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**A Study on Instructional Communication Effects of
Teachers' Nonverbal Immediacies among Chinese
University Students**

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A Study on Instructional Communication Effects of Teachers' Nonverbal Immediacies among Chinese University Students

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Abstract

Nonverbal communication has been an integrated part of teaching and learning. However, for quite a long time, too much attention has been paid to verbal communication in education with nonverbal communication being ignored for most of the time. In the era with various ICTs being used in education, research on nonverbal communication in education it is very important for both traditional classroom teaching and e-learning based on the rapid development of new technologies. Therefore, teachers' nonverbal immediacy has become an interesting research topic to the scholars from many different disciplines, including Communication Studies, Education, Sociology, Psychology, etc. To find out the use of teacher's nonverbal immediacies and their interrelationship with the effects of instructional communication, a paper-based survey based on stratified random sampling was conducted among university students in Dalian, a coastal city in Northeastern China. Out of the total responses collected, 534 were confirmed as valid. This study showed the current levels of different nonverbal immediacies used by university teachers. According to the findings, except for tactile and space sensation nonverbal immediacies, other nonverbal immediacies were of intermediate levels or relatively higher levels. As expected, most of the nonverbal immediacies were positively and significantly correlated with the effects of instructional communication. By using multiple nonverbal immediacies, including visual, audio, tactile and spatial immediacies, university teachers could boost various aspects of the learning effects among the university students, such as cognitive dimension, emotional dimension, and behavioral dimension. More attention should be paid to nonverbal communication as part of media literacy. Related trainings or workshops can be held for both students and teachers in order to make full use of various nonverbal immediacies. Facing the rapid development of more and more teaching methods with the aid of new information and communication technologies, such as MOOC (massive open online courses), nonverbal immediacies may continue to play an important role in teacher-student communication, thus future studies can compare and combine the findings of this study with the situations of online courses.

Keywords: affective learning; behavioral learning; cognitive learning; instructional communication; nonverbal immediacy.

Introduction

Education, as a typical and particular formation of communication, primarily transmits the teaching information with verbal immediacy and non-verbal immediacy to achieve the goals of teaching. Teacher group is the main body of education system, which acts on the overall processes of instructional communication. If teachers can use verbal immediacy and non-verbal immediacy in a proper, correct, and sufficient way, they can achieve a permanent influence on the study effect of the students^[1]. However, for a long time, we paid too much attention on the verbal immediacy of teachers'. Non-verbal, which correspond to verbal immediacy, are ignored both in practical teaching activity and in a discipline study. So that, although China has a position of international leadership in educational attainment with abundant and excellent educational resources, yet "high consumption and low efficiency" phenomena generally exist.

Method and Research Assumption

Teachers' Nonverbal Immediacy

Non-verbal Immediacy and Teachers' Nonverbal Immediacy

It is well known that in communication research, all kinds of information in social communication was transmitted and expressed by immediacy. Verbal immediacy and nonverbal immediacy are very common in immediacy systems. Among them, verbal immediacy includes oral language and writing, which is the most important, useful, effective and powerful communicating mode of human being. However, nonverbal immediacy has no mutual definition due to its complexity. Linguistician Ruesch and Kees agreed that nonverbal immediacy is all the information other than verbal immediacy; Shijie Guan said, the usage of nonverbal immediacy is all the stimulations excluding language elements, which has potential informational value to both sides of communication. Although different scholars have different opinions, nonverbal immediacy has 2 basic elements: (1) must be non-verbal or non-oral language; (2) must have some meaning. According to the above mentioned classification, nonverbal immediacy can be defined as all the other immediacy presented by human or environment, other than verbal communication, which has the potential informational value of information communication and emotional conveying.

The teacher group plays a leading role in the instrumental communication system. Teachers' nonverbal immediacy is all the nonverbal immediacy that is produced in the process of instrumental communication which gets rid of verbal immediacy. Teachers' nonverbal immediacy has a very important unique function in optimizing teaching effects that verbal immediacy does not have^[2].

Types of Teachers' Nonverbal Immediacy

Just like verbal immediacy, teachers' nonverbal immediacy contains an extensive and complicated content. To classify teachers' nonverbal immediacy will make researches more systematic. This paper based on referencing the domestic and international researches, classified teachers' nonverbal immediacy into 6 parts: vision, auditory, tactus, olfactory sensation, sense of time and sense of space, according to the different ways of students, such as teachers' view, facial expressions, gestures, actions, postures and so on. These belong to teachers' visual nonverbal immediacy communication, which can be submitted only. The teachers' volume and speed, which heard by students, is teachers' auditory nonverbal immediacy; sometimes, teachers flap students' shoulders or heads due to love, courage or blaming. Such body contact is a teachers' tactual nonverbal immediacy. The smells of perfumes, cigarette and sweat is teachers' olfactory nonverbal immediacy. Beside these, this paper considers teachers' control-ability of time and space in teaching activity as a kind of nonverbal immediacy. Since the distance of conversation between students and teachers, the teachers' walking action in class and syllabus will be perceived by students and then consciously or unconsciously affect teachers or even the cognitive processes, emotions and behaviors in the entire educational activities.

The Functions of Teachers' Nonverbal Immediacy

Verbal immediacy could be understood with second-time conversions, but nonverbal immediacy is different. In instructional communicating, nonverbal immediacy has the vivid apparent actions. It can act on the vision, auditory and many other senses. It is a supplement to un-noticed verbal immediacy. Nonverbal immediacy can accelerate the understanding and acquisition to language signs, can attract students' attention, can increase students' interests, can create a breezy atmosphere and can boost up the relationship between teachers and students. Additionally, teachers could use nonverbal immediacy like eye contacts, gestures and so on in a proper way to approve or negate students' behavior in class to keep up the class description and manage students' behaviors. So, teachers' nonverbal immediacy has many communicational functions like transmitting educational information, cultivating the relationship between teacher and student, regulating teaching activities and so on. American educational social psychologist Banney said: The nonverbal immediacy in teaching activity such as actions, gestures and facial expressions are very efficient and a thrifty supplementary mean.

The Effects of Instructional Communicating

The effects of communicating are the central issue of the theoretical study of communication. It means the transmitted information concerned, memorized and led to some changes in a person's attitude and personal or social behaviors. In the modern teaching field, the communication effect is that teachers solve

students' problems with verbal immediacy and nonverbal immediacy and finally achieve the desired result of education.

According to the above theory, we posed research questions as following:

Research question 1: Is there any close correlation between teachers' nonverbal immediacy and instrumental communication effect?

Research question 2: Is there any positive correlation between teachers' nonverbal immediacy and instrumental communication effect?

According to the logical order of communication effect, we can divide the effects of instructional communication into cognitive learning effect^[3], affective learning effect and behavioral learning effect. Cognitive learning effect means the increase of knowledge and the change of knowledge structure. Like how much knowledge from teachers students could understand and memorize; affective learning effect focus on students' attitudes toward learning, which including the attitudes and enthusiasm toward the teachers, classroom and further learning; behavioral learning effect results directly from the students' feedback to teachers and results deeply from the utilization of knowledge and skill in practical environment. These three kinds of effects run through every level of instructional communication. And every kind of effect significantly influences the students' study and jointly facilitates students' learning.

So, in research question1, we set 3 assumptions:

Assumption 1: Teachers' nonverbal immediacy is closely related to cognitive learning of undergraduate.

Assumption 2: Teachers' nonverbal immediacy is closely related to affective learning of undergraduate.

Assumption 3: Teachers' nonverbal immediacy is closely related to the behavioral learning effect of undergraduate.

At the same time, in research question2, we also set 3 assumptions:

Assumption 4: The higher ability of teachers' nonverbal immediacy has better undergraduates' cognitive learning outcome.

Assumption 5: The higher ability of teachers' nonverbal immediacy has better undergraduates' affective learning outcome.

Assumption 6: The higher ability of teachers' nonverbal immediacy has the better undergraduates' behavioral learning outcome.

Research Design

Selection of Sample

Dalian has rich education resources. There are 18 general colleges and vocational technical colleges, which own about 120,000 undergraduates or specialized college students. So, the student samples come from a multi-layered educational institution. In this research, we selected one of "985

Project” university-Dalian University of Technology, one “211 Project” university-Dalian Maritime University and one general undergraduate university-Liaoning Normal University. This research has been taking place from May 20th, 2013 to November 8th, 2013. 600 questionnaires were issued and 554 questionnaires were retrieved, in which, 534 were valid and 20 were invalid. The student samples are from every grade in university and both science (computer engineering, civil engineering, communication engineering, mechanical engineering and so on) and art (economics, jurisprudence, journalism, Chinese literature, management and so on) ; 198 students from Dalian University of Technology (37.1%), 211 students from Dalian Maritime University (31.5%) and 168 from Liaoning Normal University (31.5%). The students from grade 1 to grade 4 respectively are 116 (21.7%), 182 (34.1%), 121 (22.7%) and 115 (21.5%); 330 students from science (61.8%) and 204 from art (38.2%). According to the variant distribution of pivotal samples, this effectivity of sampling is reasonable.

Question Setting

Beside control variable, this questionnaire includes 4 groups of Likert-type 5-level scale, which is respectively used to measure the communicational capacity of teachers’ nonverbal immediacy and effects of cognitive learning, affective learning and behavioral learning.

The investigation of the capacity of teachers’ communicational nonverbal immediacy in this questionnaire used for reference of the testing scale, which designed by American famous scholar of instructional communication – Richmond, Gorham and McCroskey^[4] in 1987. At the same time, according to the classification in this paper, previous scale was expanded from 14 questions to 20 questions, which used to test the teachers’ nonverbal immediacy in class from visual, auditory, olfactory, time, space and many other aspects. The answer options are set as “never”, “seldom”, “sometimes”, “often”, “always”, the corresponding marks gradually arrange from 1 to 5. To extract the invalid questionnaire, some question options are converse statements (the options with*). When we generated the marks, we had used an opposite method, which arrange from 5 to 1. Finally, we generated the total marks of the 20 questions. The better communicational capacity of teachers’ nonverbal immediacy has a higher mark.

It is a progressive process to have a cognitive learning effect on students. So, we designed 4 questions to investigate the students’ knowledge development from the shallower to the deeper. We also use Likert-type 5-level scale, in which 1 for “certainly no” and 5 for “certainly yes”. The higher mark has a better effect than cognitive learning.

In foreign investigation to students’ effective learning, they often use the scale which was designed by McCroskey in 1994^[5]. But he investigated the effects of behavioral learning and effective learning together. Then we set 6 questions according to the students’ levels of effective learning. Variant 1 means “unwillingly” or “hate” and variant 5 means “willingly” or “love”.

Informant would choose a given mark which can present own practical effective learning level. The higher mark has a better effect of effective learning.

We set the answer options in the research towards students' behavioral learning effect as following: "certainly no", "generally no", "uncertain", "generally yes", "certainly yes". The corresponding marks gradually arrange from 1 to 5. Higher mark presents better behavioral learning effect.

Control variate includes the basic aspects in demographic variates, such as the gender, age, university and major of students.

Result and Analysis

Measurement and Factor Analysis

In this research, we used a series of scales to measure many potential variates. So, firstly, we should assess the validity and reliability in each scale.

Firstly, we made the correlation analysis of the 20 question options in scale 1, which used to measure the communicational capacity of teachers' nonverbal immediacy. Then, we find that, except the options which related to the sensation of space of teachers' nonverbal immediacy, the rest question options have a strong correlation. After rejecting the 5 question options related to space sensation of nonverbal immediacy, KMO is 0.854, the result of Bartlett's Test of Sphericity was outstanding, which is suitable to make a factor analysis.

We got three common factors with the factor analysis of the principal components extraction method, which can account for 87.58% variate. With a varimax rotation of factor load, 3 factors respectively named olfactory and time sensation factors, visual and tactile factors and auditory sensation factors. The result of the factor analysis matches our design, which shows the scales teachers' nonverbal immediacy communication have preferable construct validity. What's more, scales have a higher reliability, Cronbach's $\alpha=0.76$. Hence, for the question options that have both high reliability and validity, we calculated the total marks and then average mark, then analyzed with the follow-up regression model.

In instructional communication, teachers change the distance with student group or individual student by changing the position in classroom. These changes of space not only show the relation between teachers and students, but also seemingly avoid the monotony in instructional communication. Due to the importance of teachers' space sensation nonverbal immediacy, we selected the space sensation nonverbal immediacy as a unique item. On table 1, we can extract a common factor from these 5 close related question options (KMO is 0.829), and explain 94.59% variances. After factor loading, we named it space sensation factor.

Table 1. *Factor Analysis of Teachers' Nonverbal Immediacy*

	Question options	Means	Standard deviation	Explained variance
Olfactory and time sensation factors	1.Process of the class is too fast or slow* 2.Teacher has a smell of perfume, cigarette or ozostomia* 3. Teacher comes late to class or delays the class.	3.42 4.37 4.02	0.902 0.846 0.931	77.66%
Visual and tactile factors	4. Teacher dresses suitable clothes in class. 5. Gestures when talking to the class. 6. Teacher makes eye contacts with all students. 7. Teacher has expressiveness and smiles at an individual student in class. 8. Has a very tension body position when talking to the class.* 9. Teacher looks blackboard, books or screen when talking to the class.* 10. Has a very relaxed body position when talking to the class. 11.Teacher has a indifferent or dull facial expression in class * 12. Teacher dresses too much fashionable.* 13. Teacher touches students in class.	4.33 3.51 3.85 3.85 4.04 3.06 4.13 3.80 4.14 1.98	0.825 0.944 0.964 0.985 0.909 1.037 0.847 1.014 0.911 0.976	83.69%
Auditory sensation factors	14. Uses monotone/dull voice when talking to the class.* 15. Uses a variety of vocal expressions when talking to the class.	3.27 3.49	0.980 1.010	87.58%
Space sensation factors	16. Teacher dodges when chatting with students.* 17. Moves around the classroom when teaching. 18.Stands behind podium or desk when teaching* 19.Teacher gets closer when chatting with students 20.Moves around the classroom when teaching	4.03 3.13 2.53 3.40 2.82	1.019 1.036 1.117 1.095 1.063	94.59%

Note: The options with * are converse statements.

We analyzed the 4 cognitive learning question options of the principal component factor. The 4 question options in table 2 concluded into factor 1, explained 81.64% variance and eigenvalue is 2.465 and reliability measuring Cronbach's $\alpha=0.791$. The method to construct the cognitive learning effect is to

get the total mark of the 4 question options and then divide it by 4. If the mark is high, the cognitive learning effect is good.

Table 2. *Factor Analysis of Students' Cognitive Learning Effect*

Question Options	Factor Load
1. How much knowledge you memorized in class?	0.767
2. How much knowledge you understand in class?	0.782
3. Can you analysis the correlated knowledge by synthesis?	0.846
4. Can you explain and evaluate the social phenomena and issues in the contemporary era with the knowledge you had?	0.741
Eigenvalue	2.465
Explained variance	81.64%
Cronbach's α	0.791

The 6 question options in table 3 concluded into 1 factor, explained 81.58% variance and eigenvalue is 3.095 and the reliability measuring Cronbach's $\alpha=0.811$. The method to construct the cognitive learning effect is to get the total mark of the 6 question options and then divide 6. If the mark is high, the cognitive learning effect is good. (grand average mark=3.62, standard deviation=4.68)

Table 3. *Factor Analysis of Students' Effective Learning Effect*

Question Options	Factor Load
1. Are you willing to attend this teacher's courses and behave active?	0.812
2. Your attitude towards the homework or task gave by teachers is ____?	0.699
3. The knowledge or skills you think in class is ____?	0.725
4. Are you willingly to receive the knowledge taught in class?	0.728
5. Are the ideas in class same with yours?	0.658
6. Did the ideas in class influence your precious ideas?	0.673
Eigenvalue	3.095
Explained variance	81.58%
Cronbach's α	0.811

In the analysis of college students' behavioral learning effect, the 5 question options in table 4 concluded into 1 factor, explained 89.88% variance and the eigen value is 2.494 and reliability measuring Cronbach's $\alpha=0.744$. The method to construct cognitive learning effect is getting the total mark of the 5 question options and then divide 5. If the mark is high, the cognitive learning effect is good. (grand average mark=3.33, standard deviation=3.331)

Table 4. *Factor Analysis of Students' Behavioral Learning Effect*

Question Options	Factor Load
1. Will you give feedback to teachers in class or after class?	0.624
2. Will you use the knowledge learned in class?	0.745
3. Did teachers' guidance have any help to your practice activities?	0.724
4. Will you learn some extra knowledge after class?	0.723
5. Would you like to share what you learned and interesting things in class with others?	0.709
Eigenvalue	2.494
Explained variance	89.88%
Cronbach's α	0.744

Statistic Analysis of Data

Descriptive Statistics of Communicational Capacity of Teachers' nonverbal Immediacy and Instructional Communication Effects in 3 Levels

From SPSS, the average mark of teachers' nonverbal immediacy in instructional communication in Dalian is 3.642. This indicates that the general communicational capacity of teachers' nonverbal immediacy is better than the middle level-3. The question option 13-teachers' nonverbal immediacy of tactile sense got only 1.98, which is the lowest mark; while, the question option 2-teachers' nonverbal immediacy of olfaction got 4.37, which is the highest mark. Other question option marks are on an average level. Furthermore, according to the result from SPSS, the marks of cognitive learning, effective learning and behavioral learning in Dalian University of Technology respectively are 3.18, 3.62 and 3.33. Students' effective learning effect is higher than the cognitive learning effect and behavioral learning effect.

Multivariate Regression Analysis of the Effect of Teachers' Nonverbal Immediacy to Instructional Communication

According to table 5, the teachers' olfaction and time sensation nonverbal immediacy hardly has any relation with students' cognitive learning and effective learning ($\beta=-0.047$, $P>0.05$; $\beta=0.036$, $P>0.05$) but has a close relation with behavioral learning ($\beta=0.118$, $P<0.01$). Teachers' tactile and visual nonverbal immediacy have close relation with students' cognitive learning, effective learning and behavioral learning ($\beta=0.273$, $P<0.001$; $\beta=0.353$, $P<0.001$; $\beta=0.385$, $P<0.001$) teachers' auditory nonverbal immediacy has a strong relation with the students' effective learning ($\beta=0.241$, $P<0.001$) and less relation with cognitive learning and behavioral learning.

Table 5. *Result of Multivariate Regression Analysis of cognitive Learning, Effective Learning and Behavioral Learning*

		Cognitive learning	Affective learning	Behavior learning
Olfaction and space sensation	Non-standardized regression coefficient	-0.047	0.118**	0.036
	B's standard error	0.042	0.039	0.040
	Standardized regression coefficient	-0.047	0.118	0.036
Visual and tactile nonverbal immediacy communication	Non-standardized regression coefficient	0.273***	0.354***	0.385***
	B's standard error	0.042	0.039	0.040
	Standardized regression coefficient	0.273	0.353	0.385
Auditory nonverbal immediacy communication	Non-standardized regression coefficient	0.092*	0.240***	0.098*
	B's standard error	0.042	0.039	0.040
	Standardized regression coefficient	0.092	0.241	0.098

Note : *p < 0.05 ; **p < 0.01 ; ***p < 0.001

Communicational Effect of Teachers' Space Sensation Nonverbal Immediacy

Because teachers' space sensation nonverbal immediacy factor has higher reliability and validity, so, we separately analyze it in multivariate regression with the factors of cognitive learning, effective learning and behavioral learning. On table 6, teachers' space sensation nonverbal immediacy has great effect on cognitive learning, effective learning and behavioral learning ($\beta=0.2$, $P<0.001$; $\beta=0.22$, $P<0.001$; $\beta=0.22$, $P<0.001$). Due to the above reasons, the communicational effect will be better if teachers have strong capacity of space sensation nonverbal immediacy.

Table 6. *Result of Regression Analysis of the Instructional Communicational Capacity Effect on Teachers' Nonverbal Immediacy of Space Sensation (N=534)*

	Non-Standardized Regression Coefficient	B's Standard Error	Standardized Regression coefficient	R2 Modification Value	Significance Level
Cognitive learning	0.2	0.042	0.2	0.038	0.000***
Effective learning	0.22	0.042	0.221	0.047	0.000***
Behavioral learning	0.22	0.042	0.22	0.047	0.000***

The Answers of Research questions and Assumptions

According to the statistical analysis of data, some parts of teachers' nonverbal immediacy have no remarkable relation with a cognitive learning effect and a behavioral learning effect. Nevertheless, it has a noteworthy relation with an affective learning effect. So that, this paper answered the research question 1, partly proved Assumption 1 and Assumption 3 and completely proved Assumption 2. At the same time, the regression coefficient between teachers' nonverbal immediacy and instructional communication effect indicate that teachers' nonverbal immediacy has a positive correlation with a cognitive learning effect, affective learning effect and behavioral learning effect. So, this paper answered research question 2, and proved Assumption 4, Assumption 5 and Assumption 6.

Conclusion and Suggestion

After investigating the definition, types, functions and other fundamental issues this paper analyses the effect of the teachers' nonverbal immediacy on instrumental communicative by empirical study. We got the following conclusions:

Except Tactile and Space Sensation Nonverbal Immediacy, Teachers' Nonverbal Immediacy Is Generally In Medium Level or Slightly Lower

At present, university teachers have a stronger communicational capacity of nonverbal immediacy. These 20 questions got a average mark as 3.642 and 17 questions got more than 3. Especially in teachers' appearance, time controlling, body smell and such aspects, the average mark reached more than 4. This proves Chinese teachers have a stronger communicational capacity of nonverbal immediacy in sense of vision, hearing, olfaction and time. However, at the same time, we can find some deficiencies in teachers' nonverbal

immediacy, which mainly reflected in the sensation of tactile and space of nonverbal immediacy of communicational behavior. Mainly because of Chinese traditional custom of social interactions and teacher methods that most of the teachers are implicit and have less body contact. Another reason is that educational multimedia was widely used in class. So, teachers are used to give lectures behind the desk, which would decrease the interactions with students. Teachers should concentrate on these two aspects.

Teachers' Nonverbal Immediacy of Olfaction and Space Sensation has no Relation with Effects of Cognitive Learning and Behavioral Learning. Except that, other Types of Teachers' Nonverbal Immediacy have Exceeding Corresponding Relations with Instructional Communication in Every Stage.

According to the effects, college students' cognitive learning, effective learning and behavioral learning have an intimate relation with teachers' visual, auditory, tactile and space sensation nonverbal immediacy; college students' effective learning has some relations to teachers' olfactory and time sensation rather than cognitive learning, and behavioral learning. However, according to the pertinence, the relation between teachers' visual, tactile and space sensation nonverbal immediacy and effects of instructional communication in each level are obvious. The relation between teachers' olfactory and time sensation immediacy and effective learning effect have less significance. But, auditory nonverbal immediacy has a weak relation with cognitive learning and behavioral learning, in the same way close relation with effective learning.

The Positive Relation between Teachers' Capacity of Nonverbal Immediacy and Instructional Communication

The relation between teachers' nonverbal immediacy and the effects of instrumental communication in each level not only reflect from the correlations, but also from the direction of correlations. Positive correlation presents the affirmative effects and negative does passive. In this research, teachers' nonverbal immediacy of visual, auditory, tactile, time and space sensation has a positive correlation with cognitive learning, effective learning and behavioral learning, which proves all kinds of transmitting of teachers' nonverbal immediacy have positive and obvious effects toward instructional communication. If the teachers have a strong capacity of nonverbal immediacy transmitting, the result of instructional immediacy will be better.

According to the above research, we give the following suggestions to improve the effects on teachers' nonverbal immediacy: Firstly, to renew the teachers attainment of nonverbal immediacy. Teachers should change the traditional negative cognition of nonverbal immediacy. Pay more attention on nonverbal immediacy and try consciously to know the usage, type, function of nonverbal immediacy and different effects of communication with different usages of nonverbal immediacy. Secondly, to train teachers and give

evaluations. Universities can build superincumbent promotion systems, which would motivate communication of teachers' nonverbal immediacy in various ways, such as allocating funds, organizing seminars and so on. Thirdly, to pay attention on feedbacks of students' nonverbal immediacy. The best and convenient way for teachers to get feedbacks on time is to observe students' eyes, facial expression, gesture and other communicational behaviors and to adjust the teaching content and modality. Fourthly, to accelerate the association of nonverbal immediacy. The communications between students and teachers after class are more relaxed, natural and abundant and unlimited in communicational forms. This is to benefit to all-around interactions of nonverbal immediacy and effects on instructional communication.

As expected, most of the nonverbal immediacies were positively and significantly correlated with the effects of instructional communication. By using multiple nonverbal immediacies, including visual, audio, tactile and spatial immediacies, university teachers could boost various aspects of the learning effects among the university students, such as cognitive dimension, emotional dimension, and behavioral dimension. More attention should be paid to nonverbal communication as part of media literacy. Related trainings or workshops can be held for both students and teachers in order to make full use of various nonverbal immediacies. Facing the rapid development of more and more teaching methods with the aid of new information and communication technologies, such as MOOC (massive open online courses), nonverbal immediacies may continue play an important role in teacher-student communication, thus future studies can compare and combine the findings of this study with the situations of online courses.

References

- [1] Charles B. Pribyl, Masahiro Sakamoto, James A. Keaten 2004. The relationship between nonverbal immediacy, student motivation, and perceived cognitive learning among Japanese college students. *Japanese Psychological Research*, 46(2):73–85.
- [2] Alan K. Goodboy, Keith Weber, San Bolkan. 2009. *The Effects of Nonverbal and Verbal Immediacy on Recall and Multiple Student Learning Indicator*. *The Journal of Classroom Interaction*, 44(1):4-12.
- [3] Virginia Richmond, James C. McCroskey, Timothy P. Mottet . 2005. *Handbook of Instructional Communication: Rhetorical and Relational Perspectives*. New Jersey: Addison-Wesley.
- [4] Richmond, V.P., Gorham, J.S., McCroskey, J.C. 1987. *The relationship between selected immediacy behaviors and cognitive learning*. *Communication Yearbook*. Beverly Hills, 10:574-590.
- [5] McCroskey, J. C., S. Morreale, M. Brooks, R. Berko, C. Cooke 1994. *Assessment of affect toward communication and affect toward instruction in communication*. SCA Summer Conference Proceedings and Prepared Remarks. Annandale. VA: Speech Communication Association. 55-71.