



An Empirical Study of Classroom Silence Attributions in the Chinese EFL Classes

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Abstract. With the approach of Confirmatory Factor Analysis (CFA), the study aimed to figure out the potential attributions of classroom silence. 324 valid answers to the questionnaire were collected in a Chinese university in Wuhan City, Hubei Province. A series of tests, including the Kurtosis Test, Skewness Test, Kolmogorov-Smirnov Test (K-S test), KMO, and Bartlett's Test of Sphericity, were conducted. Results demonstrated that attributions such as the co-effect of classroom and the society, motivation to learn English, lesson-related task level, students' personalities, contexts in the classroom, and teachers' personalities and abilities were important attributions that contributed to EFL classroom silence in China. Findings in the study would be a reference in the future teaching and learning activities for EFL instructors and students.

Keywords: classroom silence, attributions, Chinese EFL classes, college English

1 INTRODUCTION

Studies have been conducted to figure out the radical causes of silent classroom behaviors so that practical methodologies can be applied in teaching practice. With research deepening, more classroom silence causes were found, which include classroom environment^[1], personality traits^[1-2], learned behaviors^[2], situational factors, traditional culture^[3-4], instructors, language proficiency and motivation^[5]. Scott Aubrey, Jim King, and Haydab Almhaid^[6] identified lack of social cohesion and motivational baggage as the primary factors in determining student classroom silence, and other factors such as learner-level, lesson-level, task-level, and post-task-level influenced student classroom performance. Reluctance, inability or lack of opportunity to speak^[7], passivity, demotivation, or lack of ability of a learner^[7], would also lead to classroom silence. Nakane^[8] demonstrated that silence was commonly used by students to save face or keep modest. Other causes cover extreme anxiety, embar-

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rassment, panic^[8], confidence^[9], contexts of class^[10], unjust power relations between teachers and students^[11], student identity and self-image^[11], basic goals for the classroom, family experience, and inherent institutional hierarchies^[12]. They were pivotal factors resulting in classroom silence.

Yet the curious fact is that scarce empirical research has targeted the issue of silence in classroom settings, particularly when it happens in language classes^[8, 13]. Therefore, it is an interesting and worthwhile thing to figure out classroom silence attributions in the Chinese EFL classes. To bridge this gap, this study explores, in a Chinese EFL context, attributions to classroom silence.

2 THEORETICAL METHODS: CONFIRMATORY FACTOR ANALYSIS (CFA) ON EFL CLASSROOM SILENCE ATTRIBUTIONS

CFA refers to Confirmatory Factor Analysis. This study conducted a questionnaire to survey the EFL classroom silence attributions. Six constructs with 30 items were listed in the questionnaire, so that more of the causes would be covered. The factors were: the co-effect of classroom and the society, motivation to learn English, lesson-related task level, students' personalities, contexts in the classroom, and teachers' personalities and abilities. The study analyzed the collected data with an approach of CFA. Cronbach's α coefficient was tested to examine the validity, and KMO, community, unrotated variance, and factor loading, etc. were examined to ensure the reliability of the questionnaire with the help of SPSS. Normal distribution was identified through Kurtosis, Skewness, and K-S test.

3 RESULTS

Descriptive statistics are presented from Table 1 to Table 4.

Six factors with thirty items (see Table 1) in total were included in the questionnaire. They are: F1: the co-effect of classroom and the society, F2: motivation to learn English, F3: lesson-related task level, F4: students' personalities, F5: contexts in the classroom, and F6: teachers' personalities and abilities. The 30 items are as follows in the table.

Table 1. Attributions of EFL classroom silence: six constructs with 30 items

Factors	Items
Factor1 (F1)	F1-1 Family background and personal social experience will lead to EFL classroom silence.
	F1-2 Inherent institutional hierarchies will lead to EFL classroom silence.
	F1-3 Cultural/national difference will lead to EFL classroom silence.

	F1-4 The notion that what we learn in class will be useless in society will lead to EFL classroom silence.
	F1-5 The notion that classroom is far away from the society will lead to EFL classroom silence.
Factor 2 (F2)	F2-1 Passive attitude towards CET4 will lead to EFL classroom silence.
	F2-2 Caring nothing about the final exam will lead to EFL classroom silence.
	F2-3 Not going to be a postgraduate will lead to EFL classroom silence.
	F2-4 Not going to be abroad to study will lead to EFL classroom silence.
	F2-5 Not caring about the grades of the course will lead to EFL classroom silence.
Factor 3 (F3)	F3-1 High task-level in class will lead to EFL classroom silence.
	F3-2 High post-task-level will lead to EFL classroom silence.
	F3-3 Boring topics in class will lead to EFL classroom silence.
	F3-4 Outdated topics in class will lead to EFL classroom silence.
	F3-5 Low teaching objectives of the course will lead to EFL classroom silence.
Factor 4 (F4)	F4-1 Politeness will lead to EFL classroom silence.
	F4-2 Lack of confidence will lead to EFL classroom silence.
	F4-3 Modest will lead to EFL classroom silence.
	F4-4 Student identity and self-image will lead to EFL classroom silence.
	F4-5 Taking a dislike to the teacher will lead to EFL classroom silence.
Factor 5 (F5)	F5-1 Too much noise in class will lead to EFL classroom silence.
	F5-2 Untidy classroom and blackboard will lead to EFL classroom silence.
	F5-3 Lack of opportunity to speak English will lead to EFL classroom silence.
	F5-4 Different basic goals for the classroom between teachers and students will lead to EFL classroom silence.
Factor 6 (F6)	F6-1 As for teachers, lack of charm will lead to EFL classroom silence.
	F6-2 As for teachers, outdated teaching approach will lead to EFL classroom silence.
	F6-3 As for teachers, poor oral English will lead to EFL classroom silence.
	F6-4 As for teachers, being too strict will lead to EFL classroom silence.
	F6-5 As for teachers, ways to ask the students will lead to EFL classroom silence.
	F6-6 As for teachers, ways to get along with the students will lead to EFL classroom silence.

Data in Table 2 showed that though the Kolmogorov-Smirnov test illustrated significance, the absolute value of the Kurtosis is less than 10; meanwhile, the absolute value of Skewness is less than 3 (see Table 2), thus overall, the results showed a normal distribution.

Table 2. Normal distribution test and validity test

Tests Factors	Items	Kurtosis	Skewness	Kolmogorov-Smirnov		CITC	Cronbach's α if Item Deleted
				D	p		
Factor1(F1)	F1-1	-0.436	0.487	0.232	0.000**	0.564	0.954
	F1-2	-0.324	0.243	0.247	0.000**	0.575	0.954
	F1-3	-0.339	0.025	0.240	0.000**	0.621	0.954
	F1-4	-0.346	0.049	0.225	0.000**	0.651	0.954
	F1-5	-0.450	0.059	0.227	0.000**	0.638	0.954
Factor 2 (F2)	F2-1	-0.484	0.395	0.177	0.000**	0.641	0.954
	F2-2	-0.119	-0.100	0.196	0.000**	0.564	0.954
	F2-3	-0.159	0.041	0.200	0.000**	0.556	0.954
	F2-4	-0.095	-0.296	0.213	0.000**	0.486	0.955
	F2-5	-0.378	-0.094	0.190	0.000**	0.599	0.954
Factor 3 (F3)	F3-1	-0.605	0.502	0.159	0.000**	0.674	0.953
	F3-2	-0.467	0.405	0.159	0.000**	0.706	0.953
	F3-3	-0.612	0.788	0.152	0.000**	0.698	0.953
	F3-4	-0.212	0.318	0.206	0.000**	0.722	0.953
	F3-5	-0.142	0.302	0.202	0.000**	0.642	0.954
Factor 4 (F4)	F4-1	0.037	0.236	0.224	0.000**	0.519	0.955
	F4-2	0.012	-0.021	0.203	0.000**	0.550	0.954
	F4-3	-0.680	0.767	0.166	0.000**	0.642	0.954
	F4-4	-0.162	0.147	0.228	0.000**	0.660	0.953
	F4-5	-0.486	0.532	0.191	0.000**	0.671	0.953
Factor 5 (F5)	F5-1	-0.336	0.838	0.234	0.000**	0.722	0.953
	F5-2	-0.404	0.512	0.173	0.000**	0.642	0.954
	F5-3	-0.126	0.255	0.208	0.000**	0.584	0.954
	F5-4	-0.546	0.887	0.213	0.000**	0.613	0.954
Factor 6 (F6)	F6-1	-0.511	0.553	0.177	0.000**	0.714	0.953
	F6-2	-0.426	0.855	0.183	0.000**	0.732	0.953
	F6-3	-0.317	0.329	0.199	0.000**	0.651	0.954
	F6-4	-0.524	0.595	0.155	0.000**	0.680	0.953
	F6-5	-0.421	0.798	0.183	0.000**	0.637	0.954
	F6-6	-0.594	1.070	0.180	0.000**	0.626	0.954
Cronbach's α	0.955						

The Cronbach’s α coefficient in the study is 0.955, which showed a high reliability. Data from the “Cronbach’s α if Item Deleted” part were no less than the overall Cronbach’s α coefficient ($\alpha=0.955$), allowing all the thirty items to remain in the following studies. All the CITC data were over 0.4, ranging from 0.486 to 0.732. It illustrated a good relevance among different items (see Table 2).

The KMO value of the questionnaire was 0.934 ($KMO>0.8$), illustrating a high validity. The rate of Variance (Rotated) of all six factors was 15.316%, 13.849%, 12.502%, 11.823%, 9.987%, 8.181%, and the Cumulative rate of Variance (Rotated) was 71.658% $>50\%$. The communality value of all the items is over 0.4, ranging from 0.578 to 0.829 (see Table 3-4). All the data support that the questionnaire was of good validity and that studies could proceed.

Table 3. Communality, mean, standard deviation and median

Items	Communality	Mean \pm SD	Median
F1-1	0.675	4.358 \pm 1.347	4.000
F1-2	0.626	4.179 \pm 1.431	4.000
F1-3	0.709	4.080 \pm 1.418	4.000
F1-4	0.766	4.065 \pm 1.365	4.000
F1-5	0.755	4.219 \pm 1.378	4.000
F2-1	0.729	4.704 \pm 1.367	5.000
F2-2	0.651	4.225 \pm 1.426	4.000
F2-3	0.632	4.238 \pm 1.386	4.000
F2-4	0.635	3.895 \pm 1.516	4.000
F2-5	0.748	4.432 \pm 1.517	4.000
F3-1	0.583	4.997 \pm 1.337	5.000
F3-2	0.751	4.880 \pm 1.331	5.000
F3-3	0.618	5.086 \pm 1.292	5.000
F3-4	0.604	4.660 \pm 1.262	4.000
F3-5	0.704	4.395 \pm 1.275	4.000
F4-1	0.748	4.006 \pm 1.321	4.000
F4-2	0.779	3.870 \pm 1.428	4.000
F4-3	0.751	5.207 \pm 1.309	5.000
F4-4	0.578	4.284 \pm 1.388	4.000
F4-5	0.683	4.713 \pm 1.326	5.000
F5-1	0.811	4.537 \pm 1.267	4.000
F5-2	0.677	4.731 \pm 1.281	5.000
F5-3	0.793	4.349 \pm 1.328	4.000
F5-4	0.808	4.660 \pm 1.277	5.000
F6-1	0.803	4.744 \pm 1.312	5.000
F6-2	0.774	4.793 \pm 1.218	5.000
F6-3	0.742	4.605 \pm 1.311	4.000
F6-4	0.829	5.043 \pm 1.266	5.000
F6-5	0.820	4.772 \pm 1.255	5.000
F6-6	0.714	4.883 \pm 1.297	5.000

Table 4. Validity test on the six factors

Values	F1	F2	F3	F4	F5	F6
Eigen value (Unrotated)	13.300	2.587	1.809	1.561	1.172	1.068
Rate of Variance (Unrotated)	44.332%	8.624%	6.031%	5.202%	3.908%	3.561%
Cumulative Rate of Variance (Unrotated)	44.332%	52.956%	58.987%	64.189%	68.097%	71.658%
Eigen value (Rotated)	4.595	4.155	3.751	3.547	2.996	2.454
Rate of Variance (Rotated)	15.316%	13.849%	12.502%	11.823%	9.987%	8.181%
Cumulative rate of Variance (Rotated)	15.316%	29.164%	41.667%	53.490%	63.476%	71.658%
KMO	0.934					
Bartlett's Test of Sphericity	7202.917					
<i>df</i>	435					
<i>p</i> value	0.000					

Data in Table 3 showed that Mean±SD from F1-1 to F6-6 was: 4.358±1.347, 4.179±1.431, 4.080±1.418, 4.065±1.365, 4.219±1.378, 4.704±1.367, 4.225±1.426, 4.238±1.386, 3.895±1.516, 4.432±1.517, 4.997±1.337, 4.880±1.331, 5.086±1.292, 4.660±1.262, 4.395±1.275, 4.006±1.321, 3.870±1.428, 5.207±1.309, 4.284±1.388, 4.713±1.326, 4.537±1.267, 4.731±1.281, 4.349±1.328, 4.660±1.277, 4.744±1.312, 4.793±1.218, 4.605±1.311, 5.043±1.266, 4.772±1.255, 4.883±1.297. These data illustrated that all the six factors the co-effect of classroom and the society, motivation to learn English, lesson-related task level, students' personalities, contexts in the classroom, and teachers' personalities and ability could be perceived as attributions to EFL classroom silence in Chinese EFL classes. This indicated that instructors could try to engage the students through building authentic scenarios in teaching practice, motivate the students to learn English with clearer goals, give proper lesson-related tasks in and out of the class, know more about the student personalities and language proficiency, and building relaxing learning atmosphere in the classroom. As for the instructors themselves, they should presented students a positive image with professional ability to teach in class.

4 DISCUSSION AND CONCLUSION

A series of tests illustrated that the questionnaire design was reasonable with the approach of CFA. Data also demonstrated that this study was of good validity and reliability (Cronbach's $\alpha=0.955$, KMO=0.934, Bartlett's Test of Sphericity=7202.917, $df=435$, $p=0.000$) and with a reasonable questionnaire structure. The study also demonstrated a normal distribution ($|Kurtosis|<10 \wedge |Skewness|<3$) and significance.

From the investigation, factors, including the co-effect of classroom and the society, motivation to learn English^[14], lesson-related task level, students' personalities^[15],

^{16, 17]}, contexts in the classroom^[18-19] and teachers' personalities and ability^[20-22] were confirmed as the classroom silence attributions.

The study presented the scale of classroom silence attributions with the approach of CFA, yet it was merely a case study in a university in China, thus the results could only be a reference and further studies need to be conducted in other research sites.

A few shortcomings were contained in the study, providing avenues for future research. More participants should be covered in future research so that the sample size could be larger. Other factors that are exterior of the students/instructors themselves are also worthy of studies to tell if they have an impact on student classroom performance.

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