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An Empirical Study of Teacher-Student Interaction in College English Classroom from the Perspective of Educational Equality

Feifei CHEN¹

Abstract

Educational equality is seen as the cornerstone of social justice. Likewise, ensuring the equality of teacher-student interaction in the classroom plays a crucial part in meeting the requirements of social justice. In college English classroom, teachers are expected to provide students with equal opportunities to interact with one another through communicative and collaborative activities so as to give the full play of students' potential. However, it is worth noting that the unequal status in current teacher-student interaction may pose serious threat to the implementation of educational equality in higher education system. Therefore, taking the 85 students of Zhejiang Yuexiu University as research participants, the study, spanning from September 2019 to January 2020, is designed to investigate the factors that influence teachers' educational equality mindset and to assess whether the significant difference between these variables and inequality in classroom interaction exists by adopting the research instruments of classroom observation, interview and questionnaire. The data collected reveal that the inequality can be discerned in teacher-student interaction in college English classroom, for the teacher's questioning times, question types, and feedback types are closely associated with the differences of genders, personalities, regions and English levels of students. In addition, the root causes for the inequality are also examined discreetly from multi-perspectives through interviews on both teachers and students for better proposing some effective strategies to minimize educational inequality and facilitate students' development in positive directions in college English education.

Keywords: educational equality, teacher-student interaction, college English classroom, factors, effective strategies.

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Introduction

Educational equality is the manifestation of social justice in the field of education. As being a widely-concerned topic in global context since the mid-20th century, educational equality relates closely to the reasonable distribution of limited educational resources, the solid guarantee of equalizing citizens' rights to receive education as well as the further improvement of individuals' academic achievements. As Terzi (2008) put, "the ideal of educational equality is fundamentally grounded in the egalitarian principle and it is a fundamental value of social justice." Undoubtedly, educational equality plays a prominent role in promoting social fairness in a liberal democratic society. The earliest discussion of it in China can be traced back to 2500 years ago when Confucius put forward the pedagogical concept of "making no social distinctions in teaching", believing that everyone should be bestowed with the same right to receive education. While in the history of Western education, Plato first proposed the implementation of compulsory education and henceforth Aristotle further claimed that law enforcement was necessary to protect citizens' right to receive education. The preliminary exploration made by both Eastern and Western educators reveals public's great anticipation and eternal pursuit for educational equality. However, inequality still "persists in modern society and such educational disadvantage is a significant factor of social inequality" (Dorling, 2015).

The educational equality in classroom interaction is regarded as the reflection of social justice at the micro-level in teaching practices. In a dynamic classroom, teacher-student interaction serves as a significant predicator of students' behavioral and academic outcomes (Fowler *et al.*, 2008). Therefore, the fairness of classroom interaction is one of the key factors that determine the outcome of education. The concept "interaction" was first proposed by Mead (1934) who held that "human's social behavior is an interactive process in which symbols act as the medium". From the perspective of educational sociology, interaction in classroom embodies the nature of social interaction in a micro society, and frequent interaction between teachers and students is an important avenue to transfer and share knowledge, emotions, attitudes, and values. Featuring communicativeness and interactiveness, English teaching in college aims at "providing equal access to educational opportunities" (Lachance, Honigsfeld & Harrell, 2018) for all students in the classroom to get engaged through promoting the experience, practice, participation, communication and cooperation. In fact, sufficient related studies have validated that the high-quality interactive activities can facilitate students' language skills and creative thinking to some extent (English, 1997; Brendefur, & Frykholm 2000; White, 2003; Baxter, Woodward, & Olson 2005). It is believed that the classroom interaction is one of the most effective pedagogical approaches to learn knowledge (Brown, 1994; Solheim, Roland, & Ertesvag, 2018). However, previous studies have reported the fact

that at present, a great quantity of teachers who demonstrate weak sense of educational equality when interacting with students in the classroom have already led to negative emotions and poor learning motivation of students. Although extensive researches have been carried out on the educational inequality in elementary and secondary schools (Liu, Miller, Dickmann & Monday, 2018; Hansena & Gustafsson, J. 2019), far too little attention has been paid to the study that adequately investigates the real condition of teacher-student interaction in universities and colleges. Therefore, this study, based upon the theoretical framework of sociology and pedagogy, intends to explore the factors that hinder the realization of educational equality in the teacher-student interaction of college English classrooms, aiming to provide some practical and effective strategies to improve educational equality in higher education system.

Literature Review

Educational equality

The issue of educational equality in the fields of educational sociology has received mounting attention across a wide range of disciplines in recent years. The definition of educational equality differs in various perspectives. There is a large volume of published studies giving out theoretical account of this term (Yang, 2006; Zhu, 2007). According to Huang (2007), Educational equality was defined as “an educational concept that signifies everyone should be endowed with equal educational rights and opportunities, and can develop his or her own potential to the fullest under the specific social background” (P.1). Much of the previous literature on this field focused on the pursuit of equality in education system, of which the American scholar Rawls’s theory “Justice as fairness” was considered the most authoritative (Rawls, 1971). Rawls paid more attention to the vulnerable groups that are always stuck in a disadvantageous position in the resource allocation of compulsory education and attempted to ensure that the disadvantaged groups could also enjoy education freely and equally. In addition, American sociologist Coleman *et al.* (1966) redefined the connotation of “equality of educational opportunity” in an important report and believed that equal opportunity could only be approached, but never be fully realized due to the extracurricular influences. Based upon the studies conducted before, Sweden educationist Husen (1975) attempted to clarify what was meant by equality of educational opportunity and pointed out that equal educational opportunity did not only involve “starting point”, but also linked with a “treatment”, and a “final goal”. Also, a host of empirical studies have been done to examine the factors that may give rise to the discrepancy in the educational inequality in different levels of education across the globe (Thomas, & Wang, 2003; Bamberger, 2019; Welsh, & Swain, 2020).

With regard to the inequality that exists in contemporary education system in China, most scholars conducted research from a macro-perspective by focusing on the unequal allocation and distribution of resources in urban and rural areas (Liu, Liu, & Yu, 2017) and on the gender inequality (Li *et al.*, 2017). In view of the measures taken to tackle the problem, Xiong *et al.* (2017) put forward an idea of building a particular real-time video conferencing environment, attempting to promote equality in education. Zhang & Shang (2018) presented some strategies for achieving the ultimate goals of educational equality in the context of “Internet Plus” and claimed that information technology could promote the popularization of high-quality educational resources. To a certain extent, those multifaceted studies have expanded the research view on educational equality and have enabled scholars to grasp a deeper understanding of this field.

Classroom interaction

The interaction theory has exercised great influence on the studies of social sciences. Referring to Allwright (1984), “interaction in the classroom is the fundamental fact of classroom pedagogy—the fact that everything that happens in the classroom happens through a process of live person-to-person interaction”. Interactive approach, essentially, is a stimulating and inspiring way of exchanging ideas, knowledge and experience between teachers and students with the features of positive cooperation and active participation of the subjects (Sava, 2016). Teacher-student interaction, as the most important interpersonal interaction in classroom, has close relation to students’ learning outcomes. Researchers abroad have rested their eyes on classroom interaction since 1930s. The earliest sociological analysis of classroom interaction was articulated by Waller (1932) who first adopted conflict theories to interpret the mechanism of classroom interaction and argued that teaching largely depended on the interaction between teachers and students. Delamont (1976) provided the first sociological account of classroom life with emphasis on analyzing factors that related to teacher-student interaction, role setting of both parties and teaching scenarios in classroom teaching. Furthermore, several attempts have been made to classify the traits and dynamics of the interactive activities in the classroom from multiple subjects ranging from sociology to pedagogy (Lewin, Lippitt, & White, 1939; Ashley, Cohen, & Slatter, 1969; Vanlier, 1988; Hall, 2018). As to the factors that influence the effect of teacher-student interaction, Connell (1990) deemed that competence, autonomy and relatedness were the three basic psychological needs of students in the classroom and thus concluded that students would manifest more active learning behaviors when a harmonious relationship was maintained with their teachers. Apart from that, data suggest if students were questioned frequently with challenging questions and tended to give nonverbal prompts, they would score higher in cognitive performance (She, & Fisher, 2002). Surveys such as

that conducted by Cash & Pianta (2014) revealed that climate was also relevant to the quality of teacher-student interaction in classroom to some extent.

Among domestic academia, one well-known study that is often cited in research on classroom interaction is that of Wu (1999), who explored in-depth the types of classroom interaction. By adopting Bourdieu's cultural reproduction theory, the empirical study of Chen (2002) examined the equal opportunities in interactive behaviors in a relatively small-scale research. They both regarded the classroom as a miniature society and accordingly, the classroom interaction as a special kind of social interaction.

Research hypothesis

The interaction between teachers and students in classroom mainly refers to teachers' questioning (Chen, 2002). Previous studies have reported that a few variables have been tested to show close connection with the educational inequality in teacher-student interaction in China. In general, the educational discrimination correlates appreciably to students' academic performance, gender, family background, socioeconomic status and physical conditions (Wang, 2011). The empirical study conducted by Zhao (2019) validated that factors such as genders, positions, spatial arrangements and grades had great impact on influencing the equality of teachers' questioning in primary schools. Surveys such as that carried out by (Qin, 2005) indicated that the unbalanced source allocation in urban and rural areas was a crucial factor causing educational inequality in colleges and universities. Considering the disparities between universities and other levels of schools, I chose five variables, namely students' genders, personalities, regions, positions, and English levels in this research to ascertain whether they are related to the inequality in the teacher-student interaction.

Ideally, educational equality in teacher-student interaction should embody the following features: (1) the frequency of teacher-student interaction for every student is practically equal. (2) Questions asked should be reasonable and logical. (3) The feedback given needs to be effective and encouraging (Yan, 2019). Referring to the study of Chen (2010), the main types of questions involve high-level questions focusing on student's application and analytical skills and low-level questions examining students' understanding of the fundamental knowledge. Meanwhile, the feedback will be marked positive if the teacher praises or approves of or welcomes more from the student and negative if the teacher directly offers the answer or denies or criticizes or turns to ask other students. Accordingly, five hypotheses are assumed in this study that

H1: Students' genders show significant effects on the unequal teacher-student interaction.

H2. Students' personalities show significant effects on the unequal teacher-student interaction.

H3. Students' regions show significant effects on the unequal teacher-student interaction.

H4. Students' positions show significant effects on the unequal teacher-student interaction.

H5. Students' English levels show significant effects on the unequal teacher-student interaction.

Methodology

Research participants

The research started from September 2019 to January 2020 with participants consisting of 85 students majoring Chinese literature from Zhejiang Yuexiu University (ZYU) located in the city Shaoxing (near Hangzhou and Shanghai) in Zhejiang Province. Due to its distinctive features of foreign language education, ZYU cultivates students with better English proficiency than those of the same level. Among non-English majors, the students from the school of Chinese literature generally present better performance in English. The students were taught by a female teacher with more than ten years of teaching experience who specialized in interactive teaching. First, I distributed questionnaires to the 85 students to collect the demographic information of them. Then, I observed the whole process of 30 English classes and made records for each one about the questioning times, question types and feedback types given by the teacher. At the end of the term, I also interviewed 6 English teachers and 10 students, in order to make a comprehensive and objective analysis of the factors that contribute to the unequal teacher-student interaction in the classroom. Therefore, the research objects are of typicality and representativeness, and the problems emerging in the classroom interaction have certain degree of reference, which can provide a glimpse into the actual situation in college English classroom.

Specifically, from the dimension of genders, there are 13 boys and 72 girls. But it should be noted that the ratio of boys to girls is always uneven in ZYU since it is a language college. And students were classified into two main personality types with 40 students belonging to extroverted type who tended to take the initiative to answer questions and 45 students the introverted one who were more likely to avoid doing so. In view of the regions they came from, 67 students were from more developed areas in China like Zhejiang and Jiangsu Provinces while 18 students were from the less developed ones such as Yunnan and Guizhou Provinces where the educational level of English was comparatively lower and the students' listening and speaking skills were often neglected in teaching process. Concerning the dimension of positions, 16 students acted as student leaders in

the class while the rest were ordinary students. As to the dimension of English level, based upon the scores of college entrance examination and entrance tests, students were divided into three types, 25 students were A (excellent), 47 were B (medium) and 13 were C (poor).

In general, both qualitative and quantitative methods were used in this investigation to provide descriptive, interpretive and empirical data. Specifically, the research instruments included classroom observation, interview and questionnaire.

Classroom observation

I spent one term to observe classroom interaction focusing on the teacher's questioning times, question types and feedback types in the classroom respectively according to genders, personalities, regions, positions and English levels by using the classroom observation table designed beforehand. I listened to 2 classes in every week out of 15 actual teaching weeks. Therefore, a total of 585 questions in 30 lessons were recorded. In the setting of natural observation, the data collected can generally mirror the real-time teacher-student interaction in the classroom.

Interview

As a commonly-used research instrument, interview is a purposeful interaction providing information that is inaccessible through observation (Mills & Gay, 2019). In order to make the results more reliable, I selected 6 teachers of different genders, ages, college grades (including the teacher in the observed class) and 10 students of different genders, personalities, positions, regions and English levels for the semi-structured interview to further evaluate the teachers' educational equality mindset and to explore the intrinsic factors that caused this predicament. To be precise, teachers' understanding and awareness of educational equality as well as students' expectation and experience towards an equal and just teacher-student interaction were probed in details in the interview.

Questionnaire

Questionnaire was used as an auxiliary tool in this research. 85 copies of questionnaire were distributed before the observation started and all valid copies were retrieved to collect the demographic information such as the genders, personalities, regions, positions and English levels of students.

Results

I utilized the Microsoft Excel and statistical Package for Social Sciences (SPSS 21.0) to calculate the data, in order to examine the effects of different genders, personalities, regions, positions and English levels of students on the teacher-student interaction based on the questioning times, question types and feedback types given by the English teacher. An alpha level of .05 was used in this study.

Gender

The data indicated that boys and girls in the class were questioned 8.31 times and 6.63 times on average respectively (*Table 1*). In the classroom interaction, it was clear that the teacher was more inclined to ask boys questions. In terms of the question types and the feedback types, genders show significant difference ($p < 0.05$, *Table 2 & 3*), revealing the fact that more high-level questions and positive feedback were distributed to boys. To conclude, differences in gender had influenced the equality of teacher-student interaction in college English classroom and H1 is supported.

Table 1. Statistics on questioning times in different genders

Classroom Interaction Genders	Boys	Girls
Questioning times	108	477
Percentage	18.46%	81.54%
Average	8.31	6.63

Table 2. Significant difference test in terms of question types in different genders

Question types Genders	Boys	Girls
High-level	55 (50.93%)	152 (31.87%)
Low-level	53 (49.07%)	325 (68.13%)
Total	108 (100%)	477 (100%)
χ^2 (Chi-square)	13.992	
P Value	0.000	

Note: Significant difference exists when $p < 0.05$.

Table 3. Significant difference test in terms of feedback types in different genders

Feedback Types Genders	Boys	Girls
Positive	93 (86.11%)	344 (72.18%)
Negative	15 (13.89%)	133 (27.88%)
Total	108 (100%)	477 (100%)
χ^2 (Chi-square)	9.125	
P Value	0.003	

Personality

As seen from the Table 4, the extroverted students obtained more attention from the teacher than their counterparts. Meanwhile, the teacher tended to provide extroverted students with more high-level questions and gave them more positive feedback (see Table 5 & 6). It was certified that students' personalities showed significant difference on question types and feedback types based on the results $p=0.000$. Therefore, personalities have correlation with the inequality of teacher-student interaction in college English classroom and H2 is supported.

Table 4. Statistics on questioning times in different personalities

Classroom Interaction Personalities	Extroverted	Introverted
Questioning times	316	269
Percentage	54.02%	45.98%
Average(\approx)	7.9	5.98

Table 5. Significant difference test in terms of question types in different personalities

Question Types Personalities	Extroverted	Introverted
High-level	132 (41.77%)	75 (27.88%)
Low-level	184 (58.23%)	194 (72.12%)
Total	316 (100%)	269 (100%)
χ^2 (Chi-square)	12.263	
P Value	0.000	

Table 6. Significant difference test in terms of feedback types in different personalities

Feedback Types Personalities	Extroverted	Introverted
Positive	262 (82.91%)	188 (69.89%)
Negative	54 (17.09%)	81 (30.11%)
Total	316 (100%)	269 (100%)
χ^2 (Chi-square)	13.882	
P Value	0.000	

Region

In general, students from developed areas perform better in spoken English. Table 7 showed that compared with students from less developed areas, students from more developed ones received about 1.5 more times on average, indicating that the teacher preferred to interact with students from more developed regions. Likewise, as for the question types and the feedback types, regions also revealed notable difference ($p < 0.05$, Table 8 & 9). Therefore, differences in regions relate to the inequality of teacher-student interaction in college English classroom and H3 is accepted.

Table 7. Statistics on questioning times in different regions

Classroom Interaction Regions	More developed	Less developed
Questioning times	483	102
Percentage	82.56%	17.44%
Average(\approx)	7.21	5.67

Table 8. Significant difference test in terms of question types in different regions

Question Types Regions	More developed	Less developed
High-level	182 (37.68%)	25 (24.51%)
Low-level	301 (62.32%)	77 (75.49%)
Total	483 (100%)	102 (100%)
χ^2 (Chi-square)	6.390	
P Value	0.011	

Table 9. Significant difference test in terms of feedback types in different regions

Feedback Types Regions	More developed	Less developed
Positive	386 (79.92%)	64 (62.75%)
Negative	97 (20.08%)	38 (37.25%)
Total	483 (100%)	102 (100%)
χ^2 (Chi-square)	13.990	
P Value	0.000	

Position

According to Table 10, there was barely any noticeable difference in terms of questioning times between 16 student leaders and 69 ordinary students. Though student leaders were more likely to receive high-level questions (Table 11), they got less positive feedback than the rest of the students (Table 12). The figures demonstrated that students' position in the class had no significant difference ($p > 0.05$, Table 11 & 12) on questions types and feedback types. To sum up, differences in positions have no connection to the inequality of teacher-student interaction in college English classroom and consequently H4 is rejected.

Table 10. Statistics on questioning times in different positions

Classroom Interaction Positions	Student leaders	Ordinary students
Questioning times	115	470
Percentage	19.66%	80.34%
Average(\approx)	7.19	6.81

Table 11. Significant difference test in terms of question types in different positions

Question Types Positions	Student leaders	Ordinary students
High-level	44 (38.26%)	163 (34.68%)
Low-level	71 (61.74%)	307 (65.32%)
Total	115 (100%)	470 (100%)
χ^2 (Chi-square)	0.518	
P Value	0.472	

Table 12. Significant difference test in terms of feedback types in different positions

Feedback Types Positions	Student leaders	Ordinary students
Positive	88 (76.52%)	362 (77.02%)
Negative	27 (23.48%)	108 (22.98%)
Total	115 (100%)	470 (100%)
χ^2 (Chi-square)	0.013	
P Value	0.909	

English levels

As the data presented, A students got more questions on average (8.08) than comparatively lower-level students (6.72 & 5.15; Table 13). Besides, 44.55% high-level questions were offered to A students while C students only got half of them (Table 14). As for the feedback types, students with good academic performance also had greater advantages in gaining more positive feedbacks from their teacher (Table 15). It was verified that students' English levels in the class showed significant difference ($p < 0.05$, see table 14 & 15) on questions types and feedback types in the interactive process between teachers and students in college English classroom and thus H5 is accepted.

Table 13. Statistics on questioning times in different English levels

Classroom Interaction English levels	A	B	C
Questioning times	202	316	67
Percentage	34.53%	54.02%	11.45%
Average	8.08	6.72	5.15

Table 14. Significant difference test in terms of question types in different English levels

Question Types English levels	A	B	C
High-level	90 (44.55%)	102 (32.28%)	15 (22.39%)
Low-level	112 (55.45%)	214 (67.72%)	52 (77.61%)
Total	202 (100%)	316 (100%)	67 (100%)
χ^2 (Chi-square)	13.712		
P Value	0.001		

Table 15. Significant difference test in terms of feedback types in different English levels

Feedback Types English levels	A	B	C
Positive	166 (82.18%)	24 (77.22%)	40 (59.70%)
Negative	36 (17.82%)	72 (22.78%)	27 (40.30%)
Total	202 (100%)	316 (100%)	67 (100%)
χ^2 (Chi-square)	14.352		
P Value	0.001		

Discussion

The findings of the observation clearly indicate that educational inequality does exist in teacher-student interaction in college English classroom. The inequality is mainly reflected in the aspects of questioning times, question types and feedback types affected by four variables including genders, personalities, regions and English levels of the students. According to the results of the interviews, 9 students out of 10 held negative attitudes to the question “Do you think your English teacher treat all classmates equally in the classroom”. Besides, over 80% students believed the teacher had a preference for boys and students with good grades in class. As for teachers, all admitted that they could not treat students equally, be it consciously or subconsciously. In response to the question “What kind of students are you more inclined to ask questions?” 3 teachers said they tended to ask students with good academic performance as they could provide more correct and informative answers. 2 mentioned they preferred to ask boys questions for they were more active and not afraid of embarrassment. For the question “How do you understand the equality in teacher-student interaction in the classroom”, the teachers pointed out that equality in higher education was one of the greatest guidelines for achieving social equity. However, differences in students’ motivation, qualities, interactive competence as well as teachers’ teaching skills, beliefs and attitudes would hinder the realization of interactive equality.

Through in-depth analysis, the root causes that forming the unequal status in classroom interaction are detected as follows: (1) The fact that educational investments in different parts of China have long been unbalanced made students from central and western regions incomparable with those from eastern coastal areas, especially in the oral English skills; (2) With vague understanding of educational equality and weak skills in yielding high-quality interactive activities, teachers are sometimes biased and stereotyped to students with poor qualities; (3) The individual differences in personality, intelligence, learning ability and learning attitude of students may reinforce the inequality of classroom interaction between teachers and students. In view of the existing problems, in order to

optimize the quality of classroom teaching and to better achieve educational equality, the following strategies are proposed: to strengthen teachers' moralities and raise their awareness of the importance of equal treatment with every student in classroom interaction to avoid prejudice and stereotype; organize training programs to enhance teachers' teaching abilities, especially on giving high-quality questions and feedbacks, optimizing the strategies of classroom organization and creating collaborative learning atmosphere in the classroom; guided by the student-oriented teaching philosophy, teachers are required to adopt multiple evaluation criteria featuring fairness and objectivity to motivate students to take initiatives in the interactive activities so as to give full play to students' individual characteristics. As Cogen & Lotan (1995) stated, "it is possible to produce equal-status in classroom in heterogeneous classrooms as well as significant gains in achievement." If all received the same quality of education, received the same respect from teachers all of whom were equally able and dedicated, all would "succeed".

Conclusion

The idea of equality in education has developed in similar fashion to the more general concept of social equity. The findings have added abundant evidence to the fact that there is an unfair interaction between teachers and students in Chinese College English classroom influenced by variables like gender, personality, region and English level of students. In addition, the in-depth analysis of the statistics and interviews undertaken here, has extended our knowledge of the reasons behind the unequal phenomenon from a microscopic perspective and thus helps put forward the effective strategies for improving the educational equality in teacher-student interaction in college English education. Quality and equality of education, are indeed, important not only to students but also for the sustainable development of society as a whole (Zhang, Qin, & Liu, 2019). Therefore, these strategies, including cultivating teachers' moral literacy and awareness of educational equality, improving their teaching and interactive abilities as well as adopting fair and objective evaluation criteria to measure students' development both in cognitive and affective domains, can generally divert the public attention to the issue of educational equality in college English education so that the positive teacher-student interaction in the classroom can exert a great influence on the academic performance and overall development of college students. In closing, this research authentically responds to the impending task of the equal educational opportunities for English learners at tertiary level in a Chinese context and lays a foundation for further research to remedy the present predicament.

Recommendations

From the research results and findings, some practical suggestions are proposed as follows:

- The data collected are relatively based upon a limited number of participants from merely one university in Eastern part of China; therefore, in order to broaden the extent to which the findings can be generalized, a larger-scale study can be conducted to strengthen the explanation of the factors that cause the inequality in a real-time classroom.
- To provide a panoramic view of the educational equality in college English education, the extra factors that may influence the equality of teacher-student interaction in the classroom should be explored further to illuminate the actual situation in Chinese higher education system.
- The research only touches upon the teacher-student interaction in English classroom at tertiary level, so it is beyond the scope of the study to probe into the teacher-student interaction in other subjects or in education of elementary and secondary schools. Therefore, it is advisable to expand the research in greater scope and depth in the future.

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