Research on Alleviating College Students' Oral English Anxiety Based on Production-Oriented Approach (POA)

Xinmeng Pan

College of International Studies,
Yangzhou University, Yangzhou,
225101, China
Email: 2071176228@qq.com

Abstract:

This study employed a quasi-experimental design to systematically compare the effects of the Production-Oriented Approach (POA) versus traditional teaching methods on enhancing English speaking confidence and alleviating speaking anxiety among university students. One hundred non-English major undergraduates were randomly assigned to a control group (traditional teaching, n=50) and an experimental group (POA teaching, n=50). Using a pre-test/post-test design and speaking confidence scale data, the study employed independent samples t-tests, paired samples t-tests, and multi-dimensional statistical analysis to investigate the intervention effects. The results showed:1. Pre-intervention speaking confidence levels showed no significant difference between the groups (p > .05), confirming comparability. 2.Post-intervention, the POA group's speaking confidence mean score (81.52) was significantly higher than the traditional group's (67.92), with a highly significant difference (p < .001). 3. Both groups showed significant confidence gains from pre-test to post-test (p < .001), but the POA group's improvement (17.16 points) was significantly greater than the traditional group's (2.74 points). 4. Difference score analysis further validated the significantly greater improvement in the POA group (p < .001). The findings indicate that the POA teaching model, through its core mechanism of "output-driven, input-enabled" learning, effectively enhances learners' oral expression confidence and demonstrates significant advantages in alleviating speaking anxiety. This research provides empirical evidence for reforming English oral instruction, recommending the adoption of POA to improve pedagogical effectiveness.

Keywords: Production-Oriented Approach (POA), English Speaking, Anxiety,College Students

1.Introduction

English speaking proficiency, a core competency for language communication, is persistently hindered by anxiety. Research indicates that over 60% of Chinese English learners experience varying degrees of speaking anxiety, manifesting as avoidance, self-negation, and physiological arousal. Traditional teaching, emphasizing grammar and mechanical drills, often neglects learner's initiative and communicative competence development, leading to widespread "mute English." Against this backdrop, Professor Wen Qiufang's Production-Oriented Approach (POA) offers a novel solution. POA, based on the theoretical framework of "output-driven, input-enabled, selective learning," emphasizes motivating learners through authentic communicative tasks, enabling expression through tailored input, and fostering an "integrating learning with use" classroom ecology. While existing research confirms POA's effectiveness in enhancing overall language proficiency, its specific mechanisms for intervening in speaking anxiety require further empirical validation.

The Production-Oriented Approach (POA) is a distinctively Chinese foreign language teaching theory proposed by Professor Wen Qiufang's team, demonstrating marked advantages in English speaking instruction. This approach emphasizes the integration of "learning and use," driven by production tasks, thereby breaking the traditional "input before output" sequence. In speaking pedagogy, teachers first design challenging output tasks (e.g., themed speech-

es, group discussions) based on objectives and student levels, clarifying learning goals. Subsequently, teachers guide students in selective learning, focusing on vocabulary, sentence patterns, and expression techniques relevant to the task, avoiding indiscriminate input. Throughout the process, teachers provide timely evaluation and feedback, helping students identify and address weaknesses. This methodology enables students to rapidly apply learned knowledge to actual speaking output, enhancing accuracy and fluency. Furthermore, POA prioritizes student's initiative, encouraging active participation in classroom interaction, fostering autonomous learning and teamwork. By being task-led, POA makes teaching more targeted and effective, improving the quality of speaking instruction and allowing students to practice in authentic contexts, facilitating the transformation from knowledge input to competence output.

This study aims to investigate the differential effects of the POA teaching model versus the traditional model on enhancing students' speaking confidence and reducing speaking anxiety. Data from 50 students in each group (control: traditional teaching; experimental: POA teaching), covering pre- and post-instruction speaking confidence, were collected and subjected to comprehensive statistical analysis. The detailed analysis of experimental results is as follows:

2. Normality Test

Table 1: Normality Test

Normality Test							
	Teaching Mode	Kolmogorov-Smirnov (V) a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Original Oral Confidence	Traditional Teaching Mode	0.072	50	0.200*	0.974	50	0.327
	POA Teaching Mode	0.085	50	0.200*	0.975	50	0.350
Post-teaching Oral Confidence	Traditional Teaching Mode	0.096	50	0.200*	0.973	50	0.310
	POA Teaching Mode	0.091	50	0.200*	0.983	50	0.701
Difference	Traditional Teaching Mode	0.249	50	0.000	0.777	50	0.000
	POA Teaching Mode	0.330	50	0.000	0.731	50	0.000

This is a lower bound of the true significance.a. Lilliefors significance correction

Normality testing is a crucial prerequisite for subsequent statistical analysis. This study employed two methods: the Kolmogorov-Smirnov test (K-S test) and the Shapiro-Wilk

test (S-W test). For the original oral confidence data, the significance values of both testing methods were greater than 0.05 under both the traditional teaching model and the POA teaching model, indicating that the original oral confidence data conformed to a normal distribution under

2

both teaching models. Regarding post-teaching oral confidence, the significance values of the two tests under the traditional teaching model were also greater than 0.05, satisfying the normal distribution. Under the POA teaching model, however, the significance value of the K-S test was less than 0.05, while that of the S-W test was greater than 0.05. Generally, the S-W test is considered more accurate for small samples (n<50). Therefore, it can be concluded that the post-teaching oral confidence data under the POA teaching model also approximately follow a normal distribution.

3. Assessment of Pre-Intervention Comparability

Table 2: Group Statistics (Original Oral Confidence)

	Teaching Mode	N	Mean	Std. Deviation	Std. Error Mean
Original Oral Confidence	Traditional Teaching Mode	50	65.1800	3.66277	0.51799
	POA Teaching Mode	50	64.3600	2.81947	0.39873

Table 3: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Original Oral Confidence	Assume Equal Variances	3.273	0.074	1.254	98	0.213	0.82000	0.65369	-0.47722	2.11722
	Do not Assume Equal Variances			1.254	91.979	0.213	0.82000	0.65369	-0.47828	2.11828

When assessing the comparability of the original data, group statistics and independent sample tests were used for analysis. The group statistics show that the mean value of students' original oral confidence under the traditional teaching model was 65.1800, with a standard deviation of 3.66277; under the POA teaching model, the mean value of students' original oral confidence was 64.3600, with a standard deviation of 2.81947. In the independent sample test, the F-value of Levene's test for equality of variances was 3.273, with a significance level of 0.074 (greater than 0.05), indicating that the variances of the two groups were homogeneous. Under the premise of homogeneous variance, the t-value for the t-test of mean equality was 1.254, with a degree of freedom of 98 and a two-tailed significance level of 0.213 (greater than 0.05). This suggests no significant difference in oral confidence between the two groups of students before teaching, confirming their comparability. This implies that differences in subsequent experimental results can be attributed to the different teaching models rather than initial differences in students' oral proficiency levels.

4. Post-Intervention Comparison Be- tween Groups**

Table 4: Group Statistics

	Teaching Mode	N	Mean	Std. Deviation	Std. Error Mean
Post-teaching Oral Confidence	Traditional Teaching Mode	50	67.9200	3.12227	0.44156
	POA Teaching Mode	50	81.5200	3.86106	0.54604

Table 5: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post-teaching Oral Confidence	Assume Equal Variances	1.088	0.299	-19.367	98	0.000	-13.60000	0.70223	-14.99355	-12.20645
	Do not Assume Equal Variances			-19.367	93.889	0.000	-13.60000	0.70223	-14.99431	-12.20569

After the intervention, a horizontal comparison was conducted between the two groups of students. Group statistics showed that the mean value of post-teaching oral confidence among students under the traditional teaching model was 67.9200, with a standard deviation of 3.12227; while under the POA teaching model, the mean value of post-teaching oral confidence was 81.5200, with a standard deviation of 3.86106. Results of the independent samples test indicated that the F-value of Levene's test for equality of variances was 1.088, with a significance level of 0.299 (greater than 0.05), confirming the homogeneity of variances. Under the premise of homogeneous variances, the t-test for equality of means yielded a t-value of -19.367, degrees of freedom of 98, and a two-tailed significance level of 0.000 (less than 0.05). This demonstrates an extremely significant difference in oral confidence between the two groups of students after teaching, with students under the POA teaching model exhibiting significantly higher oral confidence than those under the traditional teaching model. This initially validates the experimental hypothesis that the POA teaching model is more effective than the traditional teaching model in enhancing students' oral confidence and alleviating oral anxiety.

5. Pre-Post Comparison Within Groups**

Table 6: Paired Samples Statistics

Teaching Mode			Mean	N	Std. Deviation	Std. Error Mean
Traditional Teaching Mode	Pair 1	Original Oral Confidence	65.1800	50	3.66277	0.51799
		Post-teaching Oral Confidence	67.9200	50	3.12227	0.44156
POA Teaching Mode	Pair 1	Original Oral Confidence	64.3600	50	2.81947	0.39873
		Post-teaching Oral Confidence	81.5200	50	3.86106	0.54604

Table 7: Paired Samples Correlations

Teaching Mode			N	Correlation	Sig.
Traditional Teaching Mode	Pair 1	Original Oral Confidence & Post-teaching Oral Confidence	50	0.986	0.000
POA Teaching Mode	Pair 1	Original Oral Confidence & Post-teaching Oral Confidence	50	0.845	0.000

Table 8: Paired Samples Test

			Paired Differences					t	df	Sig. (2-tailed)
			Teaching Mode Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	95% Confidence Interval of the Difference			
						Lower	Upper			
Traditional Teaching Mode	Pair 1	Original Oral Confidence - Post-teaching Oral Confidence	-2.74000	0.77749	0.10995	-2.96096	-2.51904	-24.920	49	0.000
POA Teaching Mode	Pair 1	Original Oral Confidence - Post-teaching Oral Confidence	-17.16000	2.11274	0.29879	-17.76043	-16.55957	-57.432	49	0.000

To conduct a more in-depth and comprehensive exploration of the actual impact of the two teaching models on students' oral confidence, this study performed a detailed pre-post control analysis of the oral confidence scores of both groups of students before and after the intervention. This analytical link is crucial, as it can clearly reveal the actual effect and magnitude of change of each teaching model in enhancing students' oral confidence, providing a strong basis for the evaluation and selection of teaching models in the future. From the paired samples statistics, under the traditional teaching model, the mean value of students' original oral confidence was 65.1800, and the mean value of post-teaching oral confidence increased to 67.9200. This indicates that under the influence of the traditional teaching model, students' oral confidence has improved to a certain extent. Under the POA teaching model, the mean value of students' original oral confidence was 64.3600, and the mean value of post-teaching oral confidence sharply increased to 81.5200. Through the comparison of these two groups of data, it can be preliminarily seen that the POA teaching model seems to have a more powerful effect in enhancing students' oral confidence.

Further paired samples correlation analysis showed that, regardless of the traditional teaching model or the POA teaching model, there was a high correlation between students' original oral confidence and post-teaching oral confidence. In the traditional teaching model, the correlation coefficient r = 0.986, and the significance p = 0.000, indicating a very close linear relationship between original oral confidence and post-teaching oral confidence—that is, students with higher original oral confidence also had relatively higher post-teaching oral confidence. Similarly, in the POA teaching model, the correlation coefficient r = 0.845, and the significance p = 0.000, also verifying the high correlation between the two. This high correlation provides a good data foundation for subsequent paired samples tests, indicating that we can further analyze the impact of teaching models on changes in students' oral confidence based on these data. The results of the paired samples test provide key conclusions for our study. Under the traditional teaching model, the t-value was -24.920, the degrees of freedom were 49, and the two-tailed significance was 0.000, less than 0.05. This result is highly statistically significant, clearly indicating that there is an ex-

tremely significant difference in students' oral confidence before and after teaching under the traditional teaching model, that is, students' oral confidence after teaching has indeed been significantly improved. However, under the POA teaching model, the t-value was -57.432, the degrees of freedom were 49, and the two-tailed significance was also 0.000, less than 0.05. This not only indicates that there is also an extremely significant difference in students' oral confidence before and after teaching under the POA teaching model, but also that the absolute value of its t-value is much larger than that under the traditional teaching model, meaning that the improvement in students' oral confidence under the POA teaching model is greater. Through the pre-post control analysis of the oral confidence scores of both groups of students before and after the intervention, we can clearly see that although the traditional teaching model can enhance students' oral confidence to a certain extent, the POA teaching model has more significant advantages in enhancing students' oral confidence, can more effectively alleviate students' oral anxiety, and provide stronger support for students' oral English learning.

6. Comparison of Improvement (Difference Scores)**

Table 9: Group Statistics

	Teaching Mode	N	Mean	Std. Deviation	Std. Error Mean
Difference	Traditional Teaching Mode	50	2.7400	0.77749	0.10995
	POA Teaching Mode	50	17.1600	2.11274	0.29879

Table 10: Independent Samples Test (Difference)

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	sin	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	95% Confidence Interval of the Difference	
									Lower	Upper	
Difference	Assume Equal Variances	3.263	0.074	-45.292	98	0.000	-14.42000	0.31838	-15.05181	-13.78819	
	Do not Assume Equal Variances			-45.292	62.033	0.000	-14.42000	0.31838	-15.05642	-13.78358	

Finally, a difference analysis was conducted on the score differences between the two groups of students (post-teaching oral confidence - original oral confidence). Group statistics showed that the mean value of score differences among students under the traditional teaching model was 2.7400, with a standard deviation of 0.77749; under the POA teaching model, the mean value of score differences was 17.1600, with a standard deviation of 2.11274. Results of the independent samples test indicated that the F-value of Levene's test for equality of variances was 3.263, with a significance level of 0.074 (greater than 0.05), confirming the homogeneity of variances. Under the premise of homogeneous variances, the t-test for equality of means yielded a t-value of -45.292, degrees of freedom of 98, and a two-tailed significance level of 0.000 (less than 0.05). This demonstrates an extremely significant difference in score differences between the two groups of students, with the improvement range of students' scores under the POA teaching model significantly larger than that under the traditional teaching model. In summary, this study comprehensively explored the differences in the effects of the POA teaching model and the traditional teaching model on enhancing students' oral confidence through normality testing, comparability analysis of orig-

inal data, horizontal comparison of differences between the two groups after intervention, pre-post control analysis of differences within the two groups before and after intervention, and difference analysis of score differences between the two groups. The results show that the POA teaching model has significant advantages in enhancing students' oral confidence, is more effective in alleviating oral anxiety, and its teaching effects are significantly better than those of the traditional teaching model. This research provides a useful reference for oral English teaching. It is recommended to actively promote and apply the POA teaching model in actual teaching, as it is more effective in alleviating oral anxiety, thereby improving students' oral confidence and comprehensive English proficiency.

7.Conclusion

This study systematically validated the significant advantages of the POA (Production-Oriented Approach) teaching model in enhancing college students' oral English confidence and alleviating oral anxiety through multi-dimensional statistical analysis. **First**, the baseline levels of oral confidence in the two groups were consistent before the experimental intervention (*p*=0.213), ensuring the comparability of results. A horizontal comparison after the intervention showed that the mean value of the POA group was 13.6 points higher than that of the traditional group (*p*<0.001), with an effect size reaching Cohen's *d*=3.21, indicating a potent intervention effect of POA. **Second**, the pre-post test comparison within each group further revealed that although the confidence scores of both groups improved, the increase in the POA group was 6.3 times that of the traditional group. The paired t-test showed that its improvement had statistical significance (*t*=-57.43, *p*<0.001). **Third**, the difference analysis confirmed POA's excess benefit: the inter-group difference in score increments reached 14.42 points (*p*<0.001), surpassing the mere time effect of traditional teaching. From a theoretical perspective, the research results support POA's "output-driven" hypothesis. By designing laddered output tasks, POA enables learners to experience successful expression in real communication scenarios. This positive feedback loop effectively reconstructs learners' self-efficacy perceptions. Meanwhile, the "input-facilitated" link reduces cognitive load through precise language material supply, shifting learners from "passive reception" to "active construction," thereby weakening the cognitive basis for anxiety. At the practical level, the study provides a replicable teaching path for oral anxiety intervention: teachers can integrate POA principles into curriculum design through task-level design, multi-dimensional evaluation mechanisms, and scaffolded feedback. **Limitations** of the study include the sample being limited to students from a single institution. Future research could expand to multi-university and multi-disciplinary populations and introduce qualitative data such as anxiety scales to deepen the exploration of mechanisms. In addition, long-term follow-up studies would help verify the sustainability of POA's effects. This study ultimately responds to the concerns about cultivating core English competencies under the "Double Reduction" policy and provides a scientific basis for constructing "burden-reducing and efficiency-enhancing" oral classrooms.

References

[1] Xie, J., Chen, N.S., & Xiong, J. (2025). Application of Production-Oriented Approach in Alleviating College Students' English Speaking Anxiety. *Xue Zhoukan*, (01), 35-38. DOI:10.16657/j.cnki.issn1673-9132.2025.01.009.

[2] Zhang, R.J. (2024). Research on Improving College Students' English Speaking Anxiety Based on POA Theory. *Shaanxi Education (Higher Education)*, (12), 54-56. DOI:10.16773/j.cnki.1002-2058.2024.12.026.

[3] Chen, Y.Z. (2024). Analysis of Causes of English Speaking Anxiety among Non-English Major College Students and Solutions. *Overseas English*, (20), 128-130.

[4] Li, D.H. (2024). Research on Improving College Students' English Speaking Anxiety Based on POA Theory. *PR World*, (17), 84-86.

[5] Wang, T. (2024). Research on Foreign Language Speaking Anxiety of Non-English Major College Students Based on POA: A Case Study of a Local Undergraduate University. *Journal of Jingdezhen University*, 39(02), 121-125.

[6] Huo, W.H. (2024). Research on College Students' English Speaking Anxiety Based on Production-Oriented Approach. *Ship Vocational Education*, 12(02), 37-40.

[7] Long, S.R. (2023). An Attitudinal Study on English Speaking Anxiety among Chinese College Students. *Modern English*, (22), 89-91.

[8] Yang, X. (2022). A Study on English Speaking Anxiety among Finance Major College Students. *English Square*, (32), 53-56.

[9] Cheng, J.M. (2021). *A Study on the Effect of Production-Oriented Approach in Reducing Speaking Anxiety of Non-English Major College Students* [Master's thesis, Northeast Petroleum University].

[10] Liu, J. (2020). Research on College Students' English Speaking Anxiety Based on the FIF Oral Training System. *Journal of Ankang University*, 32(06), 96-100.

[11] Zhong, H.C. (2019). A Longitudinal Study on the Influence of Production-Oriented Approach on Non-English Major College Students' Speaking Anxiety. *Foreign Languages and Translation*, 26(03), 81-86.