

An Empirical Study on the Correlation Among English Classroom Environment, Sense of Class Belonging and English Proficiency*

Mengli Weng

Fuzhou University of International Studies and Trade
Fuzhou, China

Abstract—With the aid of questionnaire survey, 111 English-majored juniors from Foreign Languages Department of Minjiang University were selected as the subjects so as to explore the correlation among English classroom environment, sense of class belonging and their English proficiency. The study results show as follows: the English majors' perceived classroom environment is on a medium level in general, but the student involvement and teacher support need to be further improved; learners' perceived sense of class belonging is positive and favorable at present; the correlation between classroom environment and sense of class belonging is positively significant; learners' perceived student cohesiveness, involvement, task orientation, student responsibility, teacher support, sense of class belonging and their TEM-4 scores are significantly and positively correlated, but there is no significant correlation between cooperation, equity, leadership, innovation and TEM-4 scores. To certain degree, these findings would cast some light on the college English instructions in China.

Keywords—English classroom environment; sense of class belonging; TEM-4 scores; English majors; correlation

I. INTRODUCTION

English, as a foreign language, is one of the main international languages in the world nowadays. It is more widely used than other languages. With the development of economy and the progress of society in China, the requirements both in the quantity and quality of talents having a good command of foreign language are put forward higher in China. Therefore, it is increasingly prominent that English education is becoming of the great significance. In this case, the discussion and research on English classroom environment in our country becomes particularly crucial [1]. Throughout nearly 30 years, research on classroom environment has been the hot spot in the academic education at home and abroad, which has caused wide attention of educational scholars and researchers all around the world [2].

Generally speaking, most of the college students are away from home to study. Under the circumstance, the class becomes the unique place for their sense of belonging. Thus, the class has a great influence on students [3]. With the continuous deepening of the domestic research on teaching,

researchers have different opinions on the influence factors of English classroom environment. In China, there is no conclusion about the correlations among class environment, sense of class belonging and English proficiency. Hence, this study attempts to investigate the relations from the perspective of English majors in Minjiang University, which is expected to be an important supplement to the field of research on English classroom environment in the future.

II. LITERATURE REVIEW

A. Definition of Classroom Environment

Research on classroom environment can be traced back to German psychologist Lewin, who made an investigation into Dynamic Field Theory in the 1930s [4]. Researchers both in China and foreign countries have proposed many different opinions about the concept of classroom environment. Among them, domestic scholars approve one of the concepts of classroom environment. The classroom environment is also called the class environment, classroom atmosphere, or class atmosphere. It refers to the consciousness and feeling of students or teachers in class. It is the potential factors to determine the development of students. It is important factors for any educator to improve the quality of school education [2] [5] [6] [7].

From the formation of teaching environment, it mainly includes two categories — the physical environment and social environment. The physical environment includes teaching natural environment, teaching facilities and spatiotemporal environment. Social environment, including interpersonal environment, information environment, organizational environment, emotional environment and public-opinioned environment, is also called social psychological environment [1]. This study is mainly doing research on the social psychological environment.

B. Definition of Sense of Class Belonging

Sense of class belonging refers to students' identification and commitment to class in terms of ideology, emotion, and psychology. In psychology, sense of class belonging refers to the individuals making themselves belong to a certain collective, and produce feelings of being accepted and being recognized [8]. Students are willing to undertake the due obligations as a member of class. Students are willing to

*Fund: This paper is supported by FWX18026

participate in class activities [9]. According to the definition of Freeman, sense of class belonging has been vested in students. Sense of class belonging, as a kind of emotion, makes the students feel that they are important members of the class, accepted by others, considered to be valuable by others and become a whole with others [10].

C. Relevant Studies on Classroom Environment

In recent years, the domestic scholars have done in-depth research on English classroom environment. Ren investigated the current situation of English classroom environment in China's colleges, and put forward suggestions on improving the classroom environment [11]. Hou checked the current situation of teaching psychological environment in college English classroom showing that students scoring low are more susceptible to psychological environment than those scoring high [12]. Also an empirical study drew a conclusion that there was a positive correlation between classroom environment and learning outcomes [13]. Indeed, these findings have greatly enriched our knowledge and experience in the field of environmental studies in class.

Walberg proposed classroom environment including structural dimension and emotional dimension. The former refers to the role of students in the classroom organization, role expectations, and code of conduct and restraint mechanism in common, while the latter refers to the individual personality meeting need in a unique way, such as satisfaction, intimacy and friction in class [14]. Moos reckoned social environment having three dimensions, including relational dimension, personal development or goal orientation dimension, and system maintenance and changing dimensions [15]. On the basis of this, researchers represented by Fraser have done a series of research in the field of classroom environment [4].

D. Relevant Studies on Sense of Class Belonging

In western countries, an immense number of significant discoveries and achievements were made by researchers and scholars in the field of research on the sense of class belonging. Goodenow, a representative of early researchers on the sense of belonging, found that the sense of class belonging had a significant influence on students' learning motivation, learning engagement and the lasting efforts facing the difficult tasks of learning [16].

Both Gonzalez and Padilla claimed that the sense of class belonging had a direct impact on the academic achievement of learners [17]. They are high correlation between the sense of class belonging and learning motivation, attitude, academic achievement. Sense of class belonging is a prerequisite for the promotion of academic success [18]. Subsequently, abundant findings confirmed that academic achievement is closely related to good peer relationship and teachers' encouragement and support [19] [20]. That is to say, forming the positive sense of class belonging contributes greatly to the success in academic achievements.

III. THE CURRENT STUDY

A. Research Questions

This research is to investigate, by collecting data and analyzing statistics, whether there is significant correlation among English majors' perceived classroom environment, sense of class belonging and English proficiency. The study is set out to find the answers to the following three questions:

- How is English majors' perceived English classroom environment and sense of class belonging?
- Is students' perceived English classroom environment correlated with their sense of class belonging?
- Are students' perceived English classroom environment and sense of class belonging correlated with their English proficiency?

B. Questionnaire Design

The objective of the questionnaire design is to explore the three research questions put forward above much better. The design of College English Classroom Environment Inventory (CECEI) was made by Sun [7]. There are nine factors concerning students and teachers, including student cohesiveness, involvement, task orientation, responsibility, cooperation and teacher support, equity, leadership, innovation related to teachers. The design of the Sense of Class Belonging Survey Questionnaire is adapted from Du's research on university belonging of undergraduates and its impact factors [21].

The questionnaire is composed of three parts: The first part is on the basis of subjects' information, containing grade, gender, source of the students and TEM-4 scores. The second part is in relation to the learners' perceived English classroom environment. It is divided into 9 sections with 36 items in total: Part A (3 items) ("Student cohesiveness"); Part B (3 items) ("Involvement"); Part C (3 items) ("Task orientation"); Part D (4 items) ("Student responsibility"); Part E (3 items) ("Cooperation"); Part F (5 items) ("Equity"); Part G (6 items) ("Teacher support"); Part H (5 items) ("Teacher leadership"); Part I (4 items) ("Teacher innovation"). Among the total 36 items, which are scored 1, 2, 3, 4, 5 (1=never; 2=rarely; 3=sometimes; 4=often; 5=always), implying the level of which item is appropriate in depicting students' perception of classroom environment. The third part is concerning the learners' perceived sense of class belonging, which includes 10 items. It is related to the students' feelings of their own class.

C. Subjects

For the sake of examining the relations among undergraduates' English classroom environment, sense of class belonging and their TEM-4 scores, the subjects are 150 English-majored juniors from Foreign Languages Department of Minjiang University, in consideration of the juniors having just taken the TEM-4 examination in the last semester of the second college year. Furthermore, students, together with teachers and classmates, have been living and studying in the environment for more than two years. Thus,

the effectiveness and reliability of this study can be guaranteed.

D. Method

To ensure the value and effectiveness of the investigation, the number of the questionnaire required for each class was reckoned ahead of the original scheme. Before giving out the questionnaires, the author made a specific explanation to fill the questionnaire. All these questionnaires are anonymous and written in Chinese for the sake of the students to give their correspondingly authentic consciousness of college English classroom environment. In this case, it is a valid way of gathering much more feasible questionnaires. There are five classes in total, and each class has 30 questionnaires equally. In addition, every student was given 8 minutes (during their break time) to fill the questionnaire and demanded to turn it in straightly when they finish it. Above all, there are 150 questionnaires in total; after getting rid of the 39 invalid questionnaires, the whole valid ones were 111.

IV. RESULTS AND ANALYSIS

A. The Current State of English Majors' Sense of Class Belonging and Classroom Environment

From "Table I", there are apparent distinctions in the ten variables of classroom environment and sense of class

TABLE I. DESCRIPTIVE STATISTICS OF SENSE OF CLASS BELONGING AND CLASSROOM ENVIRONMENT (N=111)

Variables	Min.	Max.	Mean	Std. Deviation
Sense of CB	1.70	4.70	3.5342	.75829
Part A	1.67	5.00	3.9369	.70139
Part B	1.00	5.00	2.9580	.97971
Part C	1.33	5.00	3.5195	.92843
Part D	1.25	4.75	3.3063	.85857
Part E	1.67	5.00	3.6847	.87020
Part F	1.20	5.00	3.4541	.99634
Part G	1.17	4.83	2.8258	.90520
Part H	1.20	5.00	3.6667	.87939
Part I	1.25	5.00	3.3649	.91502

^a. Note: CB= class belonging Part A= student cohesiveness

^b. Part B= involvement Part C= task orientation

^c. Part D= student responsibility Part E= cooperation

^d. Part F= equity Part G= teacher support

^e. Part H= teacher leadership Part I= teacher innovation

B. The Correlation Between Sense of Class Belonging and Classroom Environment

For the purpose of studying the correlation between sense of class belonging and class environment, the gathered data were in-depth analyzed with Pearson Coefficient. On the basis of the correlative analysis data from "Table II", it

belonging. It is obvious that the mean among the 111 subjects' sense of class belonging reaches to 3.5342, which indicates the students' sense of class belonging showing a medium level in general. As is shown in "Table I", the mean of these factors in the classroom environment is ranging from 2.8258 to 3.9369. Among them, except for Part B (involvement) and Part G (teacher support) with average below 3, the other seven factors get points above 3. The lower scores, Part B and Part G respectively, are 2.9580 and 2.8258. Especially, Part G is the lowest in the statistics, which means the teacher support in class should be urgently promoted to a great degree. The highest score is Part A (student cohesiveness), which reaches to 3.9369 nearly close to 4. Overall, the students' perceived sense of class belonging and classroom environment is positive and beneficial. Moreover, the standard deviation varying from 0.70139 to 0.99634 in the statistics, implies that nearly all the English-majored students' perceived sense of class belonging and classroom environment are the same with a medium level.

apparently indicates that the correlations between student cohesiveness, involvement, task orientation, student responsibility, cooperation, equity, teacher support, teacher leadership, teacher innovation and sense of class belonging are positively significant at the .01 level, which reach up to .503, .450, .498, .434, .472, .339, .465, .349 and .316 respectively. In particular, the student cohesiveness is greatly

correlated with the sense of class belonging ($r=.503$, $\text{Sig}=.000<.01$).

TABLE II. THE CORRELATION BETWEEN SENSE OF CLASS BELONGING AND CLASSROOM ENVIRONMENT (N=111)

CE	Sense of CB	Sig.
Part A	.503**	.000
Part B	.450**	.000
Part C	.498**	.000
Part D	.434**	.000
Part E	.472**	.000
Part F	.339**	.000
Part G	.465**	.000
Part H	.349**	.000
Part I	.316**	.001

^a Note: (* $P<.05$; ** $P<.01$)

^b CE= classroom environment

To a certain extent, the above-mentioned findings prove the second question. The analysis, with Pearson Coefficient, illustrates that all factors in the questionnaire are closely related to students' perceived sense of class belonging. That is to say, the correlation between the English class environment and sense of class belonging is quite intensive. Last but not least, the student cohesiveness and task orientation play the most crucial roles in correlating with sense of class belonging.

C. The Correlation Among English Classroom Environment, Sense of Class Belonging and TEM-4 Scores

With respect to the relevant analysis data from "Table III", it is apparent that student cohesiveness, involvement, task orientation, student responsibility, teacher support and TEM-4 scores are significantly correlated with TEM-4 score at the .01 level, which reaches up to .322, .426, .418, .473 and .339 respectively. Furthermore, student responsibility has the most significant impact on TEM-4 scores ($r=.473$, $\text{sig}=.000<.01$). Nevertheless, there is positive but no significant correlation between cooperation, equity, leadership, teacher innovation and TEM-4 scores in the statistics. Besides, according to the data analyzed with Pearson Coefficient, the correlation between sense of class belonging and TEM-4 is significantly positive in the current research ($r=.308$, $\text{sig}=.000<.01$).

TABLE III. THE CORRELATION BETWEEN ENGLISH CLASSROOM ENVIRONMENT AND TEM-4 SCORES(N=111)

CE	TEM-4	Sig.
Part A	.322**	.001
Part B	.426**	.000
Part C	.418**	.000
Part D	.473**	.000
Part E	.134	.161
Part F	.181	.058
Part G	.339**	.000
Part H	.127	.184
Part I	.077	.420

^a Note: (* $P<.05$; ** $P<.01$)

Hence, sense of class belonging is significantly and positively correlated with the students' scores; while not all the nine factors of classroom environment positively affect the students' scores. In other words, the perception of involvement, task orientation, student responsibility, student cohesiveness and teacher support plays a rather crucial part in their English proficiency.

D. Further Discussions on the Results

The results of the study, by gathering and analyzing the data, illustrates that the English-majored students possess certain sense of class belonging and classroom environment for the moment. These research findings authenticate the result of Sun about College English Classroom Environment Inventory (CECEI) and approve the outcome of Du about Sense of Class Belonging Questionnaire Survey [7] [21]. In China, English, as a foreign language rather than a second language, is short of the communicating and exchanging atmosphere. To a great extent, the current study implies that both sense of class belonging and classroom environment exert critical influences on acquiring English proficiency.

It is worthwhile to note that the research demonstrates a significant correlation between the nine factors of classroom environment and sense of class belonging, and between classroom environment and English proficiency (TEM-4 scores), while only five factors of classroom environment (student cohesiveness, involvement, task orientation, student responsibility, teacher support) are significantly and positively correlated with English proficiency. Actually, Osterman et al. assume that these factors are indirectly connected with sense of class belonging, because sense of class belonging, embodied by students' engagement, will play a constructive role [19] [20]. However, Roeser et al. believe that sense of class belonging is directly related to learning outcomes of students and teaching effects in class. Therefore, they assert that sense of class belonging not only has a strong and positive correlation with students' mental health and academic achievement, but also has a positive prediction to the learning achievement of students [22].

Moreover, since the study is based on an empirical survey, which lays emphasis on the validity and credibility in the process of research, it corroborates Fan's finding — students' perceived sense of class belonging is positively correlated with English proficiency in the vocational college [23]. Above all, the present study supports the conclusion that sense of class belonging is positively correlated with classroom environment, which authenticates the result of Xiao et al [24]. All in all, both sense of class belonging and classroom environment are the most of significant factors to improve students' English proficiency.

V. IMPLICATIONS FOR COLLEGE ENGLISH INSTRUCTION

The students' perceived sense of class belonging is significantly and positively correlated with their English classroom environment and English proficiency (TEM-4 scores) in the current research. That means the stronger students' perceived sense of class belonging, the stronger these nine parts of classroom environment and correspondingly the higher their English scores. Indeed, improving both sense of class belonging and classroom environment is of the great importance for students' English proficiency. In order for improving students' English proficiency, it is of necessity to pay more attention to developing their sense of class belonging together with their perception of involvement, task orientation, student responsibility, student cohesiveness and teacher support, which proves to play a rather essential role in enhancing their English scores in the current study. To put it simply, the more students' sense of class belonging, involvement, task orientation, student responsibility, student cohesiveness and teacher support get involved, the higher-level students' English proficiency will be advanced. However, our study found that the student involvement and teacher support got rather low points, which indicates that some measures should be taken as follows:

First of all, student involvement suggests whether students are interested in teaching activities in class. If the teaching methods and activities are traditionally tedious, the students will be not attracted and concentrate on the teaching program in class. In other words, more attention should be paid to innovation in class so as to improve student involvement.

Furthermore, teacher support plays a vital role in English classroom environment, which ensures the establishment of a cohesive collectivity. The teachers are not only the guiders of learning, but also friends and playing the role of parents. It is crucial for teachers to encourage students, to cultivate abilities of them and to take care of them. All of these above are out of genuinely caring of teachers rather than duties. Apparently, teachers harbor gracious virtue of endurance, forgiveness and devotion, to a certain extent, which is conducive to the growth of students and the cultivation of cohesive collectivity.

VI. CONCLUSION

As a matter of fact, the results of the current study have made rational explanations for the three research questions. On the whole, students' sense of class belonging has a

positively significant correlation with English classroom environment and English proficiency, whereas only five factors of classroom environment (student cohesiveness, involvement, task orientation, student responsibility, teacher support) are significantly and positively correlated with English proficiency. In particular, it is of the great importance to improve the degree of students' involvement and teacher support as their performance in the two parts is unsatisfactory. Simultaneously, boosting the class cohesiveness, strengthening the cooperation between teachers and students, and enhancing innovation and leadership of teachers could further improve students' sense of class belonging and create a good collective atmosphere of learning.

REFERENCES

- [1] Fan Chunlin, Dong Qi. The Actuality, Value and Trend of Research on Classroom Environment [J]. *Comparative Education Review*, 2005, (08): 61-66.
- [2] Fu Lei, Xiong Qinyi. The Status and New Thinking of Study on College English Classroom Environment [J]. *Journal of China University of Geosciences (Social Science Edition)*, 2013, (Supplement): 128-130.
- [3] Jiang Lili. Investigation and Thoughts on the Sense of Class Belonging of Junior Students: Taking Xiangshan County, Zhejiang Province as an Example [J]. *Educational Measurement and Evaluation*, 2009, (12): 43-46.
- [4] Fraser, B. J. *Classroom Environment* [M]. London: Croom Helm, 1986: 1-70, 92-119.
- [5] Sun Yunmei. A Study of College English Classroom Environment in China [M]. Beijing: China Social Sciences Press, 2009.
- [6] Qu Zhiyong. A Brief Introduction to the Development of Foreign Studies on Classroom Environment [J]. *Studies in Foreign Education*, 2002, (07): 21-25.
- [7] Sun Yunmei. A Study of College Comprehensive English Classroom Environment [J]. *Foreign Language Teaching and Research*, 2010, (06): 438-444.
- [8] Wang Jin. Exploration and Analysis of Senses of Belonging [J]. *Journal of Xi'an University*, 2011, 8 (4): 88-90.
- [9] Bao Kebing, Xu Qinmei. Preliminary Study on School Belonging of School Student [J]. *Psychological Exploration*, 2006, (2): 51-54.
- [10] Freeman, T. M, Anderman, L. H. & Jensen, J. M. Sense of belonging in college freshmen at the classroom and campus levels [J]. *Journal of Experimental Education*, 2007, 75(3): 203-220.
- [11] Ren Yilin. Opinions on College English Classroom Environment [J]. *Journal of Zunyi Normal College*, 2003, (04): 64-66.
- [12] Hou Xiuli. Investigation on the Psychological Environment in English Classes [J]. *Foreign Languages and Their Teaching*, 2006, (05): 28-30.
- [13] Liu Liyan, Liu Yongbing. Associations between Students' Outcomes and Classroom Environment in Senior High School English Class [J]. *Foreign Language Learning Theory and Practice*, 2012, (04): 76-82.
- [14] Walberg, H. J. Anderson, G. J. Classroom Climate and Individual Learning [J]. *Journal of Education Psychology*, 1968, 59 (6): 414-419.
- [15] Moos, R. H. Educational Climates. In Walberg, H. J. (Eds.). *Educational Environment and Effects: Evaluation, Policy, and Productivity* [A]. California: McCutchan Publishing Corporation, 1979: 82-84.
- [16] Goodenow, C. Classroom belonging among early adolescent students: Relationship to motivation and achievement [J]. *Journal of Early Adolescence*, 1993, 13(1): 21-43.
- [17] Gonzalez, R. & Padilla, A. M. The academic resilience of Mexican American high school students [J]. *Hispanic Journal of Behavioral Sciences*, 1997, 19(3): 301-317.

- [18] Liu Likun. Emotional Strategy's Impact and Training Ways on College English Learning [J]. Journal of Heilongjiang College of Education, 2009, 1 (1): 176-177.
- [19] Osterman, K. F. Students' need for belonging in the school community [J]. Review of Educational Research, 2000, 70(3): 323-362.
- [20] Faircloth, B. S. & Hamm, J. V. Sense of belonging among high school students representing 4 ethnic groups [J]. Journal of Youth and Adolescence, 2005, 34(4): 293-309.
- [21] Du Haoqiang. A Study on University Belonging of Undergraduates and Its Impact Factors [D]. Chongqing: Southwest University, 2010.
- [22] Roeser, R. W., Midgley, C., Urdan, T. Perceptions of the School Psychological Environment and Early Adolescent's Psychological and Behavioral Functioning in School: The Mediating Pole of Coals and Belonging [J]. Journal of Educational Psychology, 1996, 88: 408-422.
- [23] Fan Lingling. Investigation on the College Students' Perceptions of Social Support and Senses of Class Belonging in Higher Vocational English Teaching [J]. Overseas English, 2013, (23): 89-90.
- [24] Xiao Gengsheng, Xu Jinfen, Zhang Zaihong. A Study on the Correlations among College Students' Perceptions of Social Support, Senses of Class Belonging and Their English Autonomous Learning Ability [J]. Foreign Languages World, 2011, (04): 2-11.