

Students' Interactions and Communication Skills Towards Their Maximum Learning

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Abstract: This paper explores the critical role of interaction and communication skills in educational Settings, especially in the context of higher education in China, and analyzes the impact of these skills on maximizing student learning outcomes. The paper emphasizes the importance of effective interaction and communication as core elements in the process of language learning, because language acquisition and ability development depend on the effective combination of input and output. The paper proposes that a comprehensive educational reform is necessary to address the identified communication barriers of students, aiming at promoting the improvement of students' interaction and communication skills. Such reforms are essential to achieve the goal of high-quality undergraduate education and to develop innovative and communicative skills.

Keywords: Interaction and Communication Skills; Student Learning Outcomes; Higher Education; Teacher-Student Interaction; Communication Barriers.

1. Introduction

Effective interaction and communication skills are essential for student learning, especially in higher education. Krashen (2022) points out that language acquisition largely depends on interaction, and the exposure of language input and active language output are helpful for the improvement of learning effect. Boudreau et al. (2018) further emphasize that student performance is significantly affected by verbal and non-verbal communication both inside and outside the classroom. However, barriers such as language, technology, physical environment, culture, emotions and communication styles hinder effective communication.

Language barriers, including verbal and non-verbal cues, often lead to misunderstanding and conflict. Technical barriers, such as outdated equipment or poor network connections, further limit effective communication (Chen et al., 2023). Physical barriers, such as noisy classes, can disrupt communication, while cultural differences can create misunderstandings about norms, gestures, and values. Affective disorders stem from inadequate emotional intelligence (Gratis, 2022), which also affects communication. In addition, different communication skills and styles can lead to problems such as conflicts and misunderstandings.

In the context of China's higher education, improving the quality of undergraduate education has become the core task. The Ministry of Education has implemented a series of reforms aimed at transforming traditional classroom teaching and fostering a student-centered dynamic learning environment to promote the cultivation of innovative talents. Effective teacher-student interaction is the key to improve learning results, which can stimulate students' active participation and create a positive learning atmosphere (Zhang Lin, 2023). Traditional teacher-centered teaching methods, although still dominant in the classroom, often fail to meet the needs of modern education, resulting in low student participation and lack of autonomy (Wang Li and Wu Jun, 2019). This paper investigates how their interaction and communication skills affect students' academic performance and experience, with the aim of identifying the role these

skills play in the learning process and providing valuable insights for future educational practice. In short, promoting effective communication and interaction between teachers and students, while addressing existing communication barriers among students, is of great significance for reforming higher education, improving learning outcomes, and cultivating innovative talents.

2. Theoretical Framework

Social Cognitive Theory (SCT) is a theory of social psychology developed by psychologist Albert Bandura in the 1960s. Bandura (2001) describes the influence of individual experience, others' behavior, and environmental factors on individual health behavior. The theory proposes that human behavior is the result of interactions between individual characteristics, environmental factors, and behavioral patterns. SCT further proposed that there is a mutually determined relationship between individuals, environment and behavior, forming a "ternary interaction", and pointed out that individual behavior is not only affected by the external environment, but also regulated by the internal cognitive process. According to the theory, these three elements continuously influence each other, shaping behavior and providing insights into interventions for behavior change.

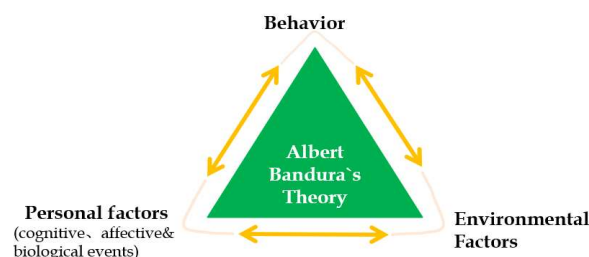


Figure 1. The interdependent relationship of the three elements of SCT

Social cognitive theory is often regarded as a bridge

between behaviorist learning theory and cognitive learning theory. It emphasizes the interaction of intrinsic factors (such as cognitive and symbolic processing, such as attention, memory, and motivation) with extrinsic influences (such as rewards and punishments) in shaping behavior. The main components of SCT related to individual behavior change include: (1) Self-efficacy: the belief that an individual can control and perform a certain behavior. (2) Behavioral capacity: understanding and possessing the skills to perform an action. (3) Expectation: Judging the result of behavior change. (4) Expectations: Assign value to the results of behavior change. (5) Self-control: regulating and monitoring individual behavior. (6) Observational learning: Learning by watching others perform or model desired behavior. (7) Reinforcement: Promoting behavior change through incentives and rewards. (Islam, 2023)

SCT can be used as a theoretical framework in different scenarios and groups, and has been widely used in various fields, especially in learning and education, health behavior, career development, and media influence, demonstrating its adaptability and importance. By exploring the fundamental principles of social cognitive theory, we can deepen our understanding of the complex mechanisms of human behavior and social dynamics. Paul Main (2023) notes: "From the previous discussion of mutual determinism and the dynamic interaction of environment, cognition, and behavior, it is clear that social cognitive theory has a profound impact on education and classroom practice." These principles can be used by educators to design classroom activities that foster students' confidence in their own abilities, enhance their sense of personal control, and promote the development of important skills.

Therefore, this study will adopt social cognitive theory. First, teachers can apply these principles and design classroom activities to cultivate students' confidence in their own abilities, enhance their sense of personal control, and promote the development of business English majors' interaction and communication skills. Subsequently, teachers can develop strategies that not only enhance students' performance in the classroom environment, but also promote their personal growth and well-being. Finally, the insights brought about by social cognitive theory can significantly enhance educational practice and contribute to the creation of a dynamic learning environment.

3. Survey Participants and Methods

3.1. Survey Participants

The study targets business English major students at one University in Guangdong, a private institution in South China known for its comprehensive programs in business and technology. Participants include 796 students across different academic years, ranging in age from 18 to 24. The purposive sampling method was applied to ensure a diverse representation of the student population.

Inclusion criteria were broad, accepting all actively enrolled students for the academic year 2024-2025, ensuring diversity regardless of gender identity, ethnicity, or sexual orientation. This inclusive approach ensures that the sample reflects the overall student demographic. However, transfer students were excluded to maintain consistency in academic background, minimizing potential variations in experiences due to different educational trajectories.

The data collection aims to gain insight into the practical

application and experience of students' communication skills in a university teaching environment, which is closely related to the need to explore the impact of these skills on their learning outcomes and their career development.

3.2. Survey Methods

Purposive sampling was used by the researcher since it was thought to be the most appropriate methodology for obtaining responses. Obilor, E. I. (2023) mentioned that purposive sampling is also known as subjective or judgement sampling. It is often used in qualitative research, where the researcher wants to gain detailed knowledge about a specific phenomenon rather than make statistical inferences, or where the population is very small and specific. Purposive sampling is a non-probability methodology that allows researchers to use their discretion when selecting respondents. Hence, meticulous planning and thoughtful selection of sampling methods are essential to determine an adequate sample size and uphold the credibility of research outcomes.

Thus, the researcher selected the respondents based on the following criteria.

Table 1. Criteria for Selection

Inclusion criteria	Exclusion criteria
Business English Majors Actively enrolled for SY 2024-2025	Those transfer students
Gender: all sexual orientation/no discrimination according to gender All year level	none

Subsequently, the researchers utilized G*Power to further assess the statistical strength of the study and to determine the minimum sample size. The researcher intends to distribute the survey to business English students for the 2024-2025 academic year. Consideration was given to potential outliers, withdrawals, or invalid responses, and the researcher chose to account for potential disparities in the number of respondents.

4. Survey Results and Analysis

4.1. Summary of the Assessment of the Interactions and Communication in Classroom Setting

The assessment evaluates key communication skills in a classroom environment, focusing on various dimensions such as interpersonal communication, speaking, listening, attending, and responding skills. The results are presented in terms of the number of participants (N), the mean score (Mean), and the standard deviation (SD), along with a verbal interpretation of the overall performance. The table below highlights the average scores for each skill, which provide insights into how students perceive their abilities in these areas.

The above data shows that interpersonal communication garnered the highest mean, 3.76, it can be deduced that the students have active exchange of information. The lowest mean has been reflected on speaking and listening skills, and these only pointed out that the students have difficulty on these skills since English language is a second or foreign language to them. According to Humouda(2013), EFL(English as a Foreign Language) learners have crucial problems in listening comprehension because universities pay attention to grammar, reading and vocabulary. Listening and speaking skills are not significant parts of many books and

teachers do not consider these skills in their classes.

Table 2. Summary of the Assessment of the Interactions and Communication in Classroom Setting

		N		Mean		SD		Verbal Interpretation	
Interpersonal Communication		340		3.76		0.68		High	
Speaking Skills		340		3.58		0.71		High	
Listening Skills		340		3.58		0.68		High	
Attending Skills		340		3.70		0.67		High	
Responding Skills		340		3.63		0.61		High	
Interactions and Communication		340		3.65		0.59		High	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Neutral (Average); 3.51-4.50: Agree (High); 4.51-5.00 : Strongly Agree (Very High).

4.2. Summary of the Assessment of the Effectiveness of the Interactions and Communication in Classroom Setting

This section focuses on the effectiveness of interactions

and communication within the classroom environment. The assessment covers areas such as verbal and social interactions, self-awareness, and empathy. The table below provides an overview of the participants' responses, showing the mean scores, standard deviations, and the corresponding verbal interpretations.

Table 3. Summary of the Assessment of the Effectiveness of the Interactions and Communication in Classroom Setting

		N		Mean		SD		Verbal Interpretation	
Verbal Interactions		340		3.45		0.69		Average	
Social Interactions		340		3.62		0.56		High	
Self-Awareness		340		3.50		0.55		Average	
Empathy		340		3.92		0.67		High	
Effectiveness of Interactions and Communication		340		3.62		0.55		High	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Neutral (Average); 3.51-4.50: Agree (High); 4.51-5.00 : Strongly Agree (Very High)

From the above data, it can be seen that students' verbal interaction, social interaction, self-awareness, empathy and overall communication effect are the key factors to reveal the effectiveness of classroom dynamics to achieve classroom interaction and communication. First, the average score for verbal interaction was 3.45, indicating that while students were engaged in verbal communication in class, there was still room for improvement, such as expressing ideas and participating in discussions. The self-awareness score of 3.50 indicates that students have some awareness of their own behavior and emotions when engaging in classroom interactions. Self-awareness is one of the key elements of effective communication, and it is related to emotional intelligence. In contrast, the social interaction score was higher, with an average of 3.62, indicating that students were more comfortable and effective in social interactions. It's worth noting that empathy averaged 3.92, which is a high score. It shows that even if they have different opinions with others, they can respect and understand the views of their peers when communicating, and generally have empathy. Finally, the overall interaction and communication effectiveness score was also high, with an average of 3.62, reflecting students' positive evaluation of their verbal and non-verbal communication skills.

In summary, while there is still room for targeted improvement in verbal interaction and self-awareness, classroom communication shows strong social interaction,

empathy, and communication effectiveness among students. This balance highlights that while fostering a collaborative and empathetic learning environment, oral communication and self-awareness skills still need to be focused on in order to achieve comprehensive and effective classroom dynamics. For enhancing student engagement not only has academic outcomes but also social and emotional outcomes that include the relationship skills of learners (Morgan et al., 2022).

4.3. Significant Relationship between the Quality and Effectiveness of Interaction and Communication in the Classroom Setting

This section examines the significant relationship between the quality and effectiveness of interactions and communication within the classroom. The correlation matrix below illustrates the strength of these relationships across various communication skills such as verbal interactions, social interactions, self-awareness, and empathy.

Using Pearson's correlation, the analysis generated p-values lower than the 0.05 significance level for all variables. Specifically, there is a positive correlation between the assessment of the quality of interactions and communication and the assessment of their effectiveness. The correlation coefficients range from 0.62 to 0.94, indicating strong to very strong positive relationships. This indicates that as the

assessment of interaction and communication quality (including interpersonal communication, speaking skills, listening skills, attending skills, and responding skills)

increases, the assessment of the effectiveness of the interactions and communication (verbal interactions, social interactions, self-awareness, and empathy) will also increase.

Table 4. Correlation Matrix between the Quality of Effectiveness of Interaction and Communication in the Classroom Setting

	Verbal Interactions	Social Interactions	Self-Awareness	Empathy	Overall
Interpersonal Communication	0.64	0.84	0.62	0.69	0.78
	< .001	< .001	< .001	< .001	< .001
Speaking Skills	0.82	0.76	0.66	0.70	0.83
	< .001	< .001	< .001	< .001	< .001
Listening Skills	0.83	0.73	0.72	0.67	0.83
	< .001	< .001	< .001	< .001	< .001
Attending Skills	0.78	0.83	0.68	0.81	0.88
	< .001	< .001	< .001	< .001	< .001
Responding Skills	0.62	0.77	0.74	0.70	0.79
	< .001	< .001	< .001	< .001	< .001
Overall	0.85	0.89	0.78	0.82	0.94
	< .001	< .001	< .001	< .001	< .001

Legend: .00-0.19: Very Weak; 0.20-0.39: Weak; 0.40-0.59: Moderate; 0.60-0.79: Strong; 0.80-1.00: Very Strong.

These findings are consistent with the transactional model of communication, which emphasizes that the effectiveness of communication is determined not only by the clarity and quality of individual communicative acts but also by the mutual understanding and responsiveness between the communicators. These findings are consistent with the interactive communication model, which emphasizes that communication effectiveness depends not only on the clarity and quality of individual communication processes, but also on the ability of communicators to understand and respond to each other. When the quality of communication improves, better listening, clear language, and appropriate responses clearly enhance the effectiveness of communication, leading to more meaningful and productive interactions. Excellence in education stems from high-quality stakeholder relationships, and communication is the key to building these relationships (Wieczorek & Manard, 2018). For example, a study by Tustonja found that active listening is the basis of the empathic model of communication, and in person-oriented communication, it is a skill that, as we could see in the aforementioned research, proved to be crucial. The elements of active listening are practical patterns by which we improve our communication competence and enable the development of a model of empathic communication. (Tustonja, 2024).

Moreover, these findings are supported by empirical research in educational psychology, which shows that strong interpersonal and communication skills are associated with better academic and social outcomes. This interaction has been shown to have a positive impact on language acquisition and instruction within the classroom setting. (Pratiwi, 2023) Students with excellent communication skills performed better on group tasks, had less conflict with group members, and showed higher empathy and social awareness, ultimately

contributing to improved learning outcomes. Rustandi and Mubarak (2017) assert that interaction plays a pivotal role and confers benefits in this context, as it facilitates the enhancement of students' language proficiency through exposure to speech from other teachers or students. Moreover, Effective interaction and communication during classroom sessions have been found to facilitate the process of knowledge transfer (Fithriani, 2021) and strengthen the relationship between teachers and students.

In sum, the significant positive correlation between communication quality and its effectiveness suggests that students' communication skills are not only relevant to their academic success, but also affect their social abilities and mental health. Therefore, the enhancement of students' communication skills should be the core focus of educational interventions aimed at effective classroom interaction. When designing curriculum and intervention measures, teachers should take the cultivation of communication ability as the main goal in order to promote the all-round development of students and improve the learning effect.

5. Conclusion and Recommendations

Through a systematic study of interaction and communication skills in the context of Chinese higher education, this paper explores the impact of these skills on maximizing student learning outcomes. The focus of the research is to assess the ability of business English students in classroom interaction and communication, and measure its quality and effectiveness. The results of the study showed that the average score for students' interpersonal communication skills was the highest, while the average scores for listening and speaking skills were the lowest, reflecting that students had certain difficulties in listening and speaking in the context of English as a second or foreign language. When exploring

the effectiveness of communication, the results showed that students rated highly in verbal interaction, social interaction, self-awareness, and empathy, but there were still gaps in listening and speaking. It can be seen that all students have similar views and needs regarding classroom interaction and communication.

An important conclusion of this study is that there is a significant correlation between the quality of interaction and communication and their effectiveness. This shows that students can further improve their learning outcomes by enhancing their communication skills and interaction ability in the classroom. Therefore, this study suggests that future education reforms should pay more attention to cultivating students' listening and speaking skills, particularly in business English courses, to enhance their overall language proficiency. Based on the research results, this paper puts forward the following suggestions: When implementing educational reforms, educators should address the barriers to students' communication, especially in listening and speaking skills, by creating a more interactive and inclusive classroom environment, so as to improve their comprehensive language ability. Effective interaction and communication enhance students' motivation and enthusiasm for learning, ultimately promoting high-quality undergraduate education and cultivating high-quality talents with innovative abilities and practical skills.

References

- [1] Boudreau, C., MacIntyre, P., and Dewaele, J.-M. (2018). Enjoyment and anxiety in second language communication: An idiodynamic approach. *Stud. Second Lang. Learn. Teach.* 8, 149–170. doi: 10.14746/ssllt.2018.8.1.7.
- [2] Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26.
- [3] Chen, L., Smith, J., & Johnson, M. (2023). Technological barriers as obstacles to effective communication. *Journal of Communication Technology*, 45(2), 87-102.
- [4] Fithriani, R. (2021). Code-switching as an efl instructional strategy: an insight to indonesian lecturers' practices. *Language Literacy: Journal of Linguistics, Literature and Language Teaching*, 5(1), 23-35.
- [5] Gratis, B. (2022, January 30). Overcoming emotional barriers to communication. Posts. Retrieved from <https://nulab.com/learn/collaboration/overcoming-emotional-barriers-to-communication/>.
- [6] Hamouda, A. (2013). Learners' listening comprehension difficulties in English language teaching. *International Journal of Academic Research in Progressive Education and Development*, 2(2), 115-128. <https://files.eric.ed.gov/fulltext/EJ1101226.pdf>.
- [7] Islam, K. F., Awal, A., Mazumder, H., Munni, U. R., Majumder, K., Afroz, K., Tabassum, M. N., & Hossain, M. M. (2023). Social cognitive theory-based health promotion in primary care: A multi-country review. *Heliyon*, 9(4), e19095.
- [8] Krashen, S. D., & Brown, E. N. (2022). Investigating the Role of Interaction in Language Learning. *Journal of Language Teaching and Research*, 11(6), 186-189.
- [9] Main, P (2023, May 08). Social Cognitive Theories. Retrieved from <https://www.structural-learning.com/post/social-cognitive-theories>.
- [10] Morgan, L. Close, S., Siller, M., Kushner, E., & Brasher, S. (2022). Teachers' experiences: social emotional engagement – knowledge and skills. *Educational Research*, 64(1), 41-59. <https://doi.org/10.1080/00131881.2021.1988865>.
- [11] Obilor, E. I. (2023). Convenience and purposive sampling techniques: Are they the same? *International Journal of Innovative Social & Science Education*, 11(1), 1-7.
- [12] Pratiwi, A., & Fithriani, R. (2023). An investigation of teacher-student verbal interaction in an Indonesian EFL classroom: A Flanders interaction analysis category (FIAC) system. *Journal of Language*, 5(1), 45-54. <https://doi.org/10.30743/jol.v5i1.6969>.
- [13] Wang, L., & Wu, J. (2019). The Importance of Teacher-Student Communication in Chinese Classroom. *Journal of Language Teaching and Research*, 10(1), 190-195.
- [14] Zhang, L., & Li, M. (2023). The Impact of Teacher-Student Interaction on Classroom Teaching Quality: A Systematic Review. *Journal of Educational Theory and Practice*.