

Nonverbal Behavior as an Educational Symbolic Mediator in Class

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Effective language strategies play an essential role in traditional teaching. However, the benefits of nonverbal behavior teaching strategy in the classroom have been underestimated. Facial expressions, gestures, and eye contact are all instantaneous nonverbal behaviors that play a significant part in exchanging information in classroom. This study aims to examine how different nonverbal teaching strategies affect teaching and learning and discover what it is used for and how important they are in education. Finally, some suggestions for improving teachers' use of nonverbal behaviors from a teacher professional development perspective are presented.

Keywords: nonverbal teaching strategies, nonverbal teaching cues, facial expressions, eye movements

Introduction

Typically, education is a social activity in which instructors and students communicate and interact in fixed and flexible environments (Al Tawil, 2019). It is also commonly assumed that teaching and learning activities are often produced through language as a symbolic mediator. However, several studies have shown that nonverbal behavior, or paralanguage, is also essential in communication. These paralanguages, such as gestures, facial expressions, and eye contact, contribute to a certain degree to the understanding of language by the other side (Pennycook, 1985).

Nonverbal behavior, also referred to as paralanguage, refers to some nonverbal clues like facial expression, gesture, and eye contact that can be used to transfer information (Knapp & Hall, 2009). There is now a commonly accepted concept of paralanguage, which refers to those aspects of communication that are not part of the structure and content of languages, such as body language, facial expression, and eye contact (Houston, 2001). There is a substantial research on paralanguage and a clear affirmation of its importance in education. For example, a significant number of educational researchers believe that some nonverbal behaviors, such as facial expressions and gestures, help them convey some useful information. A study finds that the employment of instant nonverbal behaviors in the classroom influences students' psychological attachment to instructors and communication skills (Comadena, Hunt, & Simonds, 2007; Mackay, 2006).

However, fewer studies examine how distinct nonverbal instant behaviors might affect students and what specific effects these behaviors have had on teaching progress. Furthermore, sorting out the different effects of different nonverbal immediate behaviors in teaching can help provide some reference suggestions for teachers

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to use practical suggestion on using nonverbal behavior teaching strategy. This study aims to summarize the different functions of different nonverbal immediate behaviors in the teaching process and analyze how different nonverbal immediate behaviors affect teaching. Finally, provide some valuable suggestions for how to make better use of nonverbal immediate behaviors in the teaching process from the perspective of teacher development.

Theoretical Foundation

The implicit communication theory shows that not only immediate verbal languages but also nonverbal behaviors such as facial expression, gesture, and eye contact can facilitate the continuous transmission of information (Mehrabian, 1969). In the theory of implicit communication, Albert Mehrabian proposes that implicit communication is often carried out through subtle interactions between people. In everyday life, people use language more often to convey information. However, in some specific contexts, implicit nonverbal behavior can assist in conveying deeper information. For example, a person's nonverbal behavior can be used to help guess his or her attitude. Implicit communicative theory can also be applied to the teacher-student interaction context (Butland & Beebe, 1992). Beebe and Biggers used the theory of implicit communication to explore how teachers' implicit behaviors affect students' learning (Beebe & Biggers, 1990). In the daily teaching process, teachers can infer whether students are inattentive by their facial expressions, body language, and other implicit behaviors.

Moreover, suppose some learners are afraid to express their opinions in public. In that case, teachers can also use nonverbal behaviors such as eye contact and smiling to encourage them. In the examples mentioned above, there is no direct verbal involvement but rather some implicit behavior that successfully communicates the message to the other. It also shows that implicit behaviors like nonverbal behavior are widespread in the classroom.

Different Nonverbal Behaviors in the Classroom

Nonverbal behavior or paralanguage has a wide range of applications in real life. Nonverbal behavior is often used as a particular strategy in speech, survey, and interview scenarios to express human emotions and attitudes. Albert Mehrabian proposes that nonverbal behavior can increase intimacy with other people and help to understand the deeper meaning of verbal languages (Mehrabian, 1968). Education is not only an activity about transferring knowledge but also a social learning community (Dunlap & Lowenthal, 2018). Not only verbal behavior but also nonverbal behavior plays an essential role in the exchange of information in such a social learning community. Nonverbal behaviors are used in teaching and learning, such as communication between teachers and students, promoting students' cognitive level, and helping in class management.

Student cognition refers primarily to the extent to which students understand the course material's facts, concepts, and critiques (Richmond, McCroskey, Kearney, & Plax, 1987). It has been shown that language can facilitate cognitive development (Luchkina & Waxman, 2021). In another study, Witt et al. used an experimental design and a direct test of recall to investigate the effects of teachers' nonverbal instant behavior on the cognitive learning of 347 students. One of the study's results shows that a positive relationship appears between teachers' nonverbal immediate behaviors and students' cognitive enhancement (Witt & Wheelless, 2001). In addition to contributing to the cognitive aspects of students, immediate nonverbal behaviors also help the effective communication between teachers and students. A study by Martin and Mottet showed that some

immediate nonverbal behaviors such as smiling facilitate the construction of rapport between teachers and students (Martin & Mottet, 2011). Similarly, Mehrabian et al. found that the appropriate use of effective nonverbal behaviors increased the feelings of closeness to teachers (Mehrabian, 1969). As an essential element in maintaining effective teaching and learning, effective instructional management can help teachers improve teaching effectiveness. There are many ways to manage a classroom, such as using direct verbal intervention or punitive measures to prevent accidents that interfere with the normal flow of the teaching. However, the classroom confrontation atmosphere is often not conducive to the friendly communication of teachers and students. Nonverbal behaviors, such as smiles or friendly gestures, along with verbal interventions or punitive measures, can help to avoid the formation of an atmosphere of constant solid. A study showed that effective use of nonverbal behaviors in class management, such as smiling, can help ease tensions, eliminate student misunderstandings with the teacher, and help the classroom go smoothly (Babad, 2009). Some teachers recognize the positive significance of the application of nonverbal behaviors in teaching and consciously improve their nonverbal teaching strategies in teaching. However, there are still some teachers who are unaware of the different roles of different nonverbal languages in teaching. Therefore, the following section is mainly for the purpose of sorting out the specific applications of different nonverbal behaviors in teaching.

Gesture in the Classroom

Humans have been using body language such as gestures to communicate until the language is invented. Human body language often expresses human emotions, attitudes, or thoughts indirectly. Gestures are often produced spontaneously in the process of speaking. In the teaching environment, teachers, as one of the subjects of the classroom, often use gestures as clues or to improve students' attention to help students understand the content of the course. Several common nonverbal behaviors can be seen in Table 1.

Table 1

Several Common Nonverbal Behaviors

Nonverbal event categories	
Costume	An outfit worn to create the appearance characteristic to a particular period, person, place, or thing
Gesture	The use of motions of the limbs as a means of expression
Facial expression	Interaction via head
Eye contact	Interaction via visual gaze

Gesture and clue. To a certain extent, teachers can also use gestures as a clue in teaching. It was shown in an article that infants could recognize some clues based on adult gestures (Gräfenhain, Behne, Carpenter, & Tomasello, 2009). In some subjects, specific gestures can also be used as a teaching cue to help students understand some detailed knowledge. For example, Yeo et al. used two sets of comparative experiments to find whether teachers' gestures may affect students' understanding of mathematical concepts when learning. The research found that suitable gestures can help students understand some complicated conceptions in math (Yeo, Ledesma, Nathan, Alibali, & Church, 2017). Research also has shown that teachers can use fingers to point back and forth between icons and equations to strengthen the connection between the two elements (Goldin-Meadow, Kim, & Singer, 1999). Specific gesture is often used as a clue in the classroom to help students understand difficult knowledge points.

Gesture and attention. Psychologists have demonstrated through a series of experiments that there is a time limit to students' concentration. Therefore, teachers may use gestures in the classroom to regain the

concentration of inattentive students. For example, Wakefield et al. found that when students watch online videos, as the teacher's gestures move, the position of the student's attention will also change (Wakefield, Novack, Congdon, Franconeri, & Goldin-Meadow, 2018). That is to say, when students watch the video, their eyesight can follow the teacher's gestures to move, and it helps them to pay more attention to the teacher's guide. The authors verified this result through experiments and discovered the complex relationship between gestures and visual attention.

Facial Expression

Facial expressions are a way of expressing our emotions directly in our daily lives. Research shows that students' emotions play a significant role in the classroom (Krithika & Lakshmi Priya, 2016). By observing students' emotions, teachers can understand the state of the students in the classroom at any time to carry out effective interventions or help. It is not easy for some shy students to express their thoughts and feelings in public. At this time, facial expressions can be used as a clue by teacher to sight students' feelings in class. Emotions are also closely related to cognition, especially in memory and attention. When events are associated with happy emotions, these events are often easier to remember. Therefore, teachers can spy on students' emotions and use teaching techniques to link important events with emotions to support the students' learning process.

Eye Contact in Learning

Eye gaze, as a nonverbal communication behavior, can often express a student's inside feelings. The social agency theory believes that the teacher's gaze positively impacts the connection between teachers and students, thereby improving learners' cognitive input and learning effects (Mayer, 2005).

Eye contact is essential in improving learning, increasing student-teacher interaction, and instructional management. Students can keep up with the teacher's explanation, pay greater attention to the main topic, and boost learning by following the teacher's direction of sight (Haataja, Toivanen, Laine, & Hannula, 2019). Researchers found that teachers often use nonverbal behaviors, such as eye contact to stop or encourage students' behaviors in the classroom (Ödemiş, 2019). In a complex classroom environment, teachers can not only use language to interact with students in real-time. However, they can also use eye contact to stop bad behavior with eye cues.

The Importance of Nonverbal Behavior for Teachers

Some studies in recent years have demonstrated that teachers' nonverbal immediate behaviors contribute significantly to education. McCroskey et al. also explicitly listed a range of effective nonverbal immediate behaviors teachers can use in the classroom. For example, they were smiling, using multiple tones of voice, and maintaining a relaxed posture to ease the class atmosphere (McCroskey & Richmond, 1992).

The importance of immediate nonverbal behavior in teaching and learning cannot be overstated. From the perspective of professional skills improvement of teachers, it is crucial to improve teachers' recognition of the importance of immediate nonverbal behaviors to help them use immediate nonverbal behaviors scientifically to support teaching. Firstly, improving teachers' awareness of the importance of nonverbal teaching strategies is essential. Most teachers' use of nonverbal behaviors in the teaching process is often unintentional. Therefore, for teachers, the first thing is to help them realize that nonverbal behaviors can not only be applied in interpersonal communication and speech contexts. Using appropriate nonverbal behaviors intentionally has a

positive impact on the efficiency of teaching and a better experience for students. Therefore, as a teacher, it is necessary to realize the importance of nonverbal behavior in teaching. Secondly, teachers should be more sensitive to students' nonverbal behavior in the classroom, especially facial expressions. Teaching is a two-way communication activity. In the classroom, the teacher is not only the imparter of knowledge and the guide of the classroom but also a listener. Therefore, teachers should learn to recognize students' nonverbal behaviors in the classroom to give full play to their teaching wit. Finally, from the perspective of teacher training, nonverbal behavior should be regarded as an essential part of teacher pre-service training content. Most teachers believe that nonverbal behaviors play a vital role in teaching (Brey & Pauker, 2019). However, they often lack relevant nonverbal behavior strategies in pre-service training. Practical training in nonverbal behavioral teaching strategies supports teachers in understanding the theoretical knowledge of relevant non-language teaching strategies. It can gradually apply them scientifically in teaching practice.

Conclusions

Nonverbal communication is vital in daily life, psychology, sociology, and even speech. Through the above analysis, this study found that immediate nonverbal behaviors have different functions in educational applications. Nonverbal behaviors can have an impact on students' cognitive enhancement, classroom management, and teacher-student affective communication respectively. For example, teachers' nonverbal behaviors can be used as instructional cues to improve students' attention and promote their cognitive level. Similarly, nonverbal immediacy can be used as a supplement strategy to help teachers manage their classes effectively in a noncontradictory environment. Furthermore, different nonverbal immediate behaviors often have different functions in teaching. For example, suitable body gestures can be used both as a cue to help guide students to pay more attention to key concepts and as a reminder to help students concentrate. Teachers use students' facial expressions to infer the learning status of learners so that they can modify their teaching progress. At the same time, the use of some positive facial expressions in teaching can ease the tense atmosphere and close the distance between teachers and students. A certain amount of eye contact also helps to improve the interaction level between teachers and students and build a gentle instructional atmosphere. It can be found that although non-language is often used as a tool to assist learners in learning, nonverbal behavior still has an important role in instruction.

However, in terms of teaching practice, there are still many problems to be solved. For example, most teachers still do not realize the positive significance of nonverbal behavior teaching strategies for teaching practice. Secondly, teachers often lack systematic nonverbal behavior training, and what they do in teaching practice is often based on experience. Therefore, it is essential to sort out the related nonverbal behaviors in teaching literature and use the importance of formal nonverbal behavior strategies in teaching. On this basis, provide suggestions for teachers on how to improve their nonverbal behavior teaching strategies.

References

- Al Tawil, R. (2019). Nonverbal communication in text-based, asynchronous online education. *The International Review of Research in Open and Distributed Learning*, 20(1), 144-164.
- Babad, E. (2009). Teaching and nonverbal behavior in the classroom. In L. J. Saha and A. G. Dworkin (Eds.), *International handbook of research on teachers and teaching* (pp. 817-827). Boston, MA: Springer.
- Beebe, S., & Biggers, T. (1990). Applications of implicit communication theory for the classroom. Proceedings from *the Annual Meeting of the International Communication Association*. Dublin, Ireland.

- Brey, E., & Pauker, K. (2019). Teachers' nonverbal behaviors influence children's stereotypic beliefs. *Journal of Experimental Child Psychology*, 188, 104671.
- Butland, M. J., & Beebe, S. A. (1992). A study of the application of implicit communication theory to teacher immediacy and student learning. Proceedings from *the Annual Meeting of the International Communication Association*. Miami, FL.
- Comadena, M. E., Hunt, S. K., & Simonds, C. J. (2007). The effects of teacher clarity, nonverbal immediacy, and caring on student motivation, affective and cognitive learning. *Communication Research Reports*, 24(3), 241-248.
- Dunlap, J., & Lowenthal, P. (2018). Online educators' recommendations for teaching online: Crowdsourcing in action. *Open Praxis*, 10(1), 79-89.
- Goldin-Meadow, S., Kim, S., & Singer, M. (1999). What the teacher's hands tell the student's mind about math. *Journal of Educational Psychology*, 91(4), 720-730.
- Gräfenhain, M., Behne, T., Carpenter, M., & Tomasello, M. (2009). One-year-olds' understanding of nonverbal gestures directed to a third person. *Cognitive Development*, 24(1), 23-33.
- Haataja, E., Toivanen, M., Laine, A., & Hannula, M. S. (2019). Teacher-Student eye contact during scaffolding collaborative mathematical problem-solving. *LUMAT: International Journal on Math, Science and Technology Education*, 7(2), 9-26.
- Houston, J. E. (2001). *Thesaurus of ERIC descriptors*. Greenwood Publishing Group.
- Knapp, M., & Hall, J. (2009). Chapter 1: Nonverbal communication: Basic perspectives. In M. Knapp and J. Hall (Eds.), *Nonverbal communication in human interaction* (pp. 1-25). Cengage Learning.
- Krithika, L. B., & Lakshmi Priya, G. G. (2016). Student emotion recognition system (SERS) for e-learning improvement based on learner concentration metric. *Procedia Computer Science*, 85, 767-776.
- Luchkina, E., & Waxman, S. (2021). Acquiring verbal reference: The interplay of cognitive, linguistic, and general learning capacities. *Infant Behavior and Development*, 65, 101624.
- Mackay, J. (2006). *Coat of many pockets*. Camberwell, Victoria: ACER Press.
- Martin, L., & Mottet, T. P. (2011). The effect of instructor nonverbal immediacy behaviors and feedback sensitivity on Hispanic students' affective learning outcomes in ninth-grade writing conferences. *Communication Education*, 60(1), 1-19.
- Mayer, R. E. (2005). Principles of multimedia learning based on social cues: Personalization, voice, and image principles. In R. E. Mayer (Ed.), *The Cambridge handbook of multimedia learning* (pp. 201-212). Cambridge University Press.
- McCroskey, J. C., & Richmond, V. P. (1992). Increasing teacher influence through immediacy. In V. P. Richmond and J. C. McCroskey (Eds.), *Power in the classroom: Communication, control, and concern* (pp. 101-119). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Mehrabian, A. (1968). Some referents and measures of nonverbal behavior. *Behavior Research Methods & Instrumentation*, 1(6), 203-207.
- Mehrabian, A. (1969). Significance of posture and position in the communication of attitude and status relationships. *Psychological Bulletin*, 71(5), 359-372.
- Ödemiş, İ. S. (2019). The effect of non-verbal behaviors of teachers on classroom management. *International Journal of Language Academy*, 7(2), 56-65.
- Pennycook, A. (1985). Actions speak louder than words: Paralanguage, communication, and education. *TESOL Quarterly*, 19(2), 259-282.
- Richmond, V. P., McCroskey, J. C., Kearney, P., & Plax, T. G. (1987). Power in the classroom VII: Linking behavior alteration techniques to cognitive learning. *Communication Education*, 36(1), 1-12.
- Wakefield, E., Novack, M. A., Congdon, E. L., Franconeri, S., & Goldin-Meadow, S. (2018). Gesture helps learners learn, but not merely by guiding their visual attention. *Developmental Science*, 21(6), e12664.
- Witt, P. L., & Wheelless, L. R. (2001). An experimental study of teachers' verbal and nonverbal immediacy and students' affective and cognitive learning. *Communication Education*, 50(4), 327-342.
- Yeo, A., Ledesma, I., Nathan, M. J., Alibali, M. W., & Church, R. B. (2017). Teachers' gestures and students' learning: Sometimes "hands off" is better. *Cognitive Research: Principles and Implications*, 2(1), 1-11.