

A Conceptual Paper: The Influence of Teachers' Non-Verbal Behaviours on College Students' Classroom Engagement in Hebei Province, China

Hao Lingling, and Wong Siew Ping

Abstract – The purpose of this study is to explore the influence of teachers' non-verbal behaviours on college students' classroom engagement, and to provide scientific and objective conclusions through systematic research methods and data analysis, so as to provide certain theoretical support and practical guidance for college education. Past research shows that students' engagement in the classroom is influenced by teachers' non-verbal behaviours. Soviet educationalist, Makarenko (1981), pointed out that in teaching practice, teachers' standing posture, sitting posture and voice have decisive significance to the classroom. The study will be quantitative research. It examines teachers' non-verbal behaviours that focus on students' perception about teachers' gestures, paralanguage, eye contact, facial expression, postures, and body distance. The dimensions of classroom engagement include behavioural engagement, cognitive engagement, and emotional engagement. According to the official website of the National Bureau of Statistics of China, the number of students in colleges and universities in Hebei Province in 2021 is 1.7 million. This study selected students from L, M and N universities in Hebei Province, China as research samples. According to the calculation formula in Determining the Sample Size of Research Activities by Krejcie and Morgan (1970), the sample size for this study should be 368 people. At the same time, the relevant theories of this study are expounded, and on this basis, the theoretical framework and conceptual framework of this study are built.

Keywords – Non-verbal behaviour, Teacher's non-verbal behaviours, Classroom engagement, Student-Teacher Interaction

I. INTRODUCTION

Classroom is the main position of talent training. The level of students' classroom engagement is an important factor to determine the quality of classroom teaching and education teaching. At present, college students have low engagement in class (Qian, 2019). Students' classroom engagement is not enough, their classroom performance is passive, almost no students take the initiative to ask questions, and students have low autonomy (Li, 2022). In teaching practice, college teachers pay less attention to non-verbal behaviours (Liang, 2021). For a long time, scholars also focus on the study of teachers' verbal behaviour in the classroom but ignore the non-verbal behaviour. The purpose of this study is to explore the influence of teachers' non-verbal behaviours on college students' classroom engagement, and to provide scientific

and objective conclusions through systematic research methods and data analysis, so as to provide certain theoretical support and practical guidance for college education.

Past research shows that students' engagement in the classroom is influenced by teachers' non-verbal behaviours. Soviet educationalist, Makarenko (1981), pointed out that in teaching practice, teachers' standing posture, sitting posture and voice have decisive significance to the classroom. The study will be quantitative research. It examines teachers' non-verbal behaviours that focus on students' perception about teachers' gestures, paralanguage, eye contact, facial expression, postures and body distance. The dimensions of classroom engagement include behavioural engagement, cognitive engagement and emotional engagement. According to the official website of the National Bureau of Statistics of China, the number of students in colleges and universities in Hebei Province in 2021 is 1.7 million. This study selected students from L, M and N universities in Hebei Province, China as research samples. According to the calculation formula in Determining the Sample Size of Research Activities by Krejcie and Morgan (1970), the sample size for this study should be 368 people. At the same time, the relevant theories of this study are expounded, and on this basis, the theoretical framework and conceptual framework of this study are built.

II. LITERATURE REVIEW

Non-verbal Behaviours

Concept of Non-Verbal Behaviour

The concept of non-verbal behaviour was first proposed by American scholar E. Sapir (1921) in *Language: An Introduction to the Study of Speech*. He believes that non-verbal behaviour is actually a kind of code that everyone can understand even if it is not presented in written form. Burgoon and Saine (1978), a foreign scholar, believed that non-verbal communication does not need to be mediated by speech, but it has the attributes known to the whole society. After the sender sends these non-verbal messages purposefully, consciously and in a targeted way, they can be obtained and given feedback by the receiver. Samovar and Porter (2000) Generally pointed out that non-verbal communication refers to all stimuli generated by the information spreader based on the special environment in a specific communication scene, which have obvious or potential effects on both the information spreader and the information receiver.

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The Chinese book "Li Ji, Music Ji" once recorded: "Long words are insufficient, so sigh for a while; Lamenting is insufficient, so I do not know the hand of the dance, the foot of the dance." The above records convey that in the Western Han Dynasty, ancient Chinese scholars found that human body movements played a vital role in social communication (Zhong, 2017). Chinese scholars began to study the concept of non-verbal behaviour in the late 20th century. In 1932, Chinese rhetorician, Chen Wangdao, put forward the definition of "morphological language" in his book *Rhetoric*, emphasizing that attitude is a kind of rhetoric, and attitude and rhetoric should be analyzed in the context of speech (Chen, 1997). Guan (1995) referred to non-verbal behaviour as "non-verbal" for short, believing that it refers to all signs except verbal signs in the process of exchanging information, and these non-verbal signs have certain significance for both sides of the communicator. Bi Jiwan (1999) believes that non-verbal behaviour is also a form of communicative behaviour, but this form does not include verbal behaviour. In Ci Hai (1999), the definition of non-verbal communication is summarized as non-written communication activities, which can be divided into paralanguage and body posture, and body posture includes gestures, eyes, and body posture. Zhou (2006) defined non-verbal behaviours from a more professional and detailed perspective. He believed that from a broad perspective, non-verbal behaviours were any non-verbal symbols used by people in communication. The narrow sense of non-verbal is the movement or posture of the body when the individual carries out communication activities. Liu (2021) broadly defines non-verbal behaviours as multi-channel, multi-source and multi-types of information transmission and exchange that have nothing to do with language and writing and affect other people's thinking, emotions and behaviours. The above scholars mainly define non-speech from the aspect of its role in transmitting information.

Concept of Non-Verbal Behaviour

Different scholars have different standards for the classification of non-verbal behaviour. Table 1 is the classification and summary of non-verbal behaviours by domestic and foreign scholars.

TABLE 1: CLASSIFICATION OF NON-VERBAL BEHAVIOURS

Classification of standard	Researchers	Category
Behaviour action	Samovar (1991)	Facial expression language, eye language, sign language, contact language, postural language, paralanguage, odor language
	Knapp (2010)	Gestures, body movements (limb movements, hand movements, head movements, leg movements), facial expressions (smiles, eye movements), and posture
	McCluskey (1995)	Gestures, paralanguage, eyes, facial expression, posture, body distance

Effect	Zhuang Jinying, Li Zhencun (1993)	Positive non-verbal behaviour and negative non-verbal behaviour Meaningless non-verbal behaviour
Dichotomy	Colian (1990)	conscious non-verbal behaviour and unconscious non-verbal behaviour
Quartering	Tian Ruiyun and Liu Yonghui (2005)	Body language; Auxiliary speech and quasi-language; Static standing, sitting and external appearance; Time and space arrangement

Teachers' Non-Verbal Behaviour

At the beginning of the research, there was no systematic research on the concept of "teacher non-verbal behaviour". Most scholars define "teacher's non-verbal behaviour" based on the concept of "non-verbal behaviour", thus confusing the two concepts and ignoring the nature of the work represented by the word "teacher", such as the special role of teachers in teaching, the particularity of the scene of education and teaching, and the interaction between teachers and students in the teaching process.

In the 1990s, the study of non-verbal behaviour entered the field of teaching. Zhuang and Li (1993) co-edited the book *Teacher's Body Language Art*, which systematically introduced the non-verbal behaviour of teachers in the classroom and pointed out that the non-verbal behaviour of teachers plays a role in conveying information and communicating emotions. Zhou started the research on the concept of "teacher non-verbal behaviour" in China. Zhou (2006), with the help of the monograph "A Brief Introduction to the Study of Teachers' Non-verbal Behaviours", described in detail "teachers. According to the concept of "non-verbal behaviour", he believes that teachers' non-verbal behaviour is not possessed by everyone, but is unique to teachers. In the process of education and teaching, based on the needs of teacher-student interaction and communication, the non-verbal behaviours issued by teachers are closely related to the verbal behaviours. Tang (2010) agrees with Zhou's view that teachers' non-verbal behaviours appear for practical teaching needs and have certain communicative characteristics. Yang (2017) summarized teachers' non-verbal behaviour as a form of physical dissemination of information in the course of teaching in order to improve teaching quality and achieve teaching goals from the perspective of its role and connotation. According to the definition of many experts and scholars and the actual needs of this study, this study draws on Zhou's point of view that teachers' non-verbal behaviour refers to the symbolic system other than speech that occurs in teachers' classroom teaching and faces students.

Non-verbal behaviour is classified according to different classification criteria. Scholars classify non-verbal behaviours mainly from their functions, body parts and movements. Teachers' non-verbal behaviours are mostly classified according to non-verbal behaviours. Li and Zhuang (1993) divided teachers' non-verbal behaviours into five categories according to the functions

of non-verbal behaviours and the classification standards of foreign scholars Ekman and Freeman, namely, symbolic, illustrative, demonstrative, adaptive and tonality. McCluskey (1995) divides non-verbal behaviours into gestures, paralinguage, eyes, facial expressions, postures, and body distance. When Zhou studied the non-verbal behaviours of primary school teachers, he divided the non-verbal behaviours of teachers into seven categories in a Brief Introduction to the Study of Non-verbal Behaviours of Teachers: instrumental, adaptive, symbolic, illustrative, demonstrative, distancing and accommodative actions.

Based on the purpose and operability of this study, this study divides teachers' non-verbal behaviours into six dimensions: gestures, paralinguage, eyes, facial expressions, postures and body distance based on the definition and behaviour of teachers' non-verbal behaviours and the study of Liang (2021).

Gesture is a kind of gesture language that expresses feelings through the coordinated movements of hands and arms. Gestures act not only like a second face to convey feelings, but also as an auxiliary tool to pick up the main meaning of the speaker. Gestures are inseparable from people in certain movements, such as talking, teaching, dancing, and drama and film performances (Huang, 2020). Human behaviourist Malandro Barker (1989) said that language can be used to explain facts and express ideas. So, without gestures, people's social lives would be as cold and dreary as machines. Good gestures can make language vivid, clear, and stressful. Gestures have become one of the most used gestures in daily communication.

Gestures can be mainly divided into symbolic gestures, knowing gestures, indicative gestures and descriptive gestures (Wang, 2017). As one of the earliest non-verbal behaviours used in human communication, gestures have a long history of use and have formed a specific system. Different sign languages are also used on different occasions. As the special background of teaching, teachers often use sign language which is helpful to teaching to help themselves strengthen the teaching effect. There are usually four kinds of hand gestures described above in class. The changes of hand gestures can better convey information to students, and hand gestures can also reflect teachers' own emotions and attitudes towards students. However, in the process of using sign language, one should pay attention to the relationship between sign language and teaching content, try not to use too much sign language to avoid misunderstanding and incomprehension of students. At the same time, the sign language used in class should be as natural as possible, and do not deliberately combine non-verbal behaviours with teaching-related classroom content. Using sign language, one can find out a teacher's attitude towards non-verbal behaviour in the teaching process, which reflects the teacher's professional quality.

Paralinguage. Paralinguage is a part of language facial expression that focuses on volume, intonation, speed, rhythm, etc. It is a component of speech, not the words or words themselves. It can better convey the true emotions and the meaning of words, which is called

"listening to listen to the sound". Even in the use of the same words, due to the use of different tones, speed, will produce different meanings, so as to have different communication effects, when students in the class, the teacher can choose to gently cough or silent frown for a few seconds, indicating that students should correct.

In college classrooms, teachers' effective use of paralinguals can convey care, compassion and warmth, as well as the teacher's love for students "(Browsers and Flinders, 1990). For this reason, paralinguals are often used to aid verbal facial expression and can convey non-verbal information. All in all, it may change the meaning of words. From the rhythm of the pitch, the pressure and high intensity of the pitch, one can understand the mood and attitude of the speaker. Therefore, teachers should not only maintain the optimal volume, appropriate language speed, the right to silence and speech pauses in class, but also use the rising and falling tones and brisk intonation adjustments in time to attract students' attention.

Eyes. Teachers can improve communication with students by maintaining good eye contact and establishing communication channels. The teacher's eye contact should be noticeable when the student is speaking. This tells the student that the teacher is interested. A lack of eye contact indicates disinterest. The message of the eyes can serve the teacher in many ways. The two most important ways are to promote positive relationships and communicate teacher grievances to students in the classroom in some form to influence student behaviour change. Usually, the teacher's eyes can express the feelings and attitudes towards the students. This, in turn, affects students' concentration and mood. In addition, the teacher uses his eyes to regulate the flow of conversation. For example, when a teacher asks a question and makes eye contact with a particular student, it necessarily indicates that the student should answer the question. In contrast, avoiding eye contact may avoid teacher-student interaction and affect classroom effectiveness.

Teachers also use their eyes to regulate their classes. Cooper (1988) argued that teachers who use moderate eye contact can monitor and regulate their classroom order. Moore (1992) states that "gaze, in combination with silence, can be very useful for getting the attention of misbehaving or inattentive students." However, excessive or inappropriate use of eye contact and gaze may make students uncomfortable and damage the classroom atmosphere." Cooper (1988) claimed that "teachers who stare at students may cause anxiety in students, and may even cause anxiety hostility in students".

Facial expression. The face is the main source of attitude that determines a person's feelings and behaviour. Instantaneous facial expressions indicate feelings and attitudes, such as raised eyebrows (Miller, 1988). Some studies have shown that communication comes from facial expressions (Mehrabian, 1972). A person's emotions are also very possible to observe on the face. Ekman and Friesen (1975) have identified six basic emotional facial expressions that reflect: surprise, fear, anger, disgust, happiness, and sadness.

In the classroom, teachers need to use their facial expressions to manage interactions, regulate communication signals, approve or disapprove, reinforce or not reinforce. The teacher's facial expression also has a great influence on the students. Smiles, frowns, raised eyebrows, and other facial expressions can all give the listener cues. For example, a smile usually indicates approval and encouragement while a frown is the opposite. According to Cooper (1988), smiling teachers have a positive attitude and facial expressions are perceived as approachable and direct. Andersen (1999) also pointed out that teachers play a stronger role in acquisition through smiling facial expressions, and students' attention and reaction ability are stronger than speech." On the contrary, if a teacher often frowns at students with a glazed face, he will be perceived as less likable, unfriendly, cold and unapproachable.

Posture. Posture refers to the body movements of a person's head, torso, and legs. The gesture sent out to the outside world in outer space is the natural body image, but also to express the inner state of mind and information. Posture is related to a person's image, it will not only reflect a person's mental outlook, but also reflect whether one respects others (Huang, 2020).

When a person is not moving, the person may have the following positions, such as standing, sitting, squatting, leaning, lying down, kneeling, and so on. Posture can be used to determine a participant's level of attention or engagement, status differences between communicators, and how much one person likes another (Knapp and Hall, 2007). If the teacher is always leaning on the lectern, or just sitting with her legs crossed, it means that he or she is not paying much attention to the class, or even paying attention to the class at all. A good classroom effect should be to make the teaching effective, which shows that the teacher is friendly, engaged, fair, and full of care for everyone in the class. What's more, the teacher should have a relaxed state in her or his entire body, because a tense posture will lead to poorer results from other identical instruction (Bower, 1980).

Body inclination is a standard for teachers to measure posture in classroom teaching. A study on the effect of posture on interpersonal relationships showed that posture with a parallel mirror image on the left and right led to a positive perception of the communicator and positive words. A person showing a reduction in leaning forward or backward also implies positive emotions during communication (Bull, 1987). It would be wise for teachers to show their entire bodies to the class rather than to individuals, and to lean slightly forward towards the students to show their closeness and attention to the students, rather than always leaning over the textbook, completely lowering their heads or turning their backs to the students when explaining points of language on the board, and speaking only the details of their language. It doesn't have a good effect on their teaching, or it doesn't have any use for communication.

Body distance. Knapp (2007) mentioned that the distance one keeps from the speaker has a great impact on communication. Keeping different distances from our peers may mean different things. They are intimate

distance, casual personal distance, social counselling distance and public distance. The intimate distance from actual physical contact is about 18 inches, which is suitable for talking to close friends, children and elders. The distance of a casual individual is about 18 inches to 4 feet; This distance allows people to have casual conversations with ease and pleasure. Social counselling distances from 4 to 12 feet are suitable for interviews or some group exchanges. Public distance is from 12 feet to what a person can see or hear, and one can apply it to public communication. Normally teachers should communicate with students at this distance when giving a lecture.

There are four spatial distances, representing four different relationships, so it is best for teachers to maintain an appropriate distance when communicating with students. Don't stand too far or too close. Only in this way can one feel comfortable and interaction can be successful. In the college class, the teacher should stand in the right position so that the students will feel comfortable and motivated, and there will be free conversation between the teacher and the students, otherwise it will be uncomfortable, unhappy, depressing, etc. The teacher should stand in the proper position in the classroom. It can make teachers amiable and approachable, ease the intensity of learning, and enable students to adjust their learning patterns and make necessary corrections to input and interpret new content. It can also attract students' attention.

College Students' Classroom Engagement

The term "engagement" is commonly used in disciplines such as management and organizational behaviour, and mainly refers to the state of adult involvement in group activities. The concept was originally the act of whether an individual explicitly engages in a group activity, which is explained similar to "presence". After adding the influence of people's inner psychological characteristics on behaviour, "engagement" began to add more cognitive, emotional and other aspects of involvement on the basis of the original interpretation (Astin, 1984). "Engagement" in classroom engagement also put more emphasis on the meaning of "engagement" at the level of psychological characteristics.

Different researchers at home and abroad have defined the concept of "student classroom engagement" according to their own research perspectives. American scholar, Astin (1984) was the first to put forward the concept of "student engagement", believing that student engagement is the degree of spiritual involvement in the learning of cultural knowledge in the classroom, which can be measured through the behaviour of students. Scholar Finn (1993) made some research breakthroughs after years of unremitting efforts. He believes that students' classroom engagement can be divided into four stages: passive engagement, initial engagement, active engagement and active development. Skinner EA et al. (1993) divided students' classroom engagement into passive engagement and active engagement. Active engagement included curiosity, interest and enthusiasm for classroom learning,

while passive engagement included disgust, anxiety and avoidance of class. Handelsman, brings (2005) divides classroom engagement into skill engagement, emotional engagement, interactive engagement, and performance engagement, and develops students' classroom engagement Questionnaire (SCEQ). Dunleavy Milton (2009) divided students' classroom engagement into behavioural engagement, emotional engagement and cognitive engagement. Skala and Katherine (2009) believe that classroom engagement is a kind of behaviour, which refers to students' contribution to the class and their relevance to the class. KimJ (2013) believes that student engagement means that students are fully engaged in the classroom and interact with teachers based on the real environment, which is a meaningful learning process that fosters students' creativity. Bekkering and Ward (2020) believe that classroom engagement refers to the combination of students' attendance and concentration in class. Zeng (2001) believes that student engagement is represented by the change of learning status, which reflects the change of students' involvement in learning in class. Wang Sheng (2001) regards student engagement as a way for students to achieve their learning goals and aspirations. Based on previous studies, Kong (2003) divided classroom engagement into three dimensions, namely, behavioural, cognitive and emotional classroom engagement. Chen (2015) believes that classroom engagement should be positive rather than negative, and students should actively cooperate with teachers in teaching activities to achieve teaching goals. Classroom engagement is also considered as a tendential behaviour (Yao and Jiang, 2019), which includes both students' learning under the guidance of teachers and students' subjective autonomous learning, and is a comprehensive facial expression of behaviour, cognition and emotion (Jing, 2020).

Combined with domestic and foreign scholars' research on classroom engagement, based on the research purpose and research questions of this paper, Kong's (2003) classification of students' classroom engagement is adopted, namely cognitive engagement, behavioural engagement and emotional engagement. Combined with the characteristics of this study and university classrooms, the operational definition of the three dimensions is as follows:

Behavioural engagement: refers to the time and energy spent by students participating in learning activities, as well as the interaction with peers and teachers. The concrete performance is to listen carefully in class; Concentrate on taking notes without disturbing class discipline; Actively answer the teacher's questions.

Cognitive engagement: The degree to which students are engaged in learning and expend energy to understand and master the content. The specific performance is to immediately raise one's hand and ask the teacher when he/she encounters difficulties; Be able to reflect on their learning strategies and correct them in time; The ability to link new knowledge with old knowledge to form new understandings.

Emotional engagement: Emotional engagement reflects students' attitude and interest in the learning space environment, emotional changes in the learning process,

and the formation of learning values and belonging. The main performance is to actively answer questions or show learning results; Feeling satisfied when completing a task; Looking forward to learning new knowledge, etc.

III.THE RELATIONSHIP BETWEEN TEACHERS' NOVERBAL BEHAVIOUR AND COLLEGE CLASSROOM ENGAGEMENT

As a specific body posture, non-verbal behaviour can support, modify or negate speech behaviour. It can partially replace speech acts, play an independent facial expression function, and express feelings and attitudes that are difficult to express in speech acts (Zhuang, 1993). Domestic and foreign studies have shown that teachers' non-verbal behaviours have an impact on students' classroom engagement. Landshere and Delchambse (1979) observed teachers' non-verbal behaviours and students' behaviours in the classroom and believed that students' learning attitudes could be influenced by teachers' non-verbal behaviours to a certain extent. In his research, Hurley (1992) used the method of classroom observation to introduce the methods of teachers and students using non-verbal behaviours to enhance classroom interaction. Skinner and Belmont (1993) found that teachers' non-verbal behaviours and students' classroom engagement interact with each other through quantitative research. Allen (1999) pointed out the unique status and significance of teachers' non-verbal behaviours in the classroom, as well as how to correctly use non-verbal behaviours in the classroom, explained the auxiliary functions of non-verbal behaviours, and held that there was room for further discussion on their application value. Zeki (2009), Muchemwa (2013) and other scholars respectively demonstrated that teachers' non-verbal behaviours can assist teachers in class management. For example, teachers' facial expressions and hand gestures have a profound impact on class teaching. Hostetter (2011) believes that teachers' body language is conducive to conveying information, and the teaching information is easier to be perceived and understood by students. Alibali (2013) conducted an experiment, and through repeated observation of a teacher's class status, found that the amount of classroom information received by students is proportional to the number of non-verbal behaviours used by teachers. Dunsey (2017) found that there is a positive correlation between intermediate Chinese students' perception of teachers' non-verbal communication and classroom engagement. Huang (2013) investigated two English teachers and found that teachers' non-verbal behaviours were closely related to students' classroom engagement and students' cognitive learning. Meng's (2012) study also found that teachers' non-verbal behaviours in higher vocational colleges affect students' enthusiasm for classroom engagement, which in turn affects classroom teaching.

The process of social interaction is the direct communication of symbols. People express their intentions through symbols, realize the interaction with others, and decide their behaviour according to the corresponding situation. Teachers' non-verbal behaviours

and students' behaviours can be used as symbols, and teachers and students interact with each other according to symbols. Teachers use palm posture, gestures, facial expressions and body movements to convey information and interact with students, and students make corresponding responses after receiving the information, which is symbolic interaction in a sense, and use symbolic interaction to promote the interaction between teachers and students in the classroom. Classroom engagement is the main performance of student-teacher interaction in the classroom, and can be used as an indicator to measure students' learning behaviour.

Therefore, the following hypotheses are proposed:

H1: College teachers' non-verbal behaviours can affect college students' classroom engagement

Teachers' non-verbal behaviours, such as gestures, eyes and body distance, as symbols of teacher-student interaction, convey students' expectations and stimulate students' active learning behaviours. Teacher gestures can support, supplement and strengthen verbal communication, which is conducive to attracting students' attention and stimulating students' learning initiative. The cadence of teachers shows their self-confidence and leadership. Smiling and focused eyes can improve students' attention and learning effect (Chen, 2020). Teachers conduct classroom management by controlling the spatial distance between teachers and students. Teachers can assist classroom teaching by walking reasonably in the classroom, for example, walking into students to hint at them when they are not paying attention.

Therefore, the following hypotheses are proposed:

H1: College teacher gestures can affect college students' class engagement

H2: College teachers' paralanguage can affect college students' classroom engagement

H3: College teachers' eyes can affect college students' class engagement

H4: College teachers' facial expressions can affect college students' classroom engagement

H5: College teacher posture can affect college students' classroom engagement

H6: College teacher distance can affect college students' classroom engagement

Theoretical Basis and Framework

College Students' Classroom Engagement

Symbolic interaction theory is a school of sociological theory that studies human group life by analyzing people's interactions in everyday environments. Symbolic interaction theory was founded by George Mead, a professor at the University of Chicago, and his student Herbert Blumer formally proposed the name "symbolic interaction theory" in 1936. John Dewey's pragmatic thought, Charles Houghton Cooley's "I in the mirror" theory and William James's "self" concept are the theoretical origins of symbolic interaction theory. The proposed symbolic interaction theory has had an important

influence in the academic circle. Goffman's dramatics, Beck's label theory and Garfinkel's ordinary human methodology are all inspired by the symbolic interaction theory. The core ideas of the symbolic interaction theory are still useful for analyzing the current social facts.

Interaction is the core concept of Meade's symbolic interaction theory. Meade believes that meaningful symbols are the main tools for the generation, maintenance, development and interaction of mind, self and society, and individuals use meaningful symbols for social interaction. The core content of symbolic interaction theory is: (1) Interaction is the premise of individual survival and development, and it is also the basis of human society. The formation of social roles and social classes is due to human behaviour interaction; (2) Symbols are things that are used to express people's intentions and have symbolic significance. Symbols have a wide meaning, and actions, languages, words, and objects are all types of symbols; (3) Human behaviour is meaningful, meaning comes from the interpretation of symbols in interaction; (4) The combination of situation and symbol can better reflect the meaning of symbol, and the meaning of symbol is interpreted differently according to different social situations.

In Meade's theory of symbolic interaction, the facial expressions of symbols are mainly divided into two types, namely "ideographic gesture" and "language", among which language mainly includes speech language, sign language and facial expression language (Meade, 2005). Non-verbal signs are means of communication other than words, which are purposefully sent and consciously received, and have a socially known meaning (Zhuang, 2000). So, it can be seen that non-verbal behaviour belongs to a type of sign.

College teachers' non-verbal behaviours occur in the context of classroom teaching, and teachers' non-verbal behaviours and students' classroom engagement belong to the two aspects of teacher-student interaction. The theory of symbolic interaction is a theory that analyzes interpersonal interaction in a micro-environment, and the classroom, as a micro-society, can be analyzed with the theory of symbolic interaction. Symbolic interaction theory provides a new theoretical perspective for us to study the relationship between teachers' non-verbal behaviour and students' classroom engagement.

College Students' Classroom Engagement

The core idea of emotional response theory is that college teachers' communication affects students' emotional response and ultimately affects students' learning behaviour (Mottet, 2018). In other words, college teachers convey their feelings and emotions through their verbal and non-verbal behaviours, and students perceive the emotional information contained in teachers' behaviours and produce emotional reactions, thus resulting in corresponding behavioural reactions. Teachers can also understand the emotional information in students' behaviours and thus produce emotional reactions and behavioural reactions. This theory was proposed by Mottet et al. (2018) based on Mehrabian's (1971) implicit theory

of non-verbal behaviour. The non-verbal implicit theory holds that people seldom use non-verbal behaviours to express complex information that can be expressed in words, but use non-verbal behaviours to express feelings, preferences and attitudes. Unlike Mottet et al., affective response theory focuses on the mechanism of conveying emotional information through communication between teachers and students in the classroom, and identifies teacher behaviours that affect students' emotional responses through research (Mottet, 2018).

According to the emotional response theory, one of the main factors that trigger students' behaviours is teachers' various behaviours, such as teachers' communication behaviours, teachers' humor, teachers' non-verbal behaviours and impartial behaviours (Mottet, 2018).

Role Expectation Theory

The concept of role comes from dramatic performance. Mead introduced the term role into the field of sociology, and sociologists began to use it to analyze social phenomena and behaviours. A role refers to the behaviour that a person is expected to exhibit because of a particular social position, and when one accepts a role, he/she makes his/her behaviour conform to the social norms of that role (Wang, 2017).

Role expectation is an important theory in social psychology. Role expectation refers to the expectation of a group or an individual for a certain role to perform a specific behaviour, which forms a bridge between role behaviour and social structure (Qin Qiwen, 2011). Role expectation often puts forward requirements for various role behaviours with role norms, which makes role players act according to the wishes of society.

Role expectations can be divided into script expectations, expectations of other actors, and audience expectations (Turner, 1987). (1) Script expectation. It is an established social relationship network in the process of achieving the goal of behaviour, the prescribed behaviour of each role. Interpreting social facts is like reading the script of a play, because social norms already dictate how individuals in different positions should act. (2) Audience expectation. This expectation comes from individuals who occupy a variety of positions Spectator. The audience forms the frame of reference, or reference group, which constrains the behaviour of various actors in different positions. (3) Expectations of other actors. When individuals role-play, they should pay attention to the requirements of other actors in the interactive situation, and the posture of others can convey such requirements, thus becoming one of the important forces to shape individual behaviour. Among these three kinds of expectations, script expectations have the power to control the expectations of other roles and the expectations of the audience.

The classroom can be compared to a stage, and teachers and students can be regarded as actors on the stage. The student's character behaviour is influenced by the expectations of the script, i.e., the requirements of social norms, and also by the supervision of the audience,

such as parents and social media. In the interactive scene of the classroom, the teacher is a crucial partner on the stage, and the teacher's expectations are particularly important for the students' role playing. Non-verbal behaviour is the main way for teachers to convey expectations, and role expectations have a significant impact on individual role behaviour. Rosenthal's experiment shows that teachers' expectations can be translated into students' learning engagement (Rosenthal, 1992). Therefore, the role expectation theory can be used to analyze the relationship between teachers' non-verbal behaviour and students' classroom engagement.

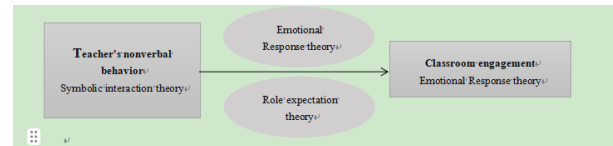


Figure 1. Theories

Conceptual Framework

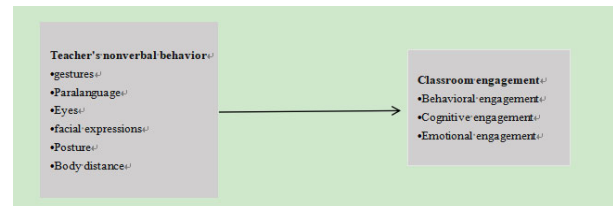


Figure 2. Conceptual Framework

As an independent variable, college teachers' non-verbal behaviour includes six dimensions: gesture, paralanguage, eyes, facial expression, posture and body distance. As a dependent variable, college classroom engagement includes three dimensions: behavioural engagement, cognitive engagement and emotional engagement. This chapter summarizes the concepts, forms and functions of independent variable college teacher non-verbal behaviour, dependent variable college classroom engagement.

This paper introduces in detail the specific forms of college teachers' non-verbal behaviour, including gestures, paralanguage, eyes, facial expressions, postures and body distance. The dimensions of classroom engagement include behavioural engagement, cognitive engagement and emotional engagement. In order to better study the influence of teachers' non-verbal behaviours on class engagement of college students in Hebei Province, this chapter introduces the influence of college teachers' non-verbal behaviours on classroom engagement. On the basis of introducing the relevant theories of this study, the theoretical framework and conceptual framework of this paper are set up.

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