

The Research on the Influence of Teacher's Questioning Strategies on the Silence in College English Classroom Teaching

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ABSTRACT

This study examines the impact of teachers' questioning strategies on student silence in contemporary college English classrooms. Classroom silence is not merely a reflection of individual student states but is closely tied to the effectiveness of teachers' questioning methods. Through a combination of questionnaire surveys, interviews, and classroom observations, the research analyzes how the fairness of questioning, waiting time, and strategic design influence classroom interaction. The findings demonstrate that optimizing questioning strategies can significantly reduce classroom silence and enhance student engagement, providing both theoretical and practical foundations for reforming college English teaching.

KEYWORDS

Teacher questioning; College English classroom; Classroom silence; Questioning strategies; Classroom interaction

1 Introduction

The phenomenon of classroom silence in contemporary college English classes has become particularly prominent, primarily manifested in students' low morale, reduced interaction enthusiasm, and infrequent participation. This not only reflects underlying psychological issues such as insufficient learning interest and lack of intrinsic motivation, but also exposes the outdated teaching methods and monotonous models in college English education, which contradict the teaching objectives. With the increasing accessibility of education in China and closer international exchanges, the demand for improving college English teaching quality and cultivating high-quality talents has become more urgent. Currently, there are few domestic studies focusing on classroom silence in college English classes, with most research concentrated on primary and secondary school stages, leaving relevant areas unexplored. Classroom silence is not merely an individual student issue. As a critical component of classroom instruction, the rationality of teacher questioning strategies directly impacts student responses. Based on this, this study focuses on college English classrooms, combining the psychological and linguistic characteristics of college students to explore the correlation between teacher questioning strategies and classroom silence. By optimizing questioning design, it aims to provide feasible solutions for breaking classroom silence and enhancing teaching effectiveness, offering both theoretical insights and practical guidance.

2 Literature Review

2.1 Research on Teacher Questioning Strategies

Teacher questioning constitutes the core component of classroom instruction. Effective questioning can energize the learning atmosphere and stimulate students' initiative, a concept reflected in both Chinese and Western educational history. For instance, Confucius' heuristic teaching and Socrates' dialogic method fundamentally achieve pedagogical interaction through teacher-student Q&A. Gary D. Borrichi categorized questioning into six cognitive levels—recognition, comprehension, application, analysis, synthesis, and evaluation—based on Bloom's taxonomy of cognitive domains^[1]. Weilun et al. emphasized the need for clear questioning language to avoid ambiguity^[2]. Domestic scholars have also conducted research on current questioning practices. Ren Zhongxue identified issues such as insufficient awareness of questioning effectiveness, inappropriate timing, and inadequate response skills among teachers^[3]. Yuan Fang proposed four optimization strategies: reducing teacher control, designing appropriate questions, expanding communication channels, and enhancing feedback techniques^[4]. Dong Yinwen highlighted prominent classroom issues including biased questioning targets, incomplete call participation, and unequal opportunities^[5]. While existing research has recognized the importance of teacher questioning strategies, specialized optimization studies for college English classrooms remain insufficient.

2.2 Research on Classroom Silence in Education

In pedagogical studies, classroom silence manifests in two forms: teacher-induced silence (often resulting from time constraints or instructional oversights) and student-induced silence (caused by active thinking, passive resistance, emotional distress, or lack of engagement). Academician Le Xingyu defines classroom silence as a dual manifestation of student participation, combining both active and passive attributes^[6]. Scholar Ma Lixue characterizes it as "persistent nonverbal communication behaviors unrelated to instructional content or requirements, devoid of fixed meanings."^[7] International scholars such as Lehner highlight correlations between student silence and classroom dynamics, while Liu and Littlewood note that excessive teacher expectations may undermine students' confidence in responses. Jaworski and Sachdev further suggest that power imbalances and insufficient response time exacerbate silence^[8]. Chinese researchers

Yang Zhengqiang and Zeng Benjun analyze the causes of student silence through three dimensions: instructional organization, sociocultural norms, and individual student characteristics ^[9]. Although existing research acknowledges teacher influence, systematic investigations into the relationship between questioning strategies and silence in college English classrooms remain scarce – a critical gap that forms the core focus of this study.

2.3 Research Questions

Addressing existing research gaps and practical classroom challenges, this study focuses on: What are the primary types and causes of classroom silence in college English instruction? What are the current status and key issues in teachers' questioning strategies? How do different questioning strategies (e. g., cognitive levels, interaction formats, waiting times) relate to classroom silence? How can teachers optimize their questioning strategies to reduce classroom silence and enhance student engagement?

3 Research Methods

3.1 Study Subjects

A total of 150 college students were selected as survey participants, covering different academic years and English proficiency levels. Additionally, 10 university English instructors with over three years of teaching experience were interviewed to ensure the representativeness of the study sample and the validity of the data.

3.2 Research Methods

This study employed a tripartite research methodology: (1) Questionnaire survey: A 30-item classroom silence questionnaire developed by Zhu Lin (2023) was administered, including 14 1-5 point scale items. The Cronbach's alpha coefficient of 0.779 demonstrated strong internal consistency, enabling quantitative analysis of students' classroom silence behaviors and associated factors ^[10]. (2) Interview method: Qualitative data were collected through discussions with lecturers on teacher questioning strategies and classroom silence management experiences. (3) Observation method: Classroom observations were conducted via cloud-based video or on-site recording, documenting teacher questioning patterns, interaction durations, and student engagement. Systematic records were compiled using classroom observation forms. Data analysis was performed using SPSS software for descriptive statistics and correlation analysis.

3.3 Research Framework

The study first investigates the current state and types of silence in college English classrooms through questionnaires and classroom observations, distinguishing between passive silence (non-compliance) and active silence (listening and thinking without speaking), while conducting interviews to uncover underlying causes. Next, through classroom observations and comparative analysis between teachers and students, the study examines the current state of teachers' questioning strategies, including cognitive levels, interaction forms, functional types, and existing issues. Then, by integrating questionnaire data and classroom observation results, the study employs relevant models to analyze the correlation between teachers' questioning strategies and classroom silence. Finally, based on the research findings, the study proposes optimization plans for questioning strategies and recommendations for addressing classroom silence.

4 Research results

4.1 Questionnaire reliability

Table 1 Cronbach reliability analysis

Name	Correction Item To- tal Correlation (CITC)	The α factor for which the item has been removed	Cronbach α coefficient
Even if I know the answer, I only answer questions when asked	0.641	0.890	0.899
The class is mainly based on the teacher's explanation, and everyone rarely speaks	0.672	0.889	
I felt that answering questions did not help me at all, so I chose to remain silent	0.630	0.890	
Everyone was silent after the teacher's question, and I chose to agree with everyone	0.708	0.887	
I have a general relationship with my English teacher, so I am reluctant to answer questions	0.456	0.898	
The teacher often only asked a few students, and I was not noticed	0.565	0.893	
After answering the question, I couldn't get praise from the teacher, so I didn't want to speak next time	0.570	0.893	
Do you feel tired after spending a long time in a group or in a social setting?	0.614	0.891	
Do you like to be alone?	0.715	0.887	
When you sit down and chat with your friends, you really like to express your opinion.	-0.110	0.916	
I am introverted and don't want to be the center of attention	0.682	0.888	
Silence is more likely to occur when the teacher asks difficult questions	0.638	0.890	
Sometimes I want to answer a question, but I don't know how to express it	0.729	0.887	
I am not very good at speaking, so I don't want to express it in class	0.761	0.885	

4.2 Validity Analysis

Through multiple exploratory factor analysis, 4 items that did not meet the requirements of factor extraction were eliminated (including two factors with a factor load value of less than 0.4 and a factor load value of more than 0.4). As shown in Table 2, the remaining 14 questions formed the main four factors, all of which were greater than 1, the cumulative variance explanation was 60.43%, and the KMO value was 0.814, indicating that each factor had a strong internal correlation.

Table 2 Cronbach Reliability Analysis - Simplified Format

Number of items	Sample size	Cronbach α coefficient
14	150	0.899
Summary of missing samples		
Item	Number of samples	Proportion
Valid samples	150	100.0%
Invalid samples are excluded	0	0.0%
Total	150	100%

Table 3 Exploratory Factor Analysis Results

Factor Loadings (after rotation)	Factor 1	Factor 2	Factor 3	Factor 4	Commonality
Do you feel tired after spending a long time in a group or in a social setting?	0.836	0.075	0.215	0.052	0.754
Do you like to be alone?	0.844	0.27	0.151	-0.05	0.81
Silence is more likely to occur when the teacher asks difficult questions	0.643	0.543	-0.072	-0.114	0.726
Sometimes I want to answer a question, but I don't know how to express it	0.581	0.4	0.358	-0.07	0.631
I am not very good at speaking, so I don't want to express it in class	0.669	0.374	0.336	-0.059	0.705
I am introverted and don't want to be the center of attention	0.49	0.524	0.228	-0.367	0.701
The class is mainly based on the teacher's explanation, and everyone rarely speaks	0.417	0.763	0.023	0.159	0.782
I felt that answering questions did not help me at all, so I chose to remain silent	0.036	0.715	0.497	-0.037	0.76
Everyone was silent after the teacher's question, and I chose to agree with everyone	0.253	0.798	0.257	-0.161	0.793
Even if I know the answer, I only answer questions when asked	0.485	0.586	0.097	0.065	0.593
I have a general relationship with my English teacher, so I am reluctant to answer questions	0.115	0.098	0.829	-0.121	0.724
The teacher often only asked a few students, and I was not noticed	0.113	0.305	0.785	-0.007	0.722
After answering the question, I couldn't get praise from the teacher, so I didn't want to speak next time	0.34	0.04	0.826	0.038	0.801
When you sit down and chat with your friends, you really like to express your opinion.	-0.018	-0.011	-0.045	0.959	0.921

4.3 Descriptive Statistics

Based on the content of the above four factors, the four factors are named and interpreted respectively. Factor 1 is the classroom atmosphere, which mainly reflects whether students will actively break the silence and whether they will break the classroom silence due to the influence of the environment. Factor 2 is teacher-student feedback, which is manifested in whether the relationship between students and teachers is harmonious, and whether they are praised by teachers, etc., have the influence of positive feedback on students' choice of classroom silence; Factor 3 is the student's personality, which is reflected in whether the student prefers to be alone and whether he often speaks in a social environment. Factor 4 is student ability, which is manifested in students' faced problems beyond their own ability, or their lack of confidence in their own abilities makes students unwilling to express themselves in English classroom, resulting in classroom silence. The absolute values of the factor load of all the above items are between 0.57 and 0.87, indicating that these four factors better reflect the content of the four dimensions of classroom atmosphere, teacher-student feedback, student personality and student ability.

Table 4 Basic indicators

Name	Sample size	Minimum	Maximum	Average	Standard deviation	Median
Even if I know the answer, I only answer questions when asked	150	1.000	5.000	3.240	1.478	3.000
The class is mainly based on the teacher's explanation, and everyone rarely speaks	150	1.000	5.000	3.490	1.283	4.000
I felt that answering questions did not help me at all, so I chose to remain silent	150	1.000	5.000	2.780	1.284	3.000
Everyone was silent after the teacher's question, and I chose to agree with everyone	150	1.000	5.000	3.420	1.335	4.000
I have a general relationship with my English teacher, so I am reluctant to answer questions	150	1.000	5.000	2.710	1.395	3.000
The teacher often only asked a few students, and I was not noticed	150	1.000	5.000	2.640	1.259	3.000
After answering the question, I couldn't get praise from the teacher, so I didn't want to speak next time	100	1.000	5.000	2.630	1.300	3.000
Do you feel tired after spending a long time in a group or in a social setting?	150	1.000	5.000	3.260	1.353	3.000
Do you like to be alone?	150	1.000	5.000	3.340	1.281	3.500
When you sit down and chat with your friends, you really like to express your opinion.	150	1.000	5.000	3.140	1.146	3.000
I am introverted and don't want to be the center of attention	150	1.000	5.000	3.040	1.263	3.000
Silence is more likely to occur when the teacher asks difficult questions	150	1.000	5.000	3.520	1.259	4.000
Sometimes I want to answer a question, but I don't know how to express it	150	1.000	5.000	3.330	1.198	3.000
I am not very good at speaking, so I don't want to express it in class	150	1.000	5.000	3.150	1.209	3.000

4.4 Descriptive Statistical Analysis Results of Scale Questions

A total of 150 valid samples were collected in this survey, and descriptive statistics were performed on 14 scale questions (scored on 1-5 points, with higher scores representing more obvious correspondence), and the core results were as follows:

4.4.1 Overall Situation

The total average score of the 14 questions was 42.75 (the average score of a single question was 3.05), which was above average, indicating that the respondents had a certain tendency to silence-related behaviors and attitudes in English classrooms. The number of valid fillers in all questions is 150, there is no missing data, and the data quality is good.

4.4.2 Core Performance of Each Item (Sorted by Average Score)

(1) High-scoring items (average score ≥ 3.3 points, the corresponding situation is more obvious)

Question 2 (the class is mainly explained by the teacher, and everyone speaks less): the average score is 3.41, 28.67% choose 4 points, 21.33% choose 5 points, reflecting that the classroom is teacher-centered and the student participation is low.

Question 12 (The teacher is more likely to be silent when asking difficult questions): The average score is 3.37, 29.33% choose 3 points, and 28.67% choose 4 points, indicating that the difficulty of the question is an important cause of silence in the classroom.

Question 4 (If everyone is silent, follow silence): The average score is 3.35, 26.67% choose 4 points, 22% choose 5 points, reflecting the significant herd effect of group silence.

(2) Medium sub-items (2.8 points < average score < 3.3 points, corresponding to medium cases)

Question 8 (tired after staying in social situations for a long time) and question 9 (like to be alone): both scored 3.25 points, and nearly half of the respondents (about 45%) chose 3-4 points, reflecting that some people have introverted tendencies.

Question 1 (know the answer but need to be asked to answer): 3.17 points, 24% choose 3 points, 21.33% choose 4 points, reflecting the classroom state of passive answering.

Question 13 (want to answer but can't express), question 11 (introverted personality does not want to be the focus), question 10 (like to express opinions when chatting), question 14 (poor speaking and reluctant to express): the average score is between 3.04-3.14 points, reflecting the moderate impact of expressive ability and personality traits on classroom participation.

(3) Low-scoring items (average score ≤ 2.7 points, the corresponding situation is less obvious)

Question 3 (silence because answering questions is not helpful): The average score is 2.59, 22.67% choose 1 point, 28.67% choose 2 points, indicating that most respondents recognize the value of classroom answers.

Question 5 (Silence due to general relationship with teachers): 2.63 points, 31.33% choose 2 points, reflecting that the teacher-student relationship has a weak influence on classroom silence.

Question 6 (silence because of lack of teacher attention) and question 7 (unwillingness to speak because of lack of praise): average score of 2.69-2.73 points, nearly 60% of respondents chose 1-3 points, indicating that teachers' attention and praise are not the core factors affecting classroom silence.

5 Conclusion

(1) The main driving factors of classroom silence are classroom teaching mode (teacher-led), difficulty of questions, and group herd effect, rather than external incentives such as teacher-student relationship and teacher praise. (2) Some respondents have introverted tendencies and insufficient expressive skills, which have a certain constraint on classroom participation, but are not the dominant factors. (3) Most of the respondents recognized the value of classroom answers, which provided a basis for improving the current situation of classroom silence by optimizing the teaching mode (such as adding interactive design) and reducing the difficulty of asking questions.

References

- [1] Borich. (2018). Effective Teaching Methods. *The World of Junior High School Students*, (40), 78.
- [2] Peter McCarthy, Alec Sithole, Paul McCarthy, Jea pil Cho & Emmanuel Gyan. (2016). Teacher Questioning Strategies in Mathematical Classroom Discourse: A Case Study of Two Grade Eight Teachers in Tennessee, USA. *Journal of Education and Practice*, 7(21), 80-89.
- [3] Ren Zhongxue. (2023). Research on the Current Situation and Strategies of Effective Questioning in Primary School Mathematics Classroom (Master's Thesis, Harbin Normal University). Master
- [4] Yuan Fang. (2019). Research on the current situation and strategy of high school Chinese classroom questioning (master's thesis, Bohai University). Master's https://kns.cnki.net/kcms2/article/abstract?v=K6QWI_fiKJEMOuW4Q27OEK62iU05qe9Yj7CSD_orf5r0dMMQbkkANUk_DoCRYvTB2yH15YxxIXEfiJVTL5bopn9Swm2pZX2-Is361EtfApCw7az3bwj2Y2EQIFWjEdsGX_uKcB-UzXQoqg00_ZilGetRqdDtE7hmN4wQfxMD5E98Mnmvll4KMw==&uniplatform=NZKPT&language=CHS.
- [5] Dong Yinwen. (2023). Research on High School Chinese Classroom Questioning Strategies (Master's Thesis, Henan Normal University). Master <https://doi.org/10.27118/d.cnki.ghesu.2023.000166>.
- [6] Le Xingyu. (2024). Silence in the classroom: manifestations, influencing factors and coping strategies. *Education and Teaching Research*, 38 (11), 47-58.
- [7] Ma Lixue. (2024). Research on the Correlation between High School English Classroom Silence and Teacher Questioning (Master's Thesis, Mudanjiang Normal University). Master
- [8] Christine Chin. (2007). Teacher questioning in science classrooms: Approaches that stimulate productive thinking. *Journal of Research in Science Teaching*, 44(6), 815-843.
- [9] Zeng Benjun & Yang Zhengqiang. (2008). On the Trend of Interpersonal Trust from the Perspective of Building a Harmonious Society. *Journal of Shenyang University of Education*, (01):68-70.
- [10] Zhu Lin. (2023). Research on the causes and countermeasures of silence in junior high school English classrooms. *Life Education*, (10):34-39.