

Gestures that Aid in Language Explanation when Recalling Memories

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Abstract

People remember actions better when they are asked to do them than when they are asked to talk about the same actions. However, when people talk, they frequently gesture with their hands, giving their words an action component. In this study, we wanted to know if making a gesture while speaking makes the information in the speech more memorable than it would have been without the gesture. Even when the amount of speech produced during encoding was controlled, we discovered that gesturing improved recall. Whether the speaker gestured spontaneously or was instructed to, gesturing during encoding improved recall. Thus, gesturing during encoding appears to facilitate memory in the same way that action does. In this paper, we investigate the possibility that speakers' gesticulations have an effect on the retention and subsequent recall of encoded information. The effect that gesturing has on recall during encoding has been the subject of very little research. In point of fact, the only studies that have been conducted examine naturalistic variation in gesture during encoding rather than manipulating gesturing during encoding. During the encoding of both concrete and abstract words, participants in one study were given the freedom to gesture on the spot. When the speakers were later asked to recall the words, either they were shown videos of themselves making gestures during encoding or someone else making gestures.

Keywords: *gestures, memory, memorable*

INTRODUCTION

There are two moments where performing an action (Sasalia & Sari, 2020), that can affect whether it will be called back (Mandasari & Oktaviani, 2018), performing the action when it is first coded (Qodriani & Wijana, 2020), or performing the action when it is later called back (Muliyah et al., 2020). The study of how enactment affects memory usually focuses on the effect of performing an action on coding (Suprayogi, 2021). In this study, participants were asked to act out phrases or store them verbally in memory for later recall. Phrases that are encoded are more likely to be memorized more slowly (Suprayogi & Eko, 2020), than phrases that are verbally coded into memory (Amelia, 2021). Imagining acting out a phrase or anticipating acting out it during coding also enhances subsequent (Nurmalasari & Samanik, 2018), even when participants did not act out phrases as they were remembered. Even seeing someone else perform an action can facilitate subsequent memory for that action (Suprayogi & Novanti, 2021).

Everyone knows (that is, we all remember) that episodic memories can be wrong (Sinaga & Pustika, 2021), and there seems to be some source of memory impairment (Qodriani & Wijana, 2021), in the interval between initial perception of an event (Kardiansyah &

Salam, 2020), or stimulus and then memory (Lestari & Wahyudin, 2020). One potential source of interference is being talked about recently perceived events (Rido & Sari, 2018), which seem to affect the memory of details event or test taker later (Oktaviani et al., 2020). As an example (Gulö & Nainggolan, 2021) found that describing someone's face leads participants to worse forced choices that facial recognition (as in selecting someone from police line) (N. R. Putri & Sari, 2021). This verbal overshadowing phenomenon seems to reflect the linguistic description of the nonlinguistic (Sari & Wahyudin, 2019b), perception (face) (E. Putri & Sari, 2020) interferes with the fine details of visual memory (Kasih, 2018), that will support later recognition face (Nurmala Sari & Aminatun, 2021). The effect of this description on memory further suggests that any contextual instructions (Afrianto et al., 2021), or cues (Simamora & Oktaviani, 2020), that affect nature speaker description (Ayu & Zuraida, 2020), can also influence memory later (Aminatun et al., 2021).

LITERATURE REVIEW

As a first step in investigating the role of communication difficulty in what is said and what may be remember (Mandasari & Wahyudin, 2021), we designed a very powerful manipulation of production difficulties, whether the description should be spoken or conveyed through gestures, without being allowed to speak. There is a tradition of comparison between speech and cues in psycholinguistic literature (Wahyudin & Sari, 2018). Using cues to convey video or image content obviously much more difficult than producing an oral description (Sinaga & Oktaviani, 2020), and gestures differ from language in some interesting ways (Suprayogi & Pranoto, 2020). ways that can have a downstream effect on memory (Amelia & Daud, 2020). Second, unlike natural language (Qodriani, 2021), gesturing participants the opportunity to describe information synthetic (Puspita & Pranoto, 2021), in which one movement can describe some semantic meaning, and in this study, we will conduct research on how influential body gestures are when recalling memories (Suprayogi, Pranoto, et al., 2021). This research was conducted at SMPN 13 Bandar Lampung, which was followed by participants using interview research methods and filling out questionnaires. this research aim to test whether moving a body part helps when remembering something.

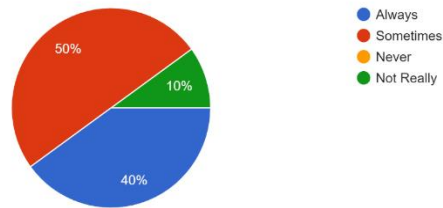
METHOD

This research uses direct interview and questionnaire methods. This method has a high level of efficiency to be able to assess someone's gesture (Puspita & Amelia, 2020), when they are trying to remember a language (Suprayogi, Samanik, et al., 2021). in the first step of research, the researcher conducts the interview section with the participant by giving them a brief question about their habits when doing something (Kardiansyah & Salam, 2021). second, the researcher conducted an analysis test by analyzing the way participants tell their past (Sari & Wahyudin, 2019a), this can trigger how they remember when remembering something that has happened in the past (Kardiansyah, 2021), and also to trigger whether there are gestures (Septiyana & Aminatun, 2021), they will make when they try to remember (Puspita, 2021). third, distributing questionnaires to be filled in by participants to be matched from the second step analysis test.

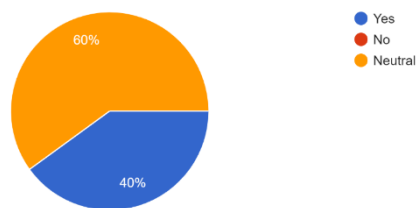
RESULTS AND DISCUSSION

By using Questionare, people can increase their memorable . There were 7 question that have been prepared by the researchers and will be use as the sample and there are 10 students who will be the objects of this research. Just like we mentioned earlier, the researchers will not put their names on the table because as the request of the students themselves that they want to keep their names and privacies safe. So, in this part, we'll discuss about the findings and discussion and here are the results

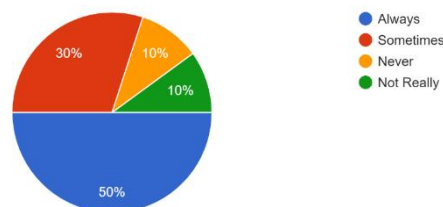
I remember certain things by moving my body
10 jawaban



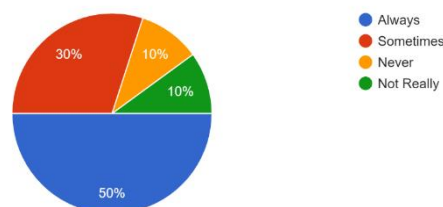
Even when i speak to anyone i always use body movement
10 jawaban



I use eye contact when doing public speaking to avoid losing word
10 jawaban



I use eye contact when doing public speaking to avoid losing word
10 jawaban



As you can see from the results that the researchers got, we can say that about 70 % people using their gestures to remembered things, this means that gestures affect in their activity. Speech and gesture produced at all time points was transcribed and coded. Speech was transcribed verbatim, including filled pauses and hesitations. A particular vignette was considered recalled correctly on each of the memory tests if the speaker's description included the action and at least one other semantic element. For example, in the vignette portraying a man carrying a chicken to some scaffolding, if the participant said, "There was a man carrying a chicken and walking towards something," the vignette was counted as recalled because the main event (the carrying action) was mentioned, along with two other semantic elements (the actor, man, and the patient, chicken). A vignette was not counted as recalled correctly if the semantic elements were recalled but their roles were reversed. For example, in the vignette portraying a dog sliding to the scooter, if the participant said, "The scooter was sliding to the dog," the vignette was not counted as recalled correctly even though the dog, scooter, and sliding action were mentioned because the participant had incorrectly identified the dog as the endpoint of the sliding action and the scooter as the moving object. In addition, a particular vignette was not considered recalled correctly if novel items were added. For example, in the vignette portraying a train moving into a fenced corral, one of the participants incorrectly recalled it as a train crashing into a wall. A gesture was coded when the participant produced any hand movement along with speech that did not serve a functional purpose (e.g. pushing hair back, fidgeting, scratching). Participants produced both representational and beat gestures when describing the vignettes.

A second coder independently coded 10% of the spoken and gestured utterances in order to assess reliability. For speech, agreement between observers for identifying correctly remembered vignettes was 98% (51/52) at immediate recall and 100% (52/52) at delayed recall. For gesture, agreement between observers for coding the presence of a gesture was 92% (48/52) during encoding, 95% (21/22) during immediate recall, and 100% (6/6) during delayed recall.

CONCLUSION

We have found that gesturing while encoding an event can affect subsequent memory for that event. Across three studies, gesturing during encoding was associated with increases in free recall, both immediately and after three weeks. These findings suggest that gesturing during encoding may influence the way that information is *stored* in memory, adding to previous findings that gesturing during recall can influence the way that information is *recalled* from memory. Our findings are generally consistent with previous research suggesting that enacting phrases during encoding can facilitate memory for those phrases. Moreover, the current findings extend these results to visual depictions of actions, both simple events and actions typically performed with the hands. Our findings are thus consistent with the suggestion that gestures may reflect speakers' action simulations. The findings are also largely consistent with previous work suggesting that gesture can facilitate learning over time. When children gesture while learning a mathematical concept, they are particularly likely to maintain what they have, as are adults who gesture while learning sentences in a foreign language. Gesturing, like enactment, appears to be important in constructing new representations that will last over time, not only for new material, that must be learned but, as we have shown here, also for familiar material.

Why does gesturing help recall? One possible explanation is that the motor coding involved in gesturing is particularly efficient for encoding information into memory and retrieving that information from memory, has hypothesized that the function of memory is to support action. Consistent with this hypothesis, speakers show improvements in memory for enacted events even if they do not see their own movements during the enactment, suggesting that it is the motoric code, rather than the visual code, that supports memory in the enactment paradigm. Moreover, recall for previously enacted events is impaired when motor distractors are present at test, and activity is seen in motor cortex during retrieval of an event enacted during encoding. Like enactment, gesturing may be particularly efficient for encoding information in memory, particularly in situations where motor codes may not be spontaneously invoked.

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