

Analysis of the effectiveness of blended learning based on improving interpersonal problems

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Keywords: Interpersonal issues; Blended learning; teaching effectiveness

Abstract: In the teaching of the school level public elective course "Interpersonal Communication Psychology", 30 students were selected as the control group and traditional teaching methods were adopted, while 30 students were selected as the experimental group and mixed teaching methods were used. Before and after class, the "Interpersonal Problem Scale" and a self-designed teaching effectiveness questionnaire were tested to examine the effect of mixed teaching on improving interpersonal problems among college students. Research has found that the competitiveness of students in the experimental group has significantly decreased; There are differences in interpersonal problems among college students of different genders, majors, and seat preferences; College students who believe that blended learning is effective are more sociable, dominant, and indifferent; 56.82% of students enjoy the interaction between teachers and students, and this group of students has a higher level of cooperation; Psychological measurement and other teaching activities that provide one-on-one feedback are most popular among students.

1. Introduction

Interpersonal relationships are crucial for healthy personality development and social adaptation^[1], and various psychological problems are related to impaired interpersonal function^[2]. Interpersonal problems refer to interpersonal behaviors that individuals find difficult and those that cause distress to them. Interpersonal problems are often reported as "I find it difficult to be confident," "I find it difficult to get close," "I am too responsible," "I cannot comply," or "I often engage in pleasing behavior," "I interfere too much with others," and so on. Interpersonal problems among college students refer to the psychological distress and stress that individuals experience during their interactions with others^[3]. On the one hand, college students need good interpersonal communication to meet their psychological needs for intimacy, tolerance, and communication, and on the other hand, they often exhibit characteristics of fragile interpersonal relationships or social avoidance due to various interpersonal problems. College students with interpersonal problems have lower life satisfaction, insufficient sense of life meaning, and are highly positively correlated with depression^[4].

The methods of interpersonal mode group counseling, mindfulness cognitive group counseling, and individual psychological counseling have been proven to improve the interpersonal problems of college students to a certain extent. Deep self exposure, moderate emotional release, and feedback

from others play a crucial role in group activities. The various group tutoring activities in schools belong to extracurricular activities, with limited quotas and the need to occupy students' spare time, resulting in a smaller audience^[5].

Blended learning has the advantage of carrying out various classroom activities. Students have mastered basic knowledge points through online learning. In offline physical classrooms, teachers organize discussions, games, role-playing, group presentations, and other teaching activities for full classroom interaction. Students not only deepen their understanding of knowledge, but also improve their practical application ability of various skills. This study utilized MOOC online course resources from Chinese universities to create an SPOC course on interpersonal communication psychology. During the offline classroom teaching process, a planned psychological test, thematic discussion, book research, and group activities were arranged to enhance the interaction between teachers and students, as well as between students and students. The aim was to verify the effectiveness of blended learning in improving interpersonal communication problems among college students and explore the relevant factors that affect the effectiveness of blended learning.

2. Research objects and methods

2.1 Research object

Students from the public elective course "Interpersonal Psychology" in the spring and autumn of 2023 were selected as participants, with a limited number of course participants for both teaching classes of 30. The students come from various majors in various colleges of Beijing United University, mainly concentrated in second and third year students, in table 1.

Table 1: Comparison of General Information between the Experimental Group and the Control Group

index	experimental group	control group
Gender (male/female)	8/22	6/24
Grade (2/3)	16/14	13/17
Major (Literature/Science/Engineering)	6/12/11	8/13/9

2.2 Research tool

We used a self-designed SPOC Teaching Effectiveness Questionnaire to investigate students' attitudes towards classroom activities and related influencing factors. Use the Inventory of Interpersonal Problems 32 (IIP-32) to measure the interpersonal problem status of elective students. IIP-32 consists of 32 items, with a 5-level rating. The higher the score, the more serious the interpersonal problem, and it has good reliability and validity among college students. Interpersonal issues include two dimensions: agency (from dominance to obedience) and communication (from indifference to intimacy) (Alden et al., 1990). Control refers to the state of being a differentiated and differentiated individual, manifested as an effort to pursue control and power. Connection refers to the state of being part of a social or spiritual entity, manifested as the pursuit of intimacy, unity, and solidarity (Wiggins, 1991). The different combinations of two dimensions constitute eight factors: dominance (PA), competitiveness (BC), indifference (DE), avoidance (FG), compliance (HI), cooperation (JK), enthusiasm (LM), and sociality (NO). In this study, Cronbach across eight dimensions of the scale α The coefficient is between 0.654 and 0.853, in table 2. The data was analyzed using SPSS 23.0 statistical software. Quantitative data is represented by ($\bar{x} \pm s$), and t-tests are

performed for inter group comparisons; Count data is represented by [n (%)], with inter group comparison rows χ^2 Inspection; $P < 0.05$ indicates a statistically significant difference.

Table 2: Reliability statistics

Alpha	Number of projects
.654-.853	32

2.3 Research design

30 students in the spring semester were selected as the control group, and traditional teaching methods were used. Classroom teaching was mainly taught by teachers; 30 elective students in the autumn semester were selected as the experimental group and adopted a blended learning approach. The students learned basic knowledge points online and completed unit assignments. The offline classroom teaching was planned to arrange 6 theme discussions, 2 group interpersonal counseling sessions, and 2 classroom games. Both semesters are taught by the same teacher.

In the first and last week of this semester, the Interpersonal Problem Scale (IIP-32) was administered to students in the control group and experimental group, respectively. The improvement of interpersonal problems before and after class was used as the main psychological indicator to evaluate the teaching effectiveness of this course.

3. Results and discussion

3.1 The competitiveness of the experimental group of college students has significantly decreased

Table 3: Comparison of interpersonal traits between two groups of students before and after

experimental group		t	P	control group		t	P	
Before	After			Before	After			
BC	7.52	7.05	2.154	.048*	7.63	7.83	-.690	.493

See Table 3, the decrease in competitiveness among the interpersonal traits of students in the experimental group reached a significant level. Competitiveness reflects whether there is a balance between self-interest and altruism in the social process. Highly competitive individuals are more likely to calculate others, focus on themselves, and only consider their own feelings and gains and losses, disregarding the feelings of others. The teaching activities of blended learning enable students to learn how to consider the feelings and needs of others in social interactions, rather than blindly pursuing the maximization of personal interests.

There was no significant change in the enthusiasm of the experimental group and the control group students, indicating that the design of the teaching process lacked guidance for students to strengthen self-protection, including how to identify the other party's aversion, identify others' lies, and examine the motivation behind their behavior.

3.2 There are gender and professional differences in interpersonal issues

In terms of gender differences, unlike previous studies, it was not found that male students had more interpersonal problems than female students, and there was no significant difference in the total score of interpersonal problems among students of different genders. Female students are significantly more cooperative than male students, and significantly less competitive than male

students. The cooperation in interpersonal problems reflects whether individuals can keep pace when completing tasks together with others. Appropriate cooperation is manifested as humility and sincerity, while transitional cooperation tendency is manifested as excessive submission to oneself and compromise. Healthy collaboration is beneficial for the development of classroom interactions such as group assignments, classroom discussions, and Q&A sessions, see table 4.

Table 4: Differences in interpersonal trait factors among college students

Interpersonal factors	Basic information		t	P
	male	female		
JK	14.0526	16.0435	-.2549	.015*
BC	10.3684	6.6957	3.415	.001**
LM	liberal arts	science	2.201	.038*
	17.400	16.000		
HI	liberal arts	engineering course	2.108	.047*
	15.2667	12.7778		
DE	Sitting in the middle of the classroom	indifferent	-3.837	.001**
	9.2667	12.6364		

Teachers often feel that female classmates are easier to cooperate with and better able to cooperate with various activities carried out by teachers. But at the same time, teachers need to guide female students to advocate for their own rights, express different opinions, and avoid excessive submission. For classrooms with a high number of male students, teachers not only need to establish fair, clear, and effective norms in various aspects of teaching, but also should consciously guide male students to consider the needs and feelings of others, and promote better collaborative activities.

Liberal arts students have higher levels of enthusiasm and compliance compared to science and engineering students, respectively. Individuals with high enthusiasm tend to self sacrifice during social interactions, while those with high obedience tend to lack confidence, act lazily, and be passive. Liberal arts students lack a strong sense of boundaries in their social interactions, which can easily invade the privacy of others. They also lack initiative and are not good at independent thinking, judgment, and action in team activities.

In addition, a survey found that 34% of students prefer to sit in the middle of the classroom, 45% of students "sit wherever there is a seat", only 11.36% of students choose to sit in the front row of the classroom, and 9.09% of students choose to sit in the back of the classroom. Where students prefer to sit in the classroom is also related to their interpersonal traits. Students who sit wherever there is a seat tend to treat others more coldly than those who sit in the middle of the classroom. They are cautious about keeping a distance from others and are more likely to use argumentative methods to deal with social conflicts.

3.3 There are significant differences in interpersonal problems among students with different attitudes towards blended learning

A survey on whether blended learning has yielded results among students shows that 76% of students believe that there is always inspiration and achievement. Students with this attitude have significantly higher scores in the three indicators of sociality, dominance, and indifference compared to those with occasional gains, uncertainty, and no gains. Among them, students with different attitudes show significant differences in sociality see table 5. Individuals with high sociality tend to be outgoing, enthusiastic, lively, and sociable, but lack a sense of boundaries between individuals. They can impose their personal will on others, leading to dissatisfaction and alienation. These students enjoy various classroom activities and are able to actively participate in them. If the teacher

guides them properly, not only can they make the classroom interactive atmosphere lively, but they can also learn to prioritize the boundaries of others and respect their wishes.

Table 5: There are significant differences in interpersonal problems among students with different attitudes towards blended learning

Interpersonal factors	Always inspiring and rewarding	Almost no harvest	t	P
NO	14.97	11.62	.164	.000**
PA	11.7	10.04	2.052	.045*
DE	8.83	10.27	-2.358	.022*

Individuals with high dominance have a strong personality and enjoy controlling others; Individuals with high aloofness lack empathy and distance themselves from anyone. In individual psychological tests, group counseling, discussions, games and other classroom interactive activities, the personality traits of these two types of students are easily exposed. The evaluation, feedback, and demonstration effects of other students and teachers have a greater impact on the inner feelings of these two types of students.

3.4 Students with different preferences for classroom interaction have differences in interpersonal issues

Table 6: Interpersonal differences in classroom interaction preferences

Interpersonal factors	Teacher-Student	Student-Student	t	P
JK	16.29	14.84	2.184	.034*

A survey on "which type of classroom interaction do you like?" found that 56.82% of students choose interaction between teachers and students, such as teachers asking questions and students answering; 28.73% of students are more willing to accept interactions between students, such as group activities, group discussions, etc; 18.18% of students choose to interact between teachers and some students. The teacher consciously initiates the topic, and the whole class actively thinks and responds. Chinese students are the most familiar and adaptable. However, if there is a lack of supervision and effective organization in the interaction between students, it often becomes a formality and students do not gain much from it, see table 6.

Comparing the interpersonal traits of students who choose different types of interaction, it is found that students who prefer "teacher student" interaction have significantly higher levels of cooperation than those who prefer "student to student" interaction. Students with high levels of cooperation may be humble, sincere, and willing to give when interacting with others, but they are prone to trusting others and even being deceived. They choose teacher led classroom interaction, and candid and sincere public speaking can be protected by the teacher. For this group of students, teachers need to guide them to establish safety awareness and use appropriate self-protection strategies in addition to smooth teacher-student interaction.

3.5 College students prefer classroom interactive forms with game like nature

The survey found that the most popular classroom interaction methods among college students are psychological measurement, group activities, games, group discussions, teacher questioning, role-playing, rain classroom submissions or private messages in cloud class, followed by debate and

student PPT presentations. In addition, 77.27% of students believe that attending classes in smart classrooms has improved the teaching effectiveness of blended learning, and 22.73% of students choose "uncertain."

4. Conclusion

4.1 Blended learning can improve interpersonal problems among college students

After a semester of blended learning, the competitiveness of the experimental group students significantly decreased, and their self-centered tendency was alleviated to a certain extent. They learned to think from different perspectives and were able to actively provide support to their peers. The completion rate of online learning and offline attendance of students in this course are both high. Students actively participate in various offline activities and complete assignments diligently. In each activity experience, students expressed the inner touch that the course brought to them, such as "I understand myself better", "I am willing to actively interact with others", and "I have learned a lot of knowledge".

4.2 Gender, profession, learning attitude, etc. can serve as clues for teachers to tailor their teaching to their individual needs

Female classmates tend to compromise in interpersonal communication, lacking the ability to express personal positions and defend personal interests; Male students should learn to think from different perspectives and empathize with each other's feelings in social interactions. Liberal arts students are prone to inferiority and lack of initiative in social interactions, and need to cultivate the qualities of independent thinking, questioning, and experimentation. Teachers need to be wary of students who are overly sociable. Although classroom activities have a high level of participation, they can easily impose their own wishes on others, making them hesitant. While helping students step out of a self-centered world and embrace socializing, teachers need to consciously guide them to prevent being deceived and exploited.

4.3 Teaching equipment such as smart classrooms can help carry out blended learning

Students believe that smart classrooms help them participate in classroom activities and facilitate various forms of classroom interaction. The commonly used teaching methods in traditional teaching, such as psychological measurement, case discussion, and teacher questioning, are still applicable in blended learning, and because blended learning provides ample offline teaching time, it can better play its role.

Compared to the evaluation of teachers and courses by students, as well as their academic performance, using the changes in psychological indicators of students before and after class as the evaluation indicator for the teaching effectiveness of psychological courses is more objective.

Acknowledgement

Fund: Beijing Union University Campus level Teaching and Research Project "Research on the Differences and Intrinsic Psychological Mechanisms of Interactive Patterns between Teachers and Students in Online, Offline, and Blended Teaching" (JK202110).

References

[1] Sullivan, H.S. (1953). *The interpersonal theory of psychiatry*. New York, NY: Norton.

- [2] Horowitz, L. M. (2004). *Interpersonal foundations of psychopathology*. Washiongton, DC: American Psychological Association.
- [3] Zhou Chunxiu, Zhang Xiaoxia, Sun Xiaofei, et al. *The relationship between individual attachment and interpersonal problems among freshmen: the mediating role of group attachment [J]*. *Journal of Hangzhou Normal University (Natural Science Edition)*, 2017, 16 (4): 378-382,434.
- [4] Ma Yuanguang. *The impact of interpersonal relationships on depression: a chain mediated effect of life satisfaction and life meaning [J]*. *Chinese Journal of Health Psychology*, 2022, 30 (10): 1459-1463.
- [5] Jiang Hai, Zhang Chao. *Experimental study on the improvement of interpersonal relationship distress among college students through group psychological counseling based on interpersonal patterns [J]*. *Psychology and Innovation Ability Enhancement - Proceedings of the 16th National Psychology Academic Conference*, 2013.