plays a very important role for children to learn language and this is the biggest obstacle faced by hearing impaired children to form sentences and essays which indeed require high language proficiency.

Students with Hearing Impairment (MMBD) are students who suffer from mild, moderate or severe hearing loss. This hearing loss will cause them to be called hearing impaired or deaf. The deaf community is a minority group in society who live normally even though they are one of the group of People with Disabilities (OKU). This hearing loss requires them to communicate using whole communication which involves essentially related sign language and assisted lip reading as well as facial mimicry. According to the Board Dictionary published by DBP the deaf are defined as unable to hear directly or unable to hear well. To reduce the effects of hearing problems, most of them will use hearing aids (ABD). For MMBD, the use of ABD is very important in helping those with mild and moderate hearing impairment to undergo the learning process in the classroom. The table below shows some of the characteristics of the disabled, including the hearing impaired.

<table>
<thead>
<tr>
<th>Types of Disabilities</th>
<th>Level of Disability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing Impairment</td>
<td>Including the deaf and dumb: a) Minimum (20 - &lt;30 db)</td>
</tr>
<tr>
<td></td>
<td>b) Medium (30 - &lt;60 db)</td>
</tr>
<tr>
<td></td>
<td>c) Severe (60 - &lt;90 db)</td>
</tr>
<tr>
<td></td>
<td>d) Profound (&gt; 90 db)</td>
</tr>
<tr>
<td>Visual Impairment</td>
<td>a) Blindness - Vision less than 3/60 even with the use of tools vision aids.</td>
</tr>
<tr>
<td></td>
<td>b) Limited vision - Vision worse than 6/18 but equal to or greater than 3/60 even with the use of visual aids.</td>
</tr>
<tr>
<td>Physical Disability</td>
<td>Limb deformities such as those caused by Polio, Kudung, Muscular Dystrophy, Myopathy, Neuropathy, Osteogenesis</td>
</tr>
<tr>
<td>a) Mental Disability</td>
<td>a) Hemiplegia - Cerebral Palsy is a deformity of one side of the body</td>
</tr>
<tr>
<td>b) Cerebral Palsy</td>
<td>b) Diplegia - Cerebral Palsy deforms both legs</td>
</tr>
<tr>
<td>c) Spastic</td>
<td>c) Quadriplegia - Cerebral Palsy deforms both arms and legs</td>
</tr>
</tbody>
</table>
Learning Disabilities

a) Late Development (for children aged <3 years)
b) Down ‘Autism Syndrome
c) Attention Deficit Hyperactive Disorder d) Mental Retardation (for children aged> 3 years)
e) Specific learning problems such as dyslexia, dysgraphia, dyscalculia

Others
All disability issues not specified in the format

Table 1: Categories of PWDs Registered in the Department of Social Welfare Malaysia

Although the education for MMBD is well prepared, but there are also some of them who have dropped out of the formal education of the deck due to lack of knowledge and also the embarrassment of their family members. In 2003, the World Federation of Deaf confirms that 80% of deaf people lack Education or are undereducated, are illiterate or semi-literate. Moreover, Sign language is banned in many countries and programs. In fact, most information contents are inaccessible to the deaf community. Furthermore, many efforts are deployed to ensure a minimum access to the information in written text or sign language like the real time translation of some TV programs in sign language (the news) or the subtitles, the development of guidelines for the deaf education and the development of multimedia tools to teach sign language. (Oussama & Jemni, 2009: 458).

Hearing loss will cause various problems related to linguistics or language. The word order in the sentence as well as the understanding of the meaning of the sentence will give problems to MMBD because hearing is an important factor in mastering the language. Hearing represents the most powerful line of communication among people. Access to speech and linguistic abilities is the fundamental precondition for personality development, and for this reason, the fact that deaf children lack - due to hearing shortage - their speech ability from a very young age plays a determinative role in their school, social and psychological growth. The result is that the personality and social characteristics of deaf persons differs from those of hearing persons. (Anastasia et al, 2010: 147).

According to Nordin (2015), a deaf child is considered a hearing impaired person because in most instances, he or she has partial hearing. This child is unusual in not being able to respond to the sounds around him. A hearing impaired child refers to the child’s ability to use the auditory senses and also when the disability is experienced. Whatever the assumptions and opinions related to deafness, MMBD still has the right to obtain knowledge and all shortcomings, especially on the use of the correct language system should be given reinforcement.

III. RESEARCH OBJECTIVES

This study focuses on the influence of the use of BIM which is the main language of communication for deaf people in Malaysia in constructing the correct sentence in terms of structure and arrangement of subjects and predicates as well as the development of the sentence when learning formal BM in the classroom or when facing internal examinations. nor the public among MMBD year 5 at SK Pendidikan Khas Batu Pahat. To achieve this purpose, the researcher has set two null hypotheses for a margin of error of 0.05 as follows:

H01: There is no significant difference related to the influence of the use of sentence structure in BIM and the construction of correct BM sentence structure in MMBD learning in the classroom and also when answering examination questions.

H02: There is no significant difference related to the influence of the total vocabulary of MMBD and the construction of correct BM sentence structure in the learning of MMBD in the classroom and also when answering examination questions.

IV. RATIONAL OF TITLE SELECTION

The selection of this title was made because the researcher could feel that there is a strong factor in influencing the construction of sentence structure that follows the correct order in BM among MMBD in schools. Based on the researcher's experience as an educator for five years in school and as a teacher trainee for five years in the institute of teacher education (IPG), MMBD is very problematic in constructing a correct sentence structure in BM in school. If observed on students 'workbooks as well as their collection of exam answer papers, this problem can clearly be seen. The positions of the subject and predicate are sometimes interchangeable, while the sentence expansion that is attempted becomes increasingly inaccurate. For students like this, this problem also occurs in their daily communication where they use BIM fully. There is no doubt that the introduction of the
Code Watch English (KTBM) introduced in assisting MBD write correct sentences BM also take a cue codes as in BIM, but the language still can not be controlled by the DBMS.

Through the observation and research of several researchers who have conducted their research, the problem of sentence structure has always plagued MMBD. When compared to the writing of normal pupils, this difference can be seen significantly. Despite the shortcomings faced by MMBD, namely their hearing loss, the influence of BIM which only focuses on the delivery of meaning makes this problem even more complicated. The use of this BIM structure in turn will also cause the writing of BM for MMBD to be imperfect. Communication that uses BIM does not present a problem, in fact it facilitates the understanding of MMBD in detecting meaning. However, problems will arise in their learning which is very important for the correct BM sentence structure. This situation forces the researcher to identify whether the influence of the use of BIM has a direct impact on the construction of the correct BM sentence structure or there are also other factors in this problem. The problem may seem small at first, but in the long run, it will limit the competition of MMBD learning with other normal students. So is the continuity of this MMBD in shaping their future careers.

V. RESEARCH METHODOLOGY

This study is conducted using a quantitative research method where the measurement of data analysis will be shown in the form of numbers and numbers. The use of quantitative research methods to obtain more, accurate and diverse data. With the use of this method, the data obtained will include proof through numbers and figures. According to Daniel (2004), this method is a method of mathematical analysis where the involvement of data is through numerical and numerical division. This is agreed by Zina (2013), who states that the quantitative method is the way in which data is quantified based on numbers. Meanwhile, Julia (2007) argues that researchers involved in the use of quantitative methods find it difficult to generalize to statistical data. The application of this type of study can help researchers obtain rigid research results and explain the high reliability. In addition, the selected study design is an experimental study design. According to John (2013), the experimentation in this study allows the researcher to identify the effectiveness of part of the action of the target group for which the researcher himself regulates the factors of change of those parts. Through this method as well, researchers can obtain data findings before and after the test is conducted.

This study began with the generation of research ideas that is to identify problems that occur in the researcher's environment. In this study, the problems given attention are related to the learning of MMBD in the classroom. The generation of this idea also involves the process of reviewing the journal as well as previous studies in order to obtain explanations and theories that are built. Next, this study will go through the process of formulating the research problem where the researcher has to select a specific problem to determine the title. The formulation of a good research problem must be concise, clear and complete. (John, 2013). The researcher then constructs appropriate hypotheses or research questions for the purpose of data collection. This hypothesis will be proven through certain tests and other instruments that are also used in this study. Next, the researcher will determine the method of how to collect relevant data and instruments that will be used for the purpose of meeting the needs of hypothesis testing that has been set. In this study, the researcher used pre -test and post -test in proving the established hypotheses. Once the shape of the instrument is determined, the researcher will perform data collection. The data collected will be analyzed quantitatively involving summation and numerical representation. Once the analysis is completed, the findings will be interpreted in certain forms such as tables, graphs, etc. to facilitate the reader to evaluate the results of this study. According to Arsaythamby & Arumugam (2013), quantitative data can be presented in descriptive and inferential forms. This involves graphs, tables and even charts. Whereas according to MyGuru (2015), Interpretation of data is the act of going beyond description and trying to make a statement about the meaning of various responses and suggesting relationships between data.

VI. RESEARCH PROCEDURE

The population of this study is MMBD who study at Batu Pahat which consists of 44 students with special needs aged from four years to 14 years, namely pre-students, special integration classes and year 1 to year 6. Breakdown of students This includes two types of students, namely hearing impaired or deaf and also students with learning disabilities such as autism, dyslexia, down syndrome, cerebral palsy, mental disorders and attention deficit hyperactive disorder (ADHD). The selection of 44 members in this population is known as the target population. Representatives for both types of students are 26 MMBD students and 18 students with learning difficulties.
Of the 44 students in the population for this study, only 26 were selected to be selected as the study sample because the number represents MMBD while the rest are non-hearing impaired. The selection of 26 students is known as the accessible population. Next, two year 5 students were selected as the study sample to represent the population of 26 MMBD people who are studying at SK Pendidikan Khas Batu Pahat. The sampling method used is random sampling. This sampling provides an equal opportunity for all members of the population to be selected. (John, 2013). According to OCW (2015), if the population is small and the sample required is also small, the easiest way is to enter all the names (identities) of the subjects in a container and the draw is done randomly.

The selected sample is students who achieved a moderate level of academic achievement where they obtained Grade C for BM subjects in the end-of-year examination which was just completed a month ago. In addition, these students are year 5 students where the researcher is the teacher of the class. This allows the researcher to give a good focus to the sample of this study. The instruments used in this study involved pre-test and post-test. The administration of this test is based on the requirements of experimental type study methods. According to John (2013), most experimental studies in education are focused on testing the effectiveness of an intervention or educational practice on student learning. To achieve this purpose, researchers will administer pre-tests in the classroom before a teaching or intervention is performed. Then, the postal test will be administered after a lesson or intervention is conducted.

This testing must be aligned with high reliability to get the best results. An experiment is valid when an effect can be attributed to the manipulation of the independent data collected. (John, 2013). Through this method, the results for the effectiveness of an intervention can be known quickly after the end of the lesson. The pre-test and post-test administered were almost identical test sets. This is to prevent a decision from losing its validity. As stated by John (2013), various factors can result in questionable test results such as history, maturity, instrument and even the test itself.

In this study, the researcher has prepared a single picture related to the activities in the playground. MMBD was asked to construct 5 sentences related to the picture provided that it involves the use of appropriate verbs. This means that each constructed sentence must include at least one verb. Before MMBD constructed the sentences, the researcher asked them to narrate orally using sign language about the given picture. After they told about the picture, then they constructed related sentences. The oral narration along with the cues were recorded by the researcher and rewritten. From the sentences constructed, the researcher will examine the structure of each sentence that is successfully constructed whether it is according to the correct rules of language or not.

VII. FINDINGS

Data collection was carried out in several stages, namely pre-test administration, teaching implementation and intervention, then post-test was administered. Once the post test was administered, the obtained data were analyzed. A summary of the data collection process is as follows:
Figure 1: Data Collection Procedure

Based on figure 1 above, it can be explained that the researcher started the data collection process by administering a pre-test on MMBD. The pre-test was a set of tests in which there was a single picture related to activities at the playground in the afternoon. The instruction given is that MMBD should construct 5 sentences related to the picture provided that each sentence must include at least one verb. After the test is successfully answered by MMBD within 15 minutes, the researcher will mark the test paper and give marks based on the correct sentence structure. Each correct sentence according to the correct BM structure will get 10 marks. So, the full mark for the test is 50 marks.

After finishing marking the test paper and recording the marks obtained by MMBD, the researcher conducted the intervention through teaching held the next day. The prescribed time interval between pre-test and intervention was one day. In the lesson, the researcher distributed a single picture related to the activities of a group of students by the beach. The researcher asked MMBD to narrate about the pictures that were distributed orally with individual gestures. The narration was recorded by the researcher to see the BIM signals performed focusing on sentence structure. The researchers then recorded the sentences constructed by MMBD based on their BIM signals.

Subsequent post tests were administered to evaluate the effectiveness of the intervention and also to determine whether the BIM signals used by MMBD during the narration influenced the sentence structure constructed. It will also test whether the MMBD vocabulary also influences the construction of sentences in the correct structure. This post test includes a single picture that is the same as when the lesson was conducted earlier. MMBD is required to construct 5 complete sentences provided that each sentence must include at least one verb. The researcher will continue to mark the post test paper and give marks based on the sentence structure constructed. The results of these pre-test and post-test are then analyzed to obtain the findings of the study, further proving the hypotheses that have been set.

Data collected through pre and post test scoring will be analyzed to prove the hypothesis. This method will determine whether significant differences exist or not and whether the hypotheses set are acceptable or not. This analysis was made based on the Null hypothesis that was established at the beginning of this study. According to John (2013), this Null Hypothesis testing aims to determine no difference or no relationship between the proposed variables. Alternatively, the hypothesis is provided in two statements. The hypothesis of these two samples involved a statement between the influence of BIM or vocabulary with the writing of correct BM sentence structure.
The researcher has set this significance level to a margin of error of 0.05. The analysis made is based on inferential statistics. According to John (2006), inferential statistics are conducted to obtain differences between specified variables or to know the level of mastery of the target group or study sample. This is also agreed by USU (2015), which states that Inferential statistics infer from the sample to the population. They determine probability of population characteristics based on the characteristics of your sample. They help assess strength of the relationship between your independent (causal) variables, and you dependent (effect) variables ". It includes two methods of analysis, namely the use of t-test for the achievement of pre-test and post-test and the use of analysis of variance (ANOVA).

**VIII. DISCUSSION**

One of the most popular tests conducted to test the hypotheses of a study is by using t-test. T-test is one of the methods of testing in the form of statistics and so well known its practice in quantitative research methods, According to Steve (2015), T-test which includes various test samples such as two-sample t-test, student t-test and independent sample t-test is the most frequently used test in statistical data analysis to test hypotheses. Whereas according to Statwings (2015), t-test is statistically significant to determine indications about the existence of mean differences between two groups in a selected population or sample. Similarly, what is stated in the archieve bio website is this test for comparing the means of two samples (or treatments), even if they have different numbers of replicates. In simple terms, the t-test compares the actual difference between two means in relation to the variation in the data (expressed as the standard deviation of the difference between the means).

ANOVA or abbreviation for analysis of variance is a set of tests that involves the process of determining a significant relationship between two or more variables. According to CSUN (2015,2), ANOVA is to tests the significance of group differences between two or more groups. This ANOVA testing method is one of the hypothesis testing methods found in studies involving inferential statistics. According to David (2015), ANOVA is a statistical method to test the difference between two or more means in a study. This is agreed by Statistic (2015) in his website which states that ANOVA compares the mean between certain variables or groups and identifies whether all the means differ significantly from each other.

Interpretation of data analysis for ANOVA can be presented in two forms either by score data or position data. This is stated by CSSE (2015), ANOVA is conducted to see the differences that exist between groups of the same type and it can be presented in both types of data either parametric (score data) and non-parametric (ranking/ordering) data. Both methods of analysis, namely t-test and ANOVA will provide a direct answer to the margin of error for the above hypotheses. The results of this analysis will prove the proposed hypothesis whether it is acceptable or not. The results from this analysis will be interpreted in tabular form. Next the full results will be presented in the form of appropriate graphs and pie charts.

**IX. CONCLUSION**

After the analysis is conducted using both the above methods, namely t-test and ANOVA, the results obtained are expected to prove whether the hypothesis set can be accepted or rejected. Expected results are as shown in the table below:

<table>
<thead>
<tr>
<th>Test</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>Df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>30</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Post</td>
<td>35</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Table 2: t-test shows the mean difference in the influence of the use of BIM in constructing sentences in the correct structure.

<table>
<thead>
<tr>
<th>Words</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>Df</th>
<th>t-cal</th>
<th>t-crit</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>More</td>
<td>150</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Less</td>
<td>50</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Table 3: t-test shows the expected mean difference in vocabulary mastery in constructing sentences in the correct structure.
The two tables above are estimates and expectations of the results that will be obtained which can prove that the first null hypothesis is rejected because of the significant margin at the level of 0.05. This gives the meaning that the use of BIM signals influences sentence construction in the correct BM structure. While the second alternative hypothesis is accepted because it meets the margin measurement. This also means that the MMBD vocabulary does not affect the construction of BM sentences in the correct structure.

REFERENCES


