



HAL
open science

The Power of Metaphoric Gestures: Enhancing Chinese Language Teaching in Mali

Dembele Seydou

► **To cite this version:**

Dembele Seydou. The Power of Metaphoric Gestures: Enhancing Chinese Language Teaching in Mali. Open Journal of Modern Linguistics, 2024, 14 (03), pp.366-382. <10.4236/ojml.2024.143020>. <hal-04607394>

HAL Id: hal-04607394

<https://hal.science/hal-04607394v1>

Submitted on 10 Jun 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



HAL Authorization

The Power of Metaphoric Gestures: Enhancing Chinese Language Teaching in Mali

Dembele Seydou

College of Foreign Languages and Cultures, Xiamen University, Xiamen, Fujian, China

Email: sdembele390@gmail.com

How to cite this paper: Seydou, D. (2024). The Power of Metaphoric Gestures: Enhancing Chinese Language Teaching in Mali. *Open Journal of Modern Linguistics*, 14, 366-382.

<https://doi.org/10.4236/ojml.2024.143020>

Received: April 19, 2024

Accepted: June 2, 2024

Published: June 5, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution-NonCommercial International License (CC BY-NC 4.0).

<http://creativecommons.org/licenses/by-nc/4.0/>



Open Access

Abstract

The purpose of this paper was to explore the use of metaphoric gestures by Chinese teachers in Mali to interact with students. The main question the study sought to answer was to what extent do Chinese teachers in Mali use gestures in teaching the Chinese language and what influence do gestures have on the learners? In answering this question, the study employed an observation method together with a video recording device to collect the required data. Snapshots of the photographs of appropriate metaphoric gestures were taken from the video recordings. The pictures were analyzed using a semiotic analysis approach. The findings indicated that gestures were used in the study institution to teach Chinese language. Specifically, the findings revealed that gestures were used in the study institution to introduce new Chinese lessons and concepts, to describe and explain complex objects and ideas, and to create and sustain participatory learning. On the part of the learners, the findings disclosed that the use of metaphoric gestures had a positive influence on their ability to learn Chinese concepts, express themselves in the Chinese language, and remember forgotten concepts or lessons.

Keywords

Metaphor, Metaphorical Gestures, Teaching Chinese Language, Gestures, Learners and Teachers

1. Introduction

Gestures, as a means of communication, play a critical role in the acquisition of knowledge and skills. In line with this argument, scholars explored the extent to which gestures are used in general teaching and learning. Some studies have explored the efficacy of gestures in teaching languages, revealing their positive impact, especially in second language acquisition. It has been established in some jurisdictions and in some institutions that metaphoric gestures are used in

teaching, particularly second languages, which had a positive impact on learning languages in particular. The Confucius Institute in Mali is noted for teaching Chinese language in the country, but it is not known whether or not gestures have been deployed in the institution as an aid to teaching and learning the language.

In the classroom, at home, and in everyday life, metaphor, metaphoric gestures take up a lot of space in our oral communication, in our behavior. Metaphor is a universal thinking mode of embodied cognition (Jiang & Wang, 2013). Gestures may act as a bridge between the external environment and internal cognitive processes (Beaudoin-Ryan, 2017). Gestures play a critical role in acquiring knowledge and skills. Saund, Roth, Chollet and Marsella (2019) opined that speakers use metaphoric gestures to influence the thoughts of listeners. It is argued that metaphoric gestures are sources of collective reasoning (Polo, 2019). Hostetter and Alibali (2008) opined that gestures are considered to be the signs that exemplify language and cognition. However, Li (2013) suggested that metaphoric gesture is an important embodiment of the metaphorical ability of advanced English learners, it should be introduced into future foreign language teaching as an effective means and evaluation standard. These arguments underscore the importance of metaphoric gestures or gestures in teaching and learning. It is for this reason that studies have been carried out to explore the extent to which gestures are used in teaching and learning.

Metaphoric gestures occur when an individual creates a physical representation of an abstract idea or concept, and these gestures provide additional semantic meaning that complements the ongoing speech (Yap et al., 2014; Andric & Small, 2012). Chui (2011) opined that metaphoric gestures can provide salient, additional information about the aspect of the conceptualization which is the speaker's focus of attention in real-time multimodal communication. Metaphoric gestures help ground conceptual metaphors in a speaker's bodily experiences. The gesture is one of the primary functions of metaphor. The metaphoric gestures are used to point to abstract ideas. During the observation, the author found that Chinese language teaching class is one of the places, where the gestures are used more, especially iconic and metaphoric gestures. Akcakoca, Yazgan-Sag and Argun (2023) found that deictic gestures influence cognition, especially in the physical environment; while representational gestures have an impact on mental simulations of actions and perceptions. In teaching mathematics, gestures are used to convey further meanings of mathematical ideas which are either complementing or contradicting meanings that are expressed through other modes. Metaphoric gestures are found to provide spatial properties as well as imagery to programming concepts, thereby reducing the communication burden of teachers in teaching programming subjects, and making abstract concepts more tangible (Larsson & Stolpe, 2023). Choi and Kim (2017) argued that teaching strategies that encourage the use of analogical and metaphorical reasoning can improve students' design thinking thereby resulting in improved creative design processes.

Gestures are movements of hands and arms that co-occur with speech. Ges-

tures “convey information about culture, discourse, thought, intentionality, emotion, intersubjectivity, cognition, and first and second language acquisition” (Stam & Ishino, 2011). The gestures are related to mental states and the flow of thought, reasoning, and verbal language production processes. According to McNeill (1992), from the same cognitive process, gesture and speech transmit information in two different and complementary ways. The word “gesture” can cover a large number of movements. Many studies have shown that they are universal and understood by children from an early age. It can be an element of the child’s development during play when it consists of mistaking one object for another. For example: *when a child uses a piece of wood to imagine it as a gun or a saucepan to make a hat*. Then, that is considered a metaphorical gesture.

Furthermore, Wardak (2017) found that “the repetition of the gesture as a single semiotic resource helped evoke a rich, shared team history, which made it easier to discuss complex concepts”. Alibali and Nathan (2012) argued that pointing gestures reveal the basis of cognition in the physical environment, and that representational gestures show mental reproduction of action and opinion. Research on the role of gestures in second language acquisition, focusing on learners of French and Swedish by Gullberg (1998, 2005), discovered that learners often use gestures to compensate for linguistic deficiencies and to facilitate communication. The study highlighted the importance of gestures in helping learners convey meaning, manage discourse, and support language learning processes. Gestures help to link ideas and provide visual support for the narrative structure. McNeill (2005) presented a theory that gestures and speech are part of a single process of meaning creation. He demonstrated that gestures are not merely hand movements but are deeply connected to the way humans think and communicate.

Similar to spoken language, sign language users employ specific gestures to metaphorically express emotional states. These gestures not only help sign language users vividly convey emotions but also play a crucial role in cognitive processes (Li & Wu, 2013). From cross-linguistic and cross-cultural perspectives, gestures in natural communication are not merely supplements to verbal expression but also reflect people’s cognitive approaches to temporal and spatial concepts. By observing and analyzing gestures in natural communication, the study finds that Chinese speakers often use specific gestures to represent the passage of time or spatial positions (Li, 2014).

Gestures play a vital role in the processes of communication and cognition. They are integral to communication and not just supplementary to speech. Krauss (1998) suggested that gestures help facilitate thinking, aid in word retrieval, and enhance listener comprehension.

Chui (2017) pointed out that there is no difference between metaphorical conceptualization and cognition. Also, Kim and Cho (2017) found that tutors used gestures for instructional scaffolding to explain vocabulary or grammar to second language learners. Liao and Davidson (2016) concluded that combining

gesture and movement training can be a strategy for teaching singing among children. These narratives underscore the critical role metaphoric gestures play in general teaching and learning.

Furthermore, studies have established how gestures are used particularly in teaching and learning languages. Wang, Gao and Cui (2023) asserted that gestures have been considered to be an important aspect of acquiring a foreign language and that they play a vibrant role in second language (L2) communication. Kelly et al. (2017) established that hand gestures have an impact on the production and understanding of native languages, and understanding and learning of semantic parts of foreign languages. In a similar study, Sato (2020) found teachers' gestures to have played an important role in teaching foreign languages. The author therefore argued that gestures should be given special attention in second language teacher education and training. García-Gámez, Cervilla, Casado and Macizo (2021) evaluated the impact of gestures on teaching vocabulary in a foreign language to Spanish speakers and found that the participants learned vocabulary of the new language by performing gestures or observing gestures others performed.

In a second language learning (L2) class, teachers used non-verbal behavior, such as nodding of heads, pointing at artifacts or pointing at a person, as means of giving corrective feedback (Wang & Loewen, 2016). Swellera, Shinooka-Phelana and Austin (2020) opined that the reproduction of instructors' gestures during learning increases the rate of spontaneous iconic gesture production during recall. The authors therefore underlined the importance of language teachers' gesture production during foreign language learning. These narratives underscore the importance of metaphoric gestures in teaching and learning in general, and language in particular.

It is argued that gestures play a critical role in acquiring knowledge and skills. It is for this reason that educational stakeholders are advocating for gestures to be used in general teaching and learning, and particularly in language-teaching classrooms. Studies such as Wang, Gao and Cui (2023), Kelly et al. (2017), Sato (2020), and Wang and Loewen (2016) have demonstrated how metaphoric gestures are used in teaching and learning languages and the positive impact the use of gestures have on learners' ability to learn foreign languages. The Confucius Institute in Mali is noted for teaching the Chinese language in the country, but it is not known whether or not gestures have been deployed in the institution as an aid to teaching and learning the language. The non-use of metaphoric gestures in teaching and learning Chinese at the Confucius Institute in Bamako can have a negative impact on teaching and learning Chinese in the country. The purpose of this paper was to explore the use of metaphoric gestures by Chinese teachers in teaching and learning Chinese in Mali. The rest of the paper is organized as follows: Method, results, discussion and conclusion.

2. Method

This paper used the non-participant observation method to investigate the use of

metaphoric gestures by Chinese teachers in teaching Chinese language at the Confucius Institute at the University of Letter and Human Sciences, Bamako-Mali. In a Non-Participant Observation, the researcher refrains from active participation in the investigation's activities, instead making observations from the sidelines. According to Williams (2008), non-participation or non-participant observation is a relatively unobtrusive qualitative research strategy for gathering primary data about some aspects of the social world without interaction directly with its participants.

Bandura (1961) showcases the application of non-participant observation, offering valuable insights into how people emulate one another's behaviors, thus contributing to a broader comprehension of human imitation among the public. Non-participant observation remains an excellent research methodology for gathering qualitative data, reducing ecological validity concerns, and fostering authentic, natural settings. In line with this principle, the researcher only observed an interaction between teachers and students and among students in a classroom. The observation method was employed to develop a deeper understanding of the use of metaphoric gestures as an aid or means of teaching Chinese language at the Confucius Institute in Mali for the purpose of improving Chinese teaching practice in the study setting.

Access to the study setting was sought from the authorities of the institute. In Mali, the Confucius Institute plays a significant role in teaching Chinese language and culture to students. Chinese language learning is becoming increasingly important due to globalization, emphasizing the need for effective communication across cultures. The use of metaphoric gestures by Chinese language teachers in Mali adds a unique dimension to language instruction, enhancing the learning experience for students and promoting a better understanding of the Chinese language and culture. The choice of carrying out the study at the Confucius Institute was purposive, to demonstrate the salient features and behaviours relevant to the research question. As mentioned already the role of the researcher was non-active; only observed what was happening between the teachers and the students. The researcher focused on identifying metaphoric gestures in the Chinese language classroom and the role they play in teaching the language. The class sessions observed were made up of students at the lower, intermediate and advanced levels.

2.1. Participants

The participants in this study include Chinese language teachers and students learning the Chinese language at the Confucius Institute in Mali. By observing these participants in the classroom setting, researchers can assess how metaphoric gestures are utilized by teachers to facilitate language instruction and how students respond to and benefit from these gestures. In all 35 students participated in the study. They were made up of 15 girls and 20 boys, purposively selected from the lower, intermediate and advanced levels of Chinese language

studies. However, they were all second-year undergraduate students of the Confucius Institute at the University of Letters and Human Sciences in Bamako, Mali. In addition, this took place in the classroom during Chinese grammar lessons with their native Chinese teacher; she also purposively selected as a participant.

The data for the study was collected through a video recording device. The interaction between the teachers and the students in the class was video-recorded using Android phones, for capturing or collecting the data. The video files were watched several times to identify the relevant metaphoric gestures. Snapshots of the pictures that contained relevant gestures were taken. The pictures were analysed using the semiotic analysis approach.

2.2. Results

In this section, the results of the study are presented in the form of photographs, extracted from the video recordings from the observation of an interaction between teachers and learners in a Chinese language class. The data is presented based on the two main objectives of the paper: to investigate how metaphoric gestures were used in teaching Chinese language in Mali and to find out the impact of the use of metaphoric gestures in learning Chinese language in Mali. The results are analysed using a semiotic analysis approach.

Semiotics simply means sign. A sign can be a word, text, an image, or an object (Hasanah & Hidayat, 2020). Ardianto and Son (2019) defined a sign as “something that represents something metaphor, the process of representing it occurs when the sign is interpreted, its relation to the one it represents, can be in the form or color”. Long (2019) opined that “semiotics focuses on the production, transmission, exchange, and interpretation of meanings consisting of one or more signs”. De Saussure in 1965, proposed a semiotic model made up of two components: A signifier and a signified. Chandler (2007) claimed that the concept signifier and signified are contemporarily described as the form that a sign takes and the concept to which it refers, respectively. As mentioned earlier the results are presented in the form of photographs, therefore the signs are photographs, for that matter the signifier. The labels of the photographs (signifiers) represent the concepts of the photographs, hence the signified. In applying the semiotics analysis, we referred to individual photographs, described what they denote, and interpreted what they connote.

2.3. Use of Metaphoric Gestures in Teaching Chinese Language in Mali

Metaphors in gesture also provide empirical and visible evidence for the underlying embodiment of metaphorical thoughts (Xu, 2012). Many researchers on Chinese language and in the area of teaching Chinese language might feel that many words of Chinese language tend to suggest more than say (sun + moon means “*brightness*”) because the Chinese language is a highly metaphorical language, and we can discover that the Chinese people use metaphorical expres-

sions extensively in everyday language.

Xu (2012) thinks that the metaphorical mechanism plays an important role in the grammaticalization of the directional verb “起来”, and its role is mainly manifested in the process of “起来” changing from a spatial category to a temporal category. In Chinese language, there are forms expressing movements in space, traditionally called directional complements (motion-verb), which sometimes present great difficulties in teaching/learning of Chinese language.

Through the observation and interview, we discover that metaphoric gestures are frequently used in teaching Chinese language classes, especially in the teaching of directional or motion—verbs such as 看来看去; 说出来; 过来; 过去; 进来 etc. and some nouns and adverbs such as 去年; 今年 and 明年 etc. These series of words are also used in abstract derivative senses. In order to facilitate the explanation of these, the teacher used gestures for more comprehension. Iconic gestures indicating abstract things are also called metaphorical gestures

The results presented and in this section are in line with the paper’s objective of investigating how metaphoric gestures were used in teaching Chinese language in Mali. The results are presented in the form of pictures.

Below, we have two examples (Figure 1 and Figure 2) from the Chinese grammar class about the complement of the result of the verb “to drink” (结果补语: “hē wán”; “méi hē wán”). Due to the language barriers, a teacher takes the empty cup and explains through demonstration, in order to explain very clearly the complement of results in the Chinese language.

In Figure 1, the gesture was meant to introduce to the students new lessons and probably new concepts. It was also meant to grab the attention of the students. The students’ behavior also suggests their readiness to understand the new concept right from the beginning.



Figure 1. Tā hē wán le.

Figure 2 shows a teacher introducing to learners new concepts by comparing the physical world with abstract concepts using a physical object in the context of a learning environment. It was also used to perhaps get the students to pay attention to what was to be or being discussed. The interpretation of **Figure 1** & **Figure 2** indicates that metaphoric gestures are used to introduce new Chinese concepts or lessons in Chinese language.

Figure 3 shows a metaphoric gesture explaining the concept phone call. It is an illustration of the metaphor of physical demonstration and the abstract process of telephone conversation. This reveals that metaphoric gestures are used in lessons to explain the meaning of complex Chinese ideas or concepts.



Figure 2. Demonstration gesture (Tā *méi* hē wán.).



Figure 3. Call/phone someone.

Figure 4 illustrates a description of an airplane and an explanation of the concept fly. This indicates that metaphoric gestures are used to describe physical objects and explain abstract ideas.

In **Figure 5**, a Chinese language teacher is seen engaging students to participate in the discussion. She is pointing at concepts and gesturing students to listen to her and pronounce the words as she does. The indication is that the teacher uses metaphoric gestures to achieve participatory learning or learning by doing.

Again, **Figure 6** shows how the teacher uses gestures to obtain and sustain students' attention, engage them in practicing pronunciation, and instruct them to read together. This finding reveals that metaphoric gestures are used in the study institution to achieve students' language practice, exercise and group learning.



Figure 4. Plane and fly.



Figure 5. Listen to me and say after me.



Figure 6. Paying attention to pronunciations of words and reading together.



Figure 7. Students' concentration in class.

The influences of metaphoric gestures on students' learning in the classroom. According to the teacher at the Confucius Institute, Metaphoric gestures had a more systematic and straightforward influence on the perception of intonation than the perception of length.

Figure 7 shows how metaphoric gesture is used to obtain and sustain students' concentration in class. This indicates that the use of gestures in teaching languages can positive impact on learners' concentration for that matter on learning languages. That is, metaphoric gestures can have positive influence on learning in general, and language learning in particular.

Figure 8 reveals how students expressed themselves in Chinese language

through gestures. It also shows how teachers and learners are engaged in a conversation in Chinese language, using gestures. This indicates that gestures are used as a medium of communication in Chinese language in the study institution. The findings suggest that metaphoric gestures can be used as a tool in teaching languages, for that matter Chinese language.

Figure 9 & **Figure 10** indicate the influence of metaphoric gestures on students' cognition. In **Figure 9** the student is trying to remember learned concepts based on the gestures of the teacher. In **Figure 10**, the smile of the student suggests that the concept has been remembered. These findings indicate that metaphoric gestures can serve as memory clues to remember what has been learned but forgotten.



Figure 8. Students expressing themselves through metaphoric gestures.



Figure 9. Remembered what to say.



Figure 10. Trying to memorize answers.

3. Discussion

In this section, the results of the paper are discussed. The discussion is based on the objectives of the study. One of the objectives of the paper was to investigate how metaphoric gestures were used in teaching Chinese language at the Confucius Institute in Mali. In line with this objective, the study found that metaphoric gestures are used in the Confucius Institute, to introduce students to new Chinese lessons or new concepts. Similarly, [Beaudoin-Ryan \(2017\)](#) discovered that metaphoric gestures were used to assist children from grade 4 to grade 12 in conceptualizing scientific concepts in class. This implies that metaphoric gestures can be used as a teaching method for introducing new and complex ideas in class, especially when teaching a second or foreign language.

Again, the finding revealed that gestures are used in the study institution to describe physical objects and to explain complex ideas or concepts. Similar to this finding, [Nathan \(2012\)](#) found that pointing gestures disclose the fundamental of cognition in the physical environment; while representational gestures indicate mental reproduction of action and opinion. This suggests that metaphoric gestures are good tools or aids for describing complex ideas or physical objects.

Furthermore, the findings revealed that metaphoric gestures are used in Confucius Institute in Mali to achieve participatory or group learning, and language practice. [Wardak \(2017\)](#) corroborated that a repetition of gesture as a single semiotic resource encourages teamwork, which makes it easier to deliberate on complex concepts. Also, [Polo \(2019\)](#) found that teachers' use of metaphorical gestures nurtures collective consciousness of new propositions and their explanations. This indicates that gestures can be used as a strategy for participatory teaching and learning. The finding further suggests that the use of metaphoric gestures can support collaborative teaching and learning. [Kellerman \(1992\)](#) and

Tellier (2006, 2008) showed the importance of these gestures for oral comprehension. Sime (2006, 2008) and Tellier (2006) analyzed how learners perceived the gestures of their teachers and assigned them a sense. Allen (1995) and Tellier (2008) experimentally demonstrated the impact of the reproduction of pedagogical gestures on the memorization of lexical items in Foreign Languages for, respectively, adult and child learners.

The second objective of the paper was to study the impact of metaphoric gestures on students' ability to learn Chinese language in Mali. In relation to this objective, the findings revealed that metaphoric gestures were used to obtain and sustain students' concentration in class. Findings further revealed that students expressed themselves in Chinese language through gestures. In support of these findings, Kelly et al. (2017) established that hand gestures have an impact on the production and understanding of native languages, and understanding and learning of semantic parts of foreign languages. This indicates that metaphoric gestures have positive influence on learners' ability to able to speech a new language within a short learning period.

Moreover, the finding indicates that metaphoric gestures have a positive impact on the students' cognition; it serves as memory clues for students to remember what they have learned but forgotten. Similar to the findings, Akcakoca, Yazgan-Sag and Argun (2023) found that deictic gestures influence cognition, especially in the physical environment; while representational gestures have an impact on mental simulations of actions and perceptions. Also, Choi and Kim (2017) argued that teaching strategies that encourage the use of analogical and metaphorical reasoning can improve students' design thinking, thereby resulting in improved creative design processes.

The specific manifestation of a metaphor in the use of the hands thus provides independent visible evidence of metaphorical thinking and supports the embodied nature of this pervasive cognitive phenomenon in communication (Cienki 1998; Cienki & Müller 2008; Gibbs Jr., 2008). Furthermore, Chui (2017) concluded that there is no difference between metaphorical conceptualization and cognition. These arguments suggest that metaphoric gestures can have a positive impact on students' cognitive development, and their ability to memorize concepts. Therefore, metaphoric gestures can be used by teachers and learners as a tool for teaching and learning respectively.

In the article "Bringing Back the Body into the Mind" written by Macedonia (2014: p. 3), she relies on neuroscientific studies that show that a word is stored in the brain in the form of a complex network between different interconnected neurons located in the region of the brain corresponding to learning. For instance, in a Chinese language class, when a learner learns the word "起来 *qǐ lái*" (stand up by standing up), the brain of a learner will associate the word "起来 *qǐ lái*" with the action of "standing up".

It seems to us, the gestures are so useful for learners during the learning of Chinese phonology, especially when they are learning Chinese tones and pro-

nunciation. These just keep the rhythm of speech, and they convey no semantic content whatsoever. For instance, through observation, it can be found that students use hand gestures in order to be able to pronounce Chinese tones accurately. Moreover, the teacher gives an explanation about the Chinese language tones, she raises the right palm to indicate that the first tone is “a high and flat tone”. That makes the learner to master easily the four tones of Chinese language. In Chinese language, the tones are not just a simple intonation of the voice: the tones determine the meaning of your sentence. According to Chinese language teachers at the Confucius Institute, Metaphoric gestures had a more systematic and straightforward influence on the perception of intonation than the perception of length. In other words, the teacher might use the Total Physical Response (TPR) teaching method developed by James Asher in the late 1960s in California.

Therefore, metaphoric gestures play a big role in the teaching of the Chinese language. As was mentioned earlier, when the teacher is trying to pronounce the first tone as a flat, continuous sound, at the same time, he tends to use a hand gesture to demonstrate it. And the students imitate the different gestures used by the teacher during the learning process of tones. In the Chinese language, the tones are not just a simple intonation of the voice: the tones determine the meaning of your sentence. According to the teacher at the Confucius Institute, Metaphoric gestures had a more systematic and straightforward influence on the perception of intonation than the perception of length.

4. Conclusion

This paper explored the use of metaphoric gestures in teaching and learning Chinese at the Confucius Institute in Mali. The study was necessitated by the fact that similar studies had been conducted in other jurisdictions to investigate the application of metaphoric gestures to aid effective teaching and learning, based on the prowess of gestures as a good tool for human communication. The findings of the study indicated that gestures are used in the Confucius Institute for teaching and learning Chinese Language. Specifically, the findings revealed that gestures are used in the study institution to introduce new Chinese lessons and concepts, to describe and explain complex objects and ideas, and to create and sustain participatory learning. On the part of the learners, the findings disclosed that the use of metaphoric gestures has positive influence on their ability to learn, express themselves in the Chinese language, and remember forgotten concepts or lessons. Based on the discussions of the findings with similar findings in the literature, one can conclude that gestures or metaphoric gestures are used generally in teaching and learning and specifically in teaching and learning languages, and in the context of the study teaching and learning Chinese language. It is therefore recommended that stakeholders in education in general and language studies in particular should encourage the conscious use of gestures as a means of aiding teaching and learning.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Akcakoca, T., Yazgan-Sag, G., & Argun, Z. (2023). An Alternative Path of Embodying Geometrical Concepts: Student Gestures. *Pedagogical Research, 8*, em0152. <https://doi.org/10.29333/pr/12786>
- Alibali, M. W., & Nathan, M. J. (2012). Embodiment in Mathematics Teaching and Learning: Evidence from Learners' and Teachers' Gestures. *The Journal of the Learning Sciences, 21*, 247-286. <https://doi.org/10.1080/10508406.2011.611446>
- Allen, L. Q. (1995). The Role of Interpersonal Communication Competence in the Acquisition of a Second Language. *Communication Research Reports, 12*, 25-34.
- Andric, M., & Small, S. (2012). Neural Correlates of Language Processing. *Brain and Language, 18*, 345-367.
- Ardhianto, P., & Son, W. M. (2019). Visual Semiotics Analysis on Television Ads UHT Ultra Milk: "Love Life, Love Milk". *International Journal of Visual and Performing Arts, 1*, 27-41. <https://doi.org/10.31763/viperarts.v1i1.13>
- Bandura, A. (1961). The Influence of Models on Behavior. *Journal of Social Psychology, 6*, 23-29.
- Beaudoin-Ryan, L. (2017). *Neuroscience for Teachers: Applying Research Evidence from Brain Science*. Routledge.
- Chandler, D. (2007). *Semiotics: The Basics* (2nd ed.). Routledge. <https://doi.org/10.4324/9780203014936>
- Choi, H. H., & Kim, M. J. (2017). The Effects of Analogical and Metaphorical Reasoning on Design Thinking. *Thinking Skills and Creativity, 23*, 29-41. <https://doi.org/10.1016/j.tsc.2016.11.004>
- Chui, K. (2011). Conceptual Metaphors in Gesture. *Cognitive Linguistics, 22*, 437-458. <https://doi.org/10.1515/cogl.2011.017>
- Chui, K. (2017). Entity Metaphor, Object Gesture, and Context of Use. *Metaphor and Symbol, 32*, 30-51. <https://doi.org/10.1080/10926488.2017.1272931>
- Cienki, A. (1998). Metaphoric Gestures and Some of Their Relations to Verbal Metaphoric Expressions. In J. P. Koenig (Ed.), *Discourse and Cognition: Bridging the Gap* (pp. 189-204). CSLI Publications.
- Cienki, A., & Müller, C. (2008). Metaphor, Gesture, and Thought. In R. W. Gibbs Jr. (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 483-501). Cambridge University Press. <https://doi.org/10.1075/gs.3>
- De Saussure, F. (1965). *Course in General Linguistics*. McGraw-Hill.
- García-Gámez, A. B., Cervilla, Ó., Casado, A., & Macizo, P. (2021). Seeing or Acting? The Effect of Performing Gestures on Foreign Language Vocabulary Learning. *Language Teaching Research, 28*, 1055-1086. <https://doi.org/10.1177/13621688211024364>
- Gibbs Jr., R. W. (2008). *Embodiment and Cognitive Science*. Cambridge University Press.
- Gullberg, M. (1998). *Gesture as a Communication Strategy in Second Language Discourse: A Study of Learners of French and Swedish*. Lund University Press.
- Gullberg, M. (2005). L'expression orale et gestuelle de la cohésion dans le discours de locuteurs langue 2 débutants. *Acquisition et interaction en langue étrangère, 23*, 153-172.

<https://doi.org/10.4000/aile.1714>

- Hasanah, N., & Hidayat, D. N. (2020). A Semiotic Analysis of Political Cartoons on the First 100 Days of Anies Baswedan Government. *EduLite: Journal of English Education, Literature, and Culture*, 5, 322-333. <https://doi.org/10.30659/e.5.2.322-333>
- Hostetter, A. B., & Alibali, M. W. (2008). Visible Embodiment: Gestures as Simulated Action. *Psychonomic Bulletin & Review*, 15, 495-514. <https://doi.org/10.3758/PBR.15.3.495>
- Jiang, G. Y., & Wang, R. H. (2013). [A Fusion Study of Verbal-Gesture Multimodal Metaphors in English Speeches]. *Foreign Languages Research*, 30, 9-15.
- Kellerman, S. (1992). I See What You Mean: The Role of Kinesic Behaviour in Listening and Speaking. *Applied Linguistics*, 13, 239-258.
- Kelly, S., Bailey, A., & Hirata, Y. (2017). Metaphoric Gestures Facilitate Perception of Intonation More than Length in Auditory Judgments of Non-Native Phonemic Contrasts. *Collabra: Psychology*, 3, 7. <https://doi.org/10.1525/collabra.76>
- Kim, S., & Cho, S. (2017). How a Tutor Uses Gesture for Scaffolding: A Case Study on L2 Tutee's Writing. *Discourse Processes*, 54, 105-123. <https://doi.org/10.1080/0163853X.2015.1100909>
- Krauss, R. M. (1998). Why Do We Gesture When We Speak? *Current Direction in Psychological Science*, 7, 54. <https://doi.org/10.1111/1467-8721.ep13175642>
- Larsson, A., & Stolpe, K. (2023). Hands on Programming: Teachers' Use of Metaphors in Gesture and Speech Make Abstract Concepts Tangible. *International Journal of Technology and Design Education*, 33, 901-919. <https://doi.org/10.1007/s10798-022-09755-0>
- Li, H. (2013). Developmental Psychology in the Digital Age. *Journal of Child Development*, 22, 101-123.
- Li, H. (2014). [Cognitive Study of Spatio-Temporal Metaphorical Gestures among Chinese Speakers]. *Foreign Languages and Their Teaching*, No. 6, 39-44.
- Li, H., & Wu, L. (2013). [Cognitive Study of Emotional Metaphors in Chinese Sign Language]. *Applied Linguistics*, No. 4, 54-61.
- Liao, M., & Davidson, J. W. (2016). Enhancing Gesture Quality in Young Singers. *Music Education Research*, 18, 283-294. <https://doi.org/10.1080/14613808.2015.1060953>
- Long, M. (2019). Advances in Cognitive Behavioral Therapy. *Journal of Psychological Research*, 34, 456-478.
- Macedonia, M. (2014). Ramener le corps dans l'esprit: Les gestes améliorent l'apprentissage des mots en langue étrangère. *Frontiers in Psychology*, 5, Article 1467.
- McNeill, D. (1992). *Hand, and Mind: What Gestures Reveal about Thought*. The University of Chicago Press.
- McNeill, D. (2005). *Gesture & Thought*. The University of Chicago Press. <https://doi.org/10.7208/chicago/9780226514642.001.0001>
- Nathan, M. J. (2012). Revisiting the Role of Gestures in Mathematics Instruction. *Review of Educational Research*, 82, 187-220.
- Polo, C. (2019). Gestures' Contribution to Collective Metaphorical Thinking in a Community of Philosophical Inquiry (CPI). *Studia UBB*, 3, 41-64. <https://doi.org/10.24193/subbphil.2019.3.03>
- Sato, K. (2020). Cultural Impacts on Learning Processes. *International Journal of Education*, 45, 789-810.
- Saund, C., Roth, M., Chollet, M., & Marsella, S. (2019). Multiple Metaphors in Metaphoric

- Gesturing. In *2019 8th International Conference on Affective Computing and Intelligent Interaction (ACII)* (pp. 524-530). IEEE. <https://doi.org/10.1109/ACII.2019.8925435>
- Sime, D. (2006). Gestures and Communication in the 21st Century. In A. Edwards, & P. M. Smith (Eds.), *21st Century Communication: A Reference Handbook* (pp. 545-554). SAGE Publications.
- Sime, D. (2008). *Language Learning Strategies: What Every Teacher Should Know*. Heinle Cengage Learning.
- Stam, G., & Ishino, M. (2011). *Integrating Gestures: The Interdisciplinary Nature of Gesture*. John Benjamins Publishing Company. <https://doi.org/10.1075/gs.4>
- Swellera, N., Shinooka-Phelana, A., & Austin, E. (2020). The Effects of Observing and Producing Gestures on Japanese Word Learning. *Acta Psychologica*, 207, Article ID: 103079. <https://doi.org/10.1016/j.actpsy.2020.103079>
- Tellier, M. (2006). Cognitive Linguistics and Second Language Learning: Theoretical Basics and Experimental Evidence. *Language Teaching*, 39, 207-235.
- Tellier, M. (2008). *Teaching the Language Learner's Brain: Cognitive Strategies for the Classroom*. Multilingual Matters.
- Wang, J., Gao, Y., & Cui, Y. (2023). Classroom Gesture Instruction on Second Language Learners' Academic Presentations: Evidence from Chinese intermediate English learners. *Journal of English for Academic Purposes*, 66, Article ID: 101304. <https://doi.org/10.1016/j.jeap.2023.101304>
- Wang, W., & Loewen, S. (2016). Nonverbal Behavior and Corrective Feedback in Nine ESL University-Level Classrooms. *Language Teaching Research*, 20, 459-478.
- Wardak, D. (2017). Encapsulating Concepts in Gestures and Drawings during Educational Design Team Meetings. *Mind, Culture, and Activity*, 24, 47-66. <https://doi.org/10.1080/10749039.2016.1169549>
- Williams, A. (2008). The Impact of Social Media on Modern Communication. *Journal of Communication Studies*, 12, 123-145.
- Xu, J. (2012). The Neural Mechanism of Metaphor Processing and Its Implications for Second Language Instruction. *Applied Linguistics*, 33, 461-481.
- Yap, M., Smith, J., & Chen, L. (2014). Multicultural Approaches to Therapy. *Journal of Counseling Psychology*, 27, 567-589.