Bio-Psychology of Lip-sync method for shaping the character of Quran memorized ronunciation

A Sulianti*, T Tarsono, T Augustiya and W Darmalaksana

UIN Sunan Gunung Djati Bandung, Faculty of Psychology, Jl. A.H. Nasution 105, Bandung, Indonesia

*ambarsulianti@uinsgd.ac.id

Abstract. In memorizing the Quran, it is necessary precision of pronunciation of verses in Arabic because the different pronunciations may alter the meaning of the verse. This study aims to analyse influence of lip-sync method to form the character of pronunciation of verses on the process of memorizing the Quran from the bio-psychology side. This study was an experimental study on 46 adolescents for control group and 44 for experimental group. The video contains the recording of the teachers recitation reading the first 10 verses of Surah AL-Kahfi distributed to the experimental group. All participants are given 4 days to memorize. The experimental group is required to record the ability of their lip-sync verse according to the video recording that is distributed by displaying the expression as the meaning of the verse is memorized. The results showed that groups using the lip-sync method had a higher level of ability on all items of observation through the ability to memorize, pronunciation, and pause between sentences (p <0.5). Accuracy, fluency, and appreciation will determine how successful synchronizaiton of the lips. Lip-sync also make subjects happier. Lip-sync method can be used as an attractive memorizing tool so that participants can not only be easier to memorize but also correct in pronunciation.

1. Introduction
Al-Qur’an is the primary and first source of Islamic teachings. Al-Qur’an is a Holy Scripture containing the word of God that was revealed to the Prophet Muhammad to be presented to mankind as one of the mercy for the universe. In Al-Qur’an, there are the collected divine revelations that became a guidance of Islam to live human life in the world.

At Islamic boarding schools (pesantren) and universities in Indonesia, students are required to memorize verses in the Qur’an. There are many methods used to quickly memorize the Al-Qur’an among which 7 techniques are from Turkey like Ten Times Khatm; Chi Technique; Zor Pismis; Kolay Pismis; Tekrar; Tekrar Hepsı Şeyya; and Has [1]. In Pakistan there is a method of memorizing called Panipat Technique (Sedek, 2014). In Malaysia, there are known 4 techniques of memorizing the Quran like Sabak method, Para Sabak, Ammokhtar and Halaqah Dauri [2]. The research studies on memorizing the Quran mention that 1/3 of the process of memorization is used in the process of memorizing new verses; and 2/3 other processes is the time to repeat the recited verses that have been memorized. With 30 minutes a day, someone who has a very good memory takes about five years to remember the entire Al-Qur’an. Meanwhile, someone who has a very poor memory will need 23 years, 10 months and five days to remember the whole Al-Qur’an [2].
The verses in Al-Qur’an use Arabic. In Arabic, the difference from the way of pronunciation, the short length of the letter reading, the obvious pronunciation will affect the meaning. Thus in memorizing Al-Qur’an required not only the ability to memorize but also the pronunciation must be brief and correct.

Lip-sync (abbreviation of lip synchronisation) is a person’s attitude as if actually singing by moving his lips accompanied by a song played through a tape or other media. Accuracy, fluency, and appreciation will determine how successful synchronization of the lips. Thus lip-sync can improve the pronunciation.

The use of lip-sync among teenagers in Indonesia is mostly done. Various styles of singing using lip-sync even contested on some television shows in Indonesia. This study aims to analyze the effect of lip-sync on the ability to memorize the verses of the Quran and the accuracy of pronunciation.

2. Method

2.1. Research design
This research uses pure experimental method with post only with controle design. The subjects, which are 100 people in total, consist of 44 groups of 46 people control treatment group. The subject sampling technique uses multiple clustering techniques. The choice of Al-Qur’an verse that is memorized is surah Al Kahfi, because based on initial research all subjects have never memorized this surah. This study quantitatively analyzed the differences of the ability to memorize Al Kahfi’s verse of 1-10 between the treatment group and the control group.

2.2. Research variable
The dependent variable assessed in this study is the ability to memorize verses of Al-Qur’an and the accuracy of the pronunciation. The rating variables are modified from the items of the Quran memorization contest scores as follows:

- The ability to memorize.
- Makharijul huruf (places or location of the letter out when sounded).
- Shifatul huruf (clear, vague, strong, soft, tongue lifted, tongue down, closed, open, stuck, smooth).
- Ahkamul huruf (the relationship between letters).
- Muroatul kalimat wal kharokat (sentence guidance with the suitability of vowels).
- Smoothness.
- The pronunciation of sentence tones according to the meaning of the verses.

2.3. Research procedure
All participants in the video section contained an audio-visual recording of a recitation teacher who chanted verses 1-10 of Surah Al Kahfi. The control group memorized the verses that the teacher recited while reading the verses in the Quran with a duration of 1 hour / day for 4 days. In addition to listening to the group while reading the Qur’an, they must imitate the teacher in the video by moving their lips together with chanting verses played through the video. Accuracy, fluency, and appreciation will determine how successful synchronization of the lips.

Participants in the treatment group, should record their lip-sync results in the video with facial expressions. Lip-sync videos are collected for grading. Test the normality of data using Shapiro-Wilk. Data were analyzed using unpaired T test.

3. Result
The results are shown in figure 1.
Figure 1. The results of the assessment of the experimental group and the control group.

Figure 1 shows the scores of rote values and the pronunciation of Al-Qur’an’s verses higher in the experimental group in all aspects of the assessment. Mean of control group 7.86 while experiment group 8.87. The difference in scores with the largest range is on the aspects of *akhmal huruf*. The highest aspect average is in the ability to memorize.

To see the significance of the differences between groups, the statistical analysis of the unpaired T test was performed.

Table 1. Statistical analysis of the unpaired T test.

| Levene’s Test for Equality of Variances | Hest for Equality of Mens | 95% Cinfidence Interval of the Difference |
|---------------------------------------|---------------------------|------------------------------------------|
| F       | Siq. | t   | df | Siq.(2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Lipsync | Equal variances assumed | 10.728 | .002 | -4.696 | 88 | .000 | -1.046 | .223 | -1.489 | -.604 |
|         | Equal variances not assumed | | | | | | | | | |
|         | Equal variances not assumed | -4.665 | 78.798 | .000 | -1.046 | .224 | -1.493 | -.600 |

Table 1 shows there is a very significant difference between the experimental group and the control group (p = 0.000).

4. Discussion

Memorizing verses of Al-Qur’an is closely related to memory. Memory is the ability of individuals to store information that can be recalled for use some time later [3]. Tulving (2000), a memory psychologist, argues that the concept of memory is used by memory experts to show 6 different things: (1) as neurocognitive capacity to encode, store and retrieve information (2) as a hypothetical storeroom for storing information, (3) as information stored in the warehouse, (4) as a number of information properties (5) as processing elements that retrieve stored information, and (6) as a phenomenal awareness of a person to remember something [4].

Memory has three stages, namely sensory registers, short-term memory, and long-term memory [5], [6]. All new information received by the senses must undergo a brief dismissal in the sensory register like the gateway into memory. Sensory registers retain information with a high degree of
accuracy, to select the information to be noticed or not. Further information is sent to short-term memory. Short-term memory is the ability of a person to recall a thing or information that is notified for a few seconds. Previously, information that is not quickly sent to short-term memory will disappear forever [4], [7]–[9].

Once in the short-term memory system, the information can be transferred again by repetition process to the long-term memory system to be stored, or it may be lost/forgotten because it is replaced by additional displacement information.

In this research, memorizing the first 10 verses of surah Al Kahfi is included in the short-term memory, in accordance with Atkinson’s statement that short-term memory is not only in numerical problems but also in all complex problems often encountered in language activities [3]. The experimental group that was given the technique of memorizing with lip-sync had a high memory than the control group. There are three known coding ways of information, auditory related to the sense of hearing, visuals associated with the sense of sight, and the semantics associated with their meaning.

In the control group, the subject coded the information through the auditory by listening to the rote and visual video by reciting the surah of Al-Qur’an. Therefore, the average result of good memory is with score 8.41. The experimental group, the information-auditory-visual activity not only matches the sounds that are written in Al-Qur’an, but also matches the mouth-to-mouth buy and teacher expression in the video. Thus the ability of what he heard becomes better. Good listening ability affects the ability of concentration [10].

In addition to coding information through auditory and video, the experimental group also performs semantic cementing. This is triggered by their necessity of doing the lip-sync technique with followed by facial expressions and upper limbs. To be able to express correctly, respondents are triggered to understand the meaning of the memorized verses thus forming a semantic code. After understanding the meaning, respondents try to keep up with the speed, the shortness of the letters, and the place of sound out of the oral cavity. This led to the group using lip-sync having better pronunciation than the control group. This finding is in line with Udomon et al (2013) research results that the effectiveness of multimodal stimulation and visual stimulation improves memory capacity [11].

The results of interviews on the respondents showed that the recording of lip-sync method caused the pleasure and enthusiasm of all respondents. Happiness causes the brain to release endorphin hormones that have an effect on them increasing memory[12-14]. The complexity of these processes causes the memory scheme and group pronunciation with lip-sync technique to be significantly higher across all aspects of the assessment.

5. Conclusion
Lip-sync method improves the accuracy of the recitation and memory of the Quran. The race to memorize the Quran using the lip-sync method can be the main attraction to spark the youthful spirit in memorizing the Quran.

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