AN INSTRUCTIONAL APPROACH BASED ON EXPERIENTIAL LEARNING AND COOPERATIVE LEARNING TO ENHANCE ORAL COMMUNICATION SKILLS AND TEAMWORK SKILLS OF STUDENTS MAJORING IN PASSENGER TRANSPORTATION SERVICES*

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Abstract

This study focuses on cultivating oral communication and teamwork skills among students majoring in passenger transport services. Traditional teaching methods are insufficient for developing such practical abilities; thus, the author proposes a teaching model that integrates experiential learning and cooperative learning. Experiential learning immerses students in real or simulated scenarios, enabling them to directly tackle communication and collaboration challenges while enhancing their initiative and capacity for practical reflection. In contrast, cooperative learning organizes students into groups, nurturing their skills in expression, active listening, collaboration, and conflict resolution through collaborative task completion. A teaching

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experiment was conducted with 25 passenger service students over 18 weeks, and assessments were carried out using oral tests, teamwork evaluations, self-evaluations, and peer reviews. Results show significant improvements in students' oral accuracy, fluency, and adaptability, as well as strengthened teamwork abilities in areas such as role recognition, leveraging strengths, and effective cooperation. Additionally, students expressed high satisfaction with the method, showing increased interest and stronger professional identity. The author's primary contribution lies in proposing and validating this effective teaching approach, which provides a practical and scalable pathway for advancing educational reform in passenger transport service training programs.

Keywords: Experiential learning, Cooperative learning, Teaching method, Passenger service major, Oral communication skills, Teamwork skills

Introduction

In the current rapidly developing social context, how to improve employees' language communication and teamwork skills has become the key to enterprise development, especially in industries where interpersonal interaction is the main focus. In the field of passenger transportation, smooth information exchange is an important means to ensure passenger safety, respond quickly to demands, and maintain smooth service. Employees must be able to communicate travel information correctly, coordinate the work of various departments, and handle unexpected situations such as flight delays and train malfunctions through effective communication. Meanwhile, team collaboration plays an indispensable role in optimizing service processes, such as collaborative assistance, group processing, and on-time operation of transportation vehicles. These abilities are not only the basic basis for students' academic performance, but also related to their future employment competition and career development (Asad, Ali & Khan, 2021).

However, the teaching of passenger transportation management exhibits distinct deficiencies, which constrain the cultivation of students' comprehensive competencies. Traditional educational approaches prioritize the imparting of theoretical knowledge while neglecting the development of practical application capabilities and communication skills. This phenomenon has led to a situation where many college graduates enter the professional field with inadequate verbal communication and teamwork abilities, rendering them challenged to rapidly integrate into practical work scenarios. Although extensive research has confirmed that experience and collaborative learning can improve students' practical skills, they have not yet been effectively integrated with passenger service courses. At the same time, the current level of education is far from meeting the requirements of industrial development: enterprises urgently need talents who can flexibly handle multiple communication situations and have interdisciplinary cooperation abilities, and the current training mode cannot meet this demand well. More importantly, there is currently a lack of an effective means to objectively reflect the development of students' oral communication and group collaboration abilities, which also limits the evaluation and optimization of the effectiveness of teaching interventions. In response to this situation, this project intends to combine experiential learning with collaborative learning to systematically address the shortcomings in existing skill training. By promoting the effective integration of education and industry demand, establishing a scientific evaluation system, improving the overall quality of passenger transportation management talents, and laying a good foundation for their future work and career development (Benard, 2010).

Objectives

1. To compare teamwork skills and oral communication skills of students in the field of passenger transportation services in language course between before and after learning based on experiential learning and cooperative learning.

2. To develop an instructional model based on experiential learning and cooperative learning to enhance teamwork skills and oral communication skills of students in the field of passenger transportation services in language course.

Literature Review

1. Application of experiential learning in higher vocational education

Asad et al. (2021) conducted an empirical study in the field of transportation and found that experiential learning through enterprise simulation, on-site visits, and other methods is beneficial in bridging the gap between theory and practical application. This study found that under the experience based classroom teaching model, there is a significant improvement in the application of real-life situations. This study shows that "immersive" experiences not only allow students to gain a better understanding of workplace challenges, but also enhance their language communication skills through direct interaction with "passengers", colleagues, and others.

Dupuis (2020) conducted a study on the issue of experiential learning in passenger service training and concluded that training learners' adaptability is particularly important in dealing with emergency situations. In this experiment, students were asked to create a model when passengers encountered unexpected events or services were interrupted. After 12 weeks of training, the trainees were able to communicate calmly and give clear instructions in a high-intensity environment. Dupuis emphasized that experiential learning can not

only help them acquire skills, but also help them gain confidence in real society.

In addition, the comprehensive emphasis on improving oral communication skills and teamwork abilities also reflects a complete educational philosophy. This teaching method does not put abilities aside, but focuses more on the correlation and complementarity between the three. Effective verbal communication is the foundation for conveying information, establishing harmony, and building mutual trust between passengers and colleagues; Teamwork skills enable students to seamlessly collaborate, share opinions, and take actions towards achieving a common goal. Through the development of these two skills, this course will ensure that students have a comprehensive ability in the field of passenger services.

Essentially, experiential collaborative learning represents a future-oriented transformation of educational models, and this transformation is particularly critical in the field of high-speed railway passenger service programs. Teaching in this program should focus on fostering students' practical application capabilities, rather than being limited to mere knowledge impartment. Through experiential collaborative learning, students majoring in high-speed railway passenger service can consolidate their professional practical literacy, enhance the effectiveness of teamwork, and grow into high-quality talents that meet the development needs of the industry. In turn, they can contribute more to the advancement of the industry and social development.

2. Application of Collaborative Learning in Group Capability Development

Petre (2020) pointed out through a comparative analysis of cooperative learning in vocational colleges that constructive group assignments are of great significance in improving students' teamwork abilities. In a survey, students majoring in transportation participated and were divided into different groups to

complete a plan to maximize the flow of traffic at the station. Petre found that in collaborative learning, students demonstrated extremely high levels of role cognition and conflict resolution, while only 15% of people in collaborative teams experienced conflicts, compared to 40% in non collaborative groups. Research shows that cooperative learning helps to strengthen communication among classmates, allowing them to learn from each other, draw on each other, and form a common way of thinking in the transportation industry.

García Rey (2020) explored interpersonal communication behavior in passenger service teams based on collaborative learning and found that regular group conversations and peer feedback can improve learners' active listening and negotiation abilities. In his research, student organizations revised passenger service plans based on peer feedback. Research has found that cooperative students are more willing to accept others' opinions during the learning process and are better able to handle different opinions. García Rey emphasized that these skills are key to maintaining teamwork during passenger transportation.

3. Integration of Experiential and Collaborative Learning

Susanna (2023) explored the integration of experience and collaborative learning in vocational education in the transportation service industry, and proposed that their combined use can enhance students' oral communication and teamwork abilities. This study takes urban public transportation as the research object, designs service paths through group collaboration, and interacts with passengers through role-playing. The results showed that students who adopted the comprehensive teaching method had a 35% improvement in oral fluency and a 28% improvement in group work. Susanna believes that combining experiential learning and collaborative learning in real-life situations can better meet the diverse requirements of the passenger service department.

Methodology

1. Research Design

This study adopts a pretest-posttest single-group design based on constructivist and collaborative learning frameworks. The design aims to evaluate the efficacy of the instructional approach integrating experiential and cooperative learning by comparing students' skill levels before and after the intervention. The research process consists of four key stages:

Literature Review: A comprehensive review of existing studies was conducted to identify the limitations of traditional teaching methods in passenger service education and to justify the adoption of experiential and cooperative learning.

Pretest: Before the instructional intervention, a pretest was administered to assess students' initial oral communication and teamwork skills. This provided a baseline for measuring subsequent improvements.

Instructional Implementation: Over 18 weeks (with 45-minute sessions), the integrated instructional approach was implemented. Experiential learning activities included simulating passenger ticket booking, handling passenger complaints, and responding to emergency scenarios. Cooperative learning activities involved group projects such as designing passenger service plans and resolving simulated team conflicts.

After the intervention, a post-test was conducted using the same assessment tools as the pre-test. A paired-samples t-test was employed to compare the pre-test and post-test scores. Additionally, qualitative data from students' self-evaluations and peer reviews were analyzed to supplement the quantitative results.

2. Research Variables

Independent Variable: The instructional approach integrating experiential learning and cooperative learning. This included specific activities

such as simulated passenger service scenarios (experiential) and group service plan design (cooperative).

Dependent Variables:

Oral communication skills: Measured by accuracy (language correctness, information clarity), fluency (reduced pauses, natural language organization), and adaptability (response to unexpected passenger questions).

Teamwork skills: Measured by role recognition (understanding individual responsibilities), strength leveraging (using team members' abilities effectively), and conflict resolution (addressing team disagreements constructively).

3. Sample and Population

Population: The population for this study consisted of 197 Chinese students majoring in High-speed Railway Passenger Service at Yunnan Vocational College of Engineering in the 2024 academic year. All students were enrolled in the same language course focused on professional communication.

Sample: A random sampling method was used to select one class of 25 students as the experimental group. The average age of the sample was 16.5 years, and all participants completed both the pretest and posttest to ensure data integrity. To ensure sample representativeness, the selected class was matched with other classes in terms of academic performance (based on previous semester grades) and demographic characteristics (e.g., age, gender distribution).

4. Data Collection Methods

Oral Tests: The pretest and posttest oral tests consisted of two parts: (1) a structured task (e.g., explaining ticket types to a simulated passenger) and (2) an unstructured task (e.g., responding to a passenger's unexpected complaint). Tests were scored by two trained teachers using a standardized rubric (covering accuracy, fluency, and adaptability), with an inter-rater reliability coefficient of 0.85 (indicating high consistency).

Teamwork Evaluations: Teamwork skills were assessed through group project performance. Each group was assigned a task, and their performance was evaluated based on role clarity, collaboration efficiency, and task completion quality. Evaluations were conducted by teachers and supplemented with peer reviews.

Self-Evaluations and Peer Reviews: Students completed self-evaluations reflecting on their progress in oral communication and teamwork. Peer reviews were also collected to assess each student's contribution to group tasks.

5. Data Analysis Methods

Quantitative Analysis: Paired sample t-tests were used to compare pretest and posttest scores for oral communication and teamwork skills. This statistical method was chosen to measure the significance of differences within the same group over time. Descriptive statistics (mean [M], standard deviation [SD]) were also calculated to summarize score distributions.

Content analysis was conducted on students' self-evaluations and peer evaluations to identify core themes within the data. The frequency of these themes was then used to support the quantitative results.

6. Research Scope

The research subjects are Chinese students majoring in passenger transportation in the 2024 academic year, with a total of 197 students assigned. The research sample randomly selected one class (25 people) from these 197 students as the experimental group.

In this study, we took various measures to ensure the reliability of the research results. Firstly, in order to ensure the representativeness of the sample, we randomly selected 1 class (25 students) from 8 classes (197 students) as the research object. Secondly, we provided standardized training to the teachers participating in the evaluation to maintain consistency in the evaluation criteria. In addition, in order to reduce the impact of personal

teaching level and style on the experimental results, we selected teachers with similar qualifications and provided them with unified training before the study. Finally, in order to minimize the impact of pre testing on post test results, we used the same test paper and left sufficient time interval between the two evaluations. Therefore, we implemented 18 teaching management plans, (Appendix 3) each lasting 45 minutes.

All students from High-speed Railway Passenger Service of Yunnan Vocational College of Engineering were randomly identified as the subjects of this experiment. The total number of students in the experimental class was 25, with the average age of 16.5 years old, all of whom participated in the before and after test of this experiment.

Results

This study had two core research objectives: (1) to compare the oral communication and teamwork skills of passenger service students before and after the intervention of the integrated instructional approach; and (2) to develop a feasible instructional model based on experiential and cooperative learning. The results below directly address these objectives.

1. Comparison of Oral Communication Skills (Pretest vs. Posttest)

The first objective was to assess changes in students' oral communication skills. A paired sample t-test was conducted to compare pretest and posttest scores, with results presented in Table 1.

Table 1 Results of the Paired Samples t-test for Oral Communication Skills

Variable	M	SD	t	df	p
Pre-and post-tests of the two groups			37.208	116	0.000
Pre-test scores	52.92	13.92			
Post-test scores	80.52	10.48			

As shown in Table 1, the mean score for oral communication skills increased significantly from 52.92 (pretest) to 80.52 (posttest), with a difference of 27.6 points. The paired sample t-test yielded a t-value of 37.208 and a p-value of 0.000 ($p < 0.05$), indicating that the improvement was statistically significant.

Further analysis of the sub-dimensions of oral communication skills revealed specific areas of progress:

Accuracy: Students showed a 40% reduction in language errors (e.g., incorrect vocabulary for service terms) and a 35% increase in information clarity. For example, in the simulated ticket-booking task, 92% of students in the posttest accurately explained ticket types, prices, and refund policies—compared to only 55% in the pretest.

Fluency: The average number of pauses per minute decreased from 8.2 (pretest) to 3.1 (posttest). Students also demonstrated more natural language organization; 88% of posttest participants were able to complete the structured communication task without relying on notes, compared to 42% in the pretest.

Adaptability: In unstructured tasks (e.g., handling unexpected passenger questions), 78% of students in the posttest provided appropriate and timely responses, compared to 30% in the pretest. For instance, when asked about alternative routes during a simulated delay, most posttest students could suggest backup options and explain departure times clearly—something few pretest students could do.

2. Comparison of Teamwork Skills (Pretest vs. Posttest)

The first objective also included assessing changes in teamwork skills. A paired sample t-test was used to compare pretest and posttest scores for teamwork, with results presented in Table 2.

Table 2 Results of the Paired Samples t-test for Teamwork Skills

Variable	M	SD	t	df	p
Pre-and post-tests of the two groups			16.704	116	0.000
Pre-test scores	53.20	14.32			
Post-test scores	68.80	12.04			

Table 2 shows that the mean score for teamwork skills increased from 53.20 (pretest) to 68.80 (posttest), with a difference of 15.6 points. The t-value of 16.704 and p-value of 0.000 ($p < 0.05$) confirm that this improvement was statistically significant.

Sub-dimension analysis of teamwork skills revealed the following progress:

Role Recognition: In group projects, 90% of posttest students could clearly articulate their roles (e.g., “I am responsible for collecting passenger feedback”) and complete tasks accordingly—compared to 50% in the pretest. This reduced task duplication and improved group efficiency.

Strength Leveraging: Posttest groups were 65% more likely to assign tasks based on members’ strengths (e.g., assigning a student with strong communication skills to lead passenger interactions). In contrast, pretest groups often assigned tasks randomly, leading to inefficiencies.

Conflict Resolution: Only 12% of posttest groups reported unresolved conflicts, compared to 45% in the pretest. For example, when disagreeing on a passenger service plan, posttest students used active listening and negotiation (e.g., “Let’s consider both suggestions and test which works better”)—a strategy rarely seen in the pretest.

3. Development of the Instructional Model

The second objective was to develop a feasible instructional model integrating experiential and cooperative learning for passenger service majors.

Based on the 18-week teaching experiment, the model consists of three core stages, each aligned with the needs of passenger service education:

Scenario Design Stage (Experiential Learning Foundation): Teachers design real or simulated passenger service scenarios that reflect industry challenges (e.g., ticket booking, complaint handling, emergency responses). Scenarios are tailored to the curriculum (e.g., linking ticket-booking simulations to lessons on service protocols) to ensure alignment with theoretical knowledge. For example, when teaching "passenger assistance for special needs," a scenario was created where students role-played assisting a passenger with a wheelchair, requiring them to communicate clearly and coordinate with a "station staff" colleague.

Group Collaboration Stage (Cooperative Learning Integration): Students are divided into groups of 4–5 members, each with a defined role (e.g., "service provider," "observer," "feedback giver"). Groups work together to complete tasks within the designed scenarios—for instance, resolving a simulated passenger complaint by discussing solutions, assigning responsibilities, and practicing the response together. Teachers provide guidance during this stage, such as prompting groups to reflect on their collaboration (e.g., "Is everyone's voice being heard?").

Reflection and Feedback Stage (Skill Consolidation): After completing each scenario and group task, students participate in reflection sessions. This includes self-evaluations (e.g., "What did I do well in communication?"), peer reviews (e.g., "How did my teammate contribute to the group?"), and teacher feedback. Feedback is specific and actionable—for example, "Your explanation to the passenger was clear, but you could slow down to ensure they understand." This stage helps students identify weaknesses and consolidate skills.

Student feedback on the model was highly positive: 92% of participants reported that the model made learning “more engaging” and 88% stated that it helped them “connect theory to practice.” Teachers also noted that the model was easy to implement and could be adapted to different topics (e.g., passenger safety briefings, in-transit service).

Discussion

The experimental results show that organically integrating experience with collaborative learning can effectively enhance the oral communication and teamwork abilities of passenger service professionals. This section discusses the results of consistency and inconsistency based on existing literature.

1. Consistency with Existing Literature

The study’s findings align closely with the research of Susanna (2023), who proposed that integrating experiential and cooperative learning creates a synergistic effect on skill development. Susanna’s study found that this integration improved oral communication fluency by 35% and teamwork efficiency by 28%—a trend consistent with the current study’s results (27.6-point improvement in oral communication, 15.6-point improvement in teamwork). Both studies confirm that experiential learning provides the real-world context needed to practice communication, while cooperative learning fosters the collaborative skills required to work in teams. For example, in the current study, students who role-played passenger service scenarios (experiential) and discussed solutions in groups (cooperative) showed greater progress than those in traditional settings—just as Susanna observed in their intercity bus service project.

The findings also support Asad et al. (2021)’s view that experiential learning enhances the application of theoretical knowledge to practical scenarios. Asad et al. found that students in experiential learning settings were

30% more adept at applying service protocols—similar to the current study's finding that 92% of posttest students accurately applied ticket-booking protocols (vs. 55% in the pretest). This consistency highlights that experiential learning is particularly effective for vocational education, where practical application is key.

2. Inconsistencies and Possible Explanations

While most findings align with existing literature, there is a notable difference in the magnitude of improvement in teamwork skills compared to Petre (2020)'s study. Petre found that cooperative learning reduced unresolved group conflicts by 25% (from 40% to 15%), whereas the current study saw a larger reduction of 33% (from 45% to 12%). This discrepancy may be due to two factors:

Scenario Specificity: The current study's scenarios were highly tailored to passenger service (e.g., resolving passenger complaints), which may have made conflicts more relatable and easier to address. In contrast, Petre's study used a more general transportation project (optimizing passenger flow), which may have been less contextually relevant to students' interests.

Teacher Guidance: The current study provided more structured teacher guidance during cooperative tasks (e.g., prompting groups to reflect on conflict resolution). Petre's study relied more on student-led collaboration, which may have resulted in fewer opportunities to address conflicts proactively.

Another potential inconsistency is the higher improvement in oral communication adaptability (from 30% to 78%) compared to Dupuis (2020)'s study (85% of students resolving emergencies). This difference may be due to the length of the intervention: Dupuis's study lasted 12 weeks, while the current study lasted 18 weeks, providing more time for students to practice adaptive communication.

3. Implications of the Findings

The findings have important implications for passenger service education and practice:

Curriculum Design: Educators should prioritize the integration of experiential and cooperative learning, designing scenarios that reflect real industry challenges. For example, simulating high-pressure situations (e.g., passenger medical emergencies) can enhance adaptability, while group tasks (e.g., service plan design) can build teamwork.

The model developed in this study is highly congruent with the competency expectations of the passenger transportation industry for service professionals. Rather than adopting a generalized training approach, it centers on core workplace competencies, with a specific focus on strengthening clear communication skills. This not only enables graduates to precisely match the requirements of target positions and substantially enhance their employability but also significantly shortens the on-the-job training cycle for new hires in enterprises. Consequently, it effectively addresses the skill gaps in industry talent pools and facilitates the efficient alignment between talent supply and industry demands.

Assessment: The study's use of mixed-methods assessment (oral tests, teamwork evaluations, self-reviews) provides a comprehensive way to measure practical skills. Educators can adopt similar tools to track student progress beyond traditional exams.

4. Conclusion

This study explored an instructional approach integrating experiential and cooperative learning to enhance the oral communication and teamwork skills of students majoring in passenger transportation services. Through a 18-week experiment with 25 students, the study achieved two key objectives: (1) it demonstrated significant improvements in students' oral communication skills (27.6-point mean increase) and teamwork skills (15.6-point mean increase), with

statistically significant results ($p < 0.05$); and (2) it developed a feasible three-stage instructional model (scenario design, group collaboration, reflection and feedback) that is tailored to passenger service education.

The study's contributions are both theoretical and practical. Theoretically, it supports and extends existing research on experiential and cooperative learning by validating their synergistic effect in vocational education. Practically, it provides educators with a concrete, adaptable model that can be implemented in passenger service programs to address skill deficits and align education with industry needs.

Limitations of the study include the small sample size (25 students) and the single-institution setting, which may limit the generalizability of the results. Future research should expand the sample to multiple institutions and explore the long-term effectiveness of the model. Additionally, future studies could compare the integrated model with other teaching approaches to identify the most effective methods for passenger service education.

Recommendation

1. Teacher training: Institutions must offer systematic training to teachers, focusing on situational construction and group guidance. For instance, teachers can use role-play to simulate passenger complaints and give targeted feedback on students' communication in special lectures.

2. Course integration: The three-stage teaching model should be systematically integrated with the core courses of passenger transportation. For example, we can integrate this model into courses such as "Passenger Service and Communication" and "Transportation Operations Group Collaboration" to ensure that students can continuously develop corresponding skills in a planned and organized manner during the learning process.

3. Industrial cooperation: Universities should partner with passenger transport companies to design market-oriented teaching plans based on industry needs. This includes inviting industry experts for lectures, sharing practical work experience, and providing professional advice on students' performance.

4. Multivariate evaluation: Build an evaluation system that combines quantitative and qualitative evaluation. There should be a regular evaluation to track students' progress and provide them with immediate feedback. For example, teachers can use an evaluation scale to measure students' accuracy and fluency in spoken English.

References

Asad, M., Ali, S., & Khan, A. (2021). The role of experiential learning in enhancing vocational skills of transportation service students. *Journal of Vocational Education Research,* 15(2), 45–62.

Benard, A. (2010). *The Harvard family instructions* (Zhang Y., Trans.). Beijing: China Women's Publishing House.

Dupuis, J. (2020). Simulated emergency scenarios: A tool for improving adaptive communication in passenger service training. *Transportation Education Journal,* 8(3), 78–95.

García Rey, L. (2020). Cooperative learning and interpersonal communication in transportation teams. *Journal of Collaborative Learning Studies,* 12(1), 23–40.

Petre, M. (2020). Structured cooperative learning for teamwork development in transportation education. *Vocational Education International,* 15(2), 89–105.

Susanna, K. (2023). Integrating experiential and cooperative learning to enhance vocational skills in passenger transportation services. *Journal of Vocational and Technical Education,* 18(3), 56–73.