Vol.6 Iss.1 2025 Communication & Education Review
https://doi.org/10.37420/j.cer.2025.002

A Study on the Differences in Students' Classroom Academic Emotions Under the Production-Oriented Approach

Zuo Baoxia[1*] , Wei Fuxiang[2]
1 PhD Student, Department of Education, Sehan University, Korea
1 Professor, Tianjin University of Finance and Economics Pearl Harbor College, School of Humanities
2 Professor, Department of Economics and Management, Sehan University, Korea
***Corresponding author, E-mail: zuobaoxia123@126.com**

Abstract:
The Production-Oriented Approach (POA) emphasizes using students' outputs as the starting point and goal of teaching. This approach differs from traditional teacher-centered methods by focusing more on students' active participation and the development of their practical application skills. The core principles of the Production-Oriented Approach include the following six aspects: student-centeredness, task-driven learning, outcome orientation, process evaluation, collaborative learning, and reflection and improvement. The POA has been widely applied in educational practices across various subjects and levels, aiming to enhance students' practical abilities, innovative skills, and lifelong learning capabilities. This paper aims to investigate the differences in students' classroom academic emotions under the Production-Oriented Approach. The study targets 710 college students majoring in English and Business English from universities nationwide, collecting data through a questionnaire and performing quantitative analysis. The research findings indicate that students majoring in English exhibit stronger positive academic emotions than negative ones within the context of the Production-Oriented Approach. This study contributes to teachers' understanding of the differences in classroom academic emotions among students of different majors and genders, thereby promoting improvements in foreign language teaching under the Production-Oriented Approach.

Keywords:
Production-Oriented Approach (POA); academic emotions; influencing factors; *differential analysis*

1. Introduction

The Production-Oriented Approach (POA) emphasizes that the starting point and goal of teaching should be the results that students can produce. This method is different from the traditional teacher-centered teaching method, which pays more attention to the active participation of students and the development of practical application ability. The core concept of the output-oriented method includes the following six aspects: student-centered, the design and implementation of teaching activities are centered on the needs and outputs

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

of students, and students are encouraged to learn actively. Task-driven, by setting specific tasks or projects, students are guided to learn and apply knowledge in the process of completing tasks. Results-oriented, clear teaching objectives, emphasizing what results students can ultimately show, such as reports, demonstrations, design works, etc. Process evaluation attaches importance to students' performance in the learning process and promotes students' growth through formative evaluation. Cooperative learning encourages students to cooperate with each other, and cultivates students' teamwork ability through group discussions and cooperative projects. Reflection and improvement, students are encouraged to reflect on their learning process and outcomes and to improve based on feedback. The output-oriented method is widely used in the teaching of various disciplines and levels in educational practice, aiming at improving students' practical ability, innovative ability and lifelong learning ability. Through this approach, students are better prepared for their future career development by being able to apply what they have learned in a real or simulated work environment.

2. Research Background

With the deepening of globalization, English, as an important tool for international communication, has been widely concerned about its educational quality. As potential participants in future international exchanges, English majors' language competence and intercultural communicative competence are particularly important. As an innovative teaching mode, the production-oriented approach (POA) has been paid more and more attention by the educational circles. This method emphasizes that the starting point and goal of teaching should be the results that students can produce, and encourages students to participate actively and apply knowledge in practice, so as to improve their ability to use language.

However, the emotional state of students in the process of classroom learning, especially academic emotions, has a significant impact on learning effectiveness. Academic emotions not only affect students' knowledge absorption and skill mastery, but also affect students' motivation, participation and long-term interest in learning. Under the production-oriented teaching mode, students need to constantly challenge and innovate themselves in the process of completing tasks, and the fluctuation of academic emotions in this process may become a key factor affecting the learning effect.

At present, there are relatively few studies on the academic emotions of English majors under the production-oriented approach, especially the lack of in-depth discussion on the specific factors affecting academic emotions. Therefore, the purpose of this study is to explore the influencing factors of English majors' classroom academic emotions under the production-oriented teaching mode, so as to provide theoretical support and practical guidance for improving English teaching effect and students' learning experience.

This study will collect data through questionnaires, interviews and other methods to analyze the emotional experience of English majors under the production-oriented teaching mode, identify the key factors affecting academic emotions, and explore how these factors affect students' learning motivation, engagement and learning outcomes. The results will help teachers better understand students' emotions, optimize teaching strategies, improve teaching quality, and provide students with a more positive and effective learning environment.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

3. Literature Review

3.1Production-Oriented Approach (POA)

Production-oriented method is a teaching method that focuses on the cultivation of students' practical ability to use language. Its theoretical basis mainly includes the social interaction theory of language learning and cognitive psychology theory. Social Interaction Theory: Emphasis on Language learning takes place in social interaction, emphasizing language use and practice in communication. Cognitive psychology theory: focus on the cognitive process of learners, including attention, memory, thinking, etc., emphasizing the improvement of learning effect through repeated practice and feedback. Output-oriented Approach, as an educational and teaching strategy, has been widely used in foreign language education and other disciplines in recent years. This method emphasizes the promotion of students' practical application ability and language application ability through specific production activities, such as oral expression, writing and project presentation. According to the research, the output-oriented approach can not only enhance students' learning motivation, but also improve their autonomous learning ability (Swain, 2005; Zhang & Cheng, 2020). In addition, the production-oriented approach is closely related to the theory of communicative language teaching, which emphasizes the realization of the purpose of language learning through communicative activities. The related literature points out that the production-oriented approach effectively stimulates students' engagement and motivation, and promotes the internalization process of language learning (Ellis, 2009; Liu, 2021).

3.2Academic Emotions: Definition, Classification and Related Prior Research

Academic emotion refers to the emotional experience of students in academic activities, mainly including positive emotions and negative emotions. Positive emotions, such as interest, happiness and self-confidence, help to improve learning motivation and learning effect. Negative emotions, such as anxiety, stress and weariness of learning, will affect the learning effect and even lead to learning disabilities. Academic Emotions refer to the emotional reactions of students in the process of learning, including positive emotions (such as excitement, pleasure) and negative emotions (such as anxiety, depression). Studies have shown that academic emotions have an important impact on students' learning effectiveness and academic performance (Pekrun, 2006; Meyer & Turner, 2006). Positive academic emotions can stimulate students' learning motivation and enhance learning effectiveness, while negative academic emotions may lead to the reduction of learning motivation and the decline of learning effectiveness. In addition, academic emotions are closely related to students' self-efficacy, achievement goals and learning strategies (Schunk & Zimmerman, 2008). Therefore, it is very important to understand and regulate academic emotions to improve students' learning effectiveness.

3.3The Effect of Production-oriented Approach on Academic Emotion

Several studies have shown that the production-oriented method can affect students' academic emotions in many ways. Improve learning motivation: stimulate students' interest and initiative in learning through task design. Increase learning confidence: Increase students' self-efficacy by gradually increasing the difficulty of tasks and providing timely feedback. Reduce learning anxiety: reduce students' learning stress through group cooperation and interaction. The effect of production-oriented approach on academic emotions is an area worthy of further study. Some empirical studies have shown that the production-oriented approach can effectively

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

enhance students' positive academic emotions. By participating in actual language use activities, students' self-confidence and sense of achievement are significantly improved, thus improving their learning experience (Gao, 2020; yuan, 2021). For example, the study found that in terms of output, in the oriented classroom, students generally show a high sense of interest and involvement, and the increase of positive emotions promotes their learning motivation and learning effect (Liu & Chen, 2019). On the contrary, the lack of effective learning style may lead to students' anxiety and frustration, so it is particularly important to combine the production-oriented approach with the regulation of academic emotions in teaching.

3.4Influential Factors of Classroom Academic Emotions

The influencing factors of classroom academic emotions are various, including teaching strategies, teacher support, peer interaction and individual characteristics. Research shows that teachers' teaching style and classroom management directly affect students' academic emotions (Pianta et al., 2008; Wentzel, 2009). For example, teachers' positive feedback and support can enhance students' self-confidence and reduce learning anxiety, while negative classroom atmosphere may lead to students' low mood. In addition, peer interaction and cooperative learning are also considered to be important factors affecting academic emotions. Good peer relationship can increase students' sense of belonging, thereby enhancing positive emotions (Kuh et al., 2005). Individual characteristics, such as gender, personality and learning style, also have an impact on academic emotions (Pekrun et al., 2011). To sum up, understanding and analyzing the influencing factors of classroom academic emotions is of great significance for optimizing teaching practice and improving students' learning effect. Under the production-oriented teaching mode, the factors that affect English majors' academic emotions mainly include teachers' factors, students' factors and environmental factors. Teacher factors: Teachers' teaching style, feedback and emotional support will directly affect students' academic emotions. Student factors: Students' self-efficacy, learning motivation and cognitive strategies are important internal factors that affect academic emotions. Environmental factors: external conditions such as teaching environment, learning resources and peer support also have an impact on students' academic emotions.

4. Research Design

4.1Research questions

This study aims to answer the following four questions:

1.What is the overall situation of students' academic emotions in the classroom under the production-oriented approach?

2.What are the emotional manifestations of students' classroom academic emotions under the production-oriented approach (POA) teaching mode?

3.Are there significant differences in classroom academic emotions among students of different genders and majors? What is the main reason for the difference?

4.What effective strategies can be implemented to improve students' classroom academic emotions in English teaching?

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

4.2Research Participants

Following the principle of random sampling and according to the characteristics of the subjects, the subjects of this study are English majors at the undergraduate level in various universities in China, and each subject has received a non-stop length of time. Teaching in English under the POA teaching mode. A total of 725 students participated in the questionnaire survey, excluding 15 invalid questionnaires, the researcher finally obtained 710 valid questionnaires, the questionnaire recovery rate was 97.93%. There were 92 male subjects (12.96%) and 618 female subjects (87.04%). The subjects were all English majors or Business English majors. The basic characteristics of the demographic aspects of the validated questionnaire are shown in Table 1 and Figure 1.

[Table 1] Demographic Factors of Research Participants (N = 710)

	Item name	Number of people	Percentage
Gender	Male	92	12.96%
	Female	618	87.04%
Grade	First year of college	356	50.14%
	Sophomore year of college	224	31.55%
	Junior year of college	100	14.08%
	Senior year of college	30	4.23%
Major	English major	455	64.08%
	Business English major	255	35.92%

4.3Research Tools

The research paradigm of quantitative research was used in this study. In the process of quantitative research, the research group selected Xia Yang and Meng Jian compiled the Classroom Academic Emotions Scale for English Majors in 2017. According to the characteristics of the subjects, the researchers adjusted the dimensions of the scale and the items of each dimension in order to make the scale more suitable for measuring the subjects' classroom academic emotions. As shown in Table 2, there are 21 items in the scale, and the academic emotions are divided into four dimensions according to the degree of pleasure and arousal. Each item is scored by a five-point Likert scale, ranging from 1 (completely inconsistent) to 5 (completely consistent). The Cronbach alpha coefficient of the overall scale of classroom academic emotions is 0.773, which means that the reliability, that is, the internal consistency, is good. The results of exploratory factor analysis showed that KMO = 0.904, Bartlett's sphericity test chi-square = 6730.531, $p < 0.001$, which meant that the sample data of classroom academic emotions were suitable for factor analysis. Four factors were extracted after rotation by the maximum variance method: boredom and boredom; relaxation and calmness; joy and expectation; Anxiety and guilt. The explanation rate of the cumulative variance is 61. 099%, which means that the construct validity of the scale is good.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

[Table 2] Measurement of English Majors' Classroom Academic Emotion Reliability

Dimension of the scale	Item	Cronbach's alpha
Boredom and boredom	2，4，1，12，17	0.726
Relax and calm	7，18，21，15，14，5	0.787
Happy and look forward to	10，3，13，6	0.765
Anxiety and guilt	16，19，11，20，9	0.789
Total	**21**	**0.773**

On the basis of this questionnaire, the research team used SPSS27.0 to conduct descriptive statistical analysis to explore the overall situation of English majors' classroom academic emotions from four dimensions. This paper explores the influencing factors of English majors' classroom academic emotions under the production-oriented approach, and then uses SPSS28.0 to test the correlation between the influencing factors of English majors' classroom academic emotions, and finally puts forward a series of effective strategies to improve students' classroom academic emotions in English teaching.

4.4Data Processing and Analysis

This study investigates the influencing factors of English majors' classroom academic emotions and the relationship between them by using rating scale data analysis. SPSS 28.0 and Amos 28.0 software are used to analyze the rating scale data collected from college students. The analysis steps include: reliability test and validity test, descriptive statistical analysis, difference analysis, correlation analysis and path analysis. Amos 28.0 software was used to construct a structural equation model (SEM) to measure and present the causality between all the variables involved in this topic relationships and structural relationships. Further identify and visualize the direct and indirect relationships between variables, and further verify the fitness of the theoretical model through path analysis.

5. Research Results and Analysis

5.1Descriptive Statistical Analysis

The research work starts from March 25, 2024 and ends on April 1, 2024. Through the analysis of 710 valid questionnaires, the results show that the Cronbach's alpha coefficient of the overall scale of classroom academic emotions is 0.773. Therefore, the classroom academic emotion scale has a high internal consistency.

Using SPSS28.0 software to analyze the 710 valid questionnaires collected, we can get the overall situation of the classroom academic emotions of the college students surveyed, as shown in Table 3.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

[Table 3] Four dimensions of classroom academic emotions of English majors: average, standard deviation and normality (N = 710)

Dimension	Min	Max	Mean	SD	Ske	Kur
Boredom and boredom	1.00	5.00	2.5079	.88461	.261	-.285
Relax and calm	1.00	5.00	3.3491	.72906	-.084	.223
Happy and look forward to	1.50	5.00	4.2965	.63800	-1.030	1.291
Anxiety and guilt	1.00	5.00	2.9766	.79566	-.222	.131

It can be seen from Table 3 that the minimum value of the four dimensions is 1.00, indicating that the lowest possible value of the emotion score is 1, while the maximum value is 5.00, meaning that the highest possible emotion score is 5. The table shows the mean (M) for each dimension, which is an important measure of the trend in the data set. The average value shows the general level of students in each emotional dimension. The mean value of the boredom and boredom dimension was 2.5079, while the mean value of the relaxation and calmness dimension was 3.3491, indicating that among the two sub-dimensions of positive emotions, students had relatively higher levels of classroom academic emotions in the low arousal state. The table also provides the standard deviation (SD), which is a measure of how scattered the data are. A smaller standard deviation means that the data points are more concentrated around the mean; a larger standard deviation means that the data points are more widely distributed. The standard deviation of boredom and boredom was 0. 88461, while the standard deviation of pleasure and expectation was 0. 63800, which may imply that the variability of negative emotions in high arousal is small. Skewness (Ske) and kurtosis (Kur) are statistics that describe the shape of the data distribution. Skewness measures the symmetry of the data distribution, with positive values indicating that the data is skewed to the right and negative values indicating that the data is skewed to the left. Kurtosis measures how sharp the data distribution is. A positive value indicates that the data distribution is sharper than the normal distribution, and a negative value indicates the opposite. The skewness of the boredom and dullness dimension is 0.2614, and the kurtosis is -0.285, which indicates that the data distribution of this dimension is slightly right skewed and flatter than the normal distribution.

Taken together, this chart provides us with a comprehensive perspective to understand college students in specific teaching modes by providing statistical information such as minimum, maximum, mean, standard deviation, skewness, and kurtosis. Classroom Academic Emotional State. These statistics not only help us understand the central tendency and variability of emotion levels, but also reveal the shape characteristics of data distribution, which provides a basis for further analysis and research.

5.2Difference Analysis

5.2.1Analysis of Gender Differences

This study uses independent sample t-test to test the gender differences in the four dimensions of the influencing factors of college students' classroom academic emotions, and the analysis results are shown in Table 4.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

[Table 4] Independent Sample t-test of Gender Differences in Influencing Factors of College Students' Classroom Academic Emotions (N = 710)

Dimension	Gender (mean ± SD)		F	P Significance (Double Tail)
	① Male(n=92)	② Female(n=618)		
Boredom and boredom	2.4587±1.00790	2.5152±.86543	6.745	.568
Relax and calm	3.4764±.92271	3.3301±.69457	14.543	.072
Happy and look forward to	4.1304±.78576	4.3212±.60988	11.663	.007
Anxiety and guilt	2.7543±.92349	3.0097±.77021	6.343	.004

* p<0.05 ** p<0.01

The reasons for the differences are as follows: It can be seen from Table 4 that in terms of gender, there are certain gender differences in the four dimensions of college students' classroom academic emotions. In the dimension of boredom and boredom, the average score of boys was 2.4587 and that of girls was 2.5152, but the significance level of t-test was.568, indicating that the gender difference was not significant. However, the average score of 4.3212 for girls was significantly higher than that of 4.1304 for boys in the dimension of happiness and expectation, and the significance level of t-test was.007, indicating a significant gender difference. In addition, on the dimensions of anxiety and guilt, the average score of female students was 3.0097, which was also significantly higher than that of male students (2.7543), and the significance level of t-test was.004, indicating that the gender difference was significant. This means that girls feel more anxiety and guilt in the classroom.

5.2.2Analysis of Major Differences

Researcher uses independent sample t-test to test the four dimensions of influencing factors of college students' classroom academic emotions. The results of the analysis of the differences in specialties are shown in Table 5.

[Table 5] Independent Sample t-test of Major Differences in Influencing Factors of College Students' Classroom Academic Emotions (N = 710)

Dimension	Major (mean ± SD)		F	P Significance (Double Tail)
	① English major (n=455)	② Business English major (n=255)		
Boredom and boredom	2.5846±.86500	2.3710±.90420	.815	.002
Relax and calm	3.3007±.68601	3.4353±.79427	6.248	.018
Happy and look forward to	4.2610±.67901	4.3598±.55300	4.922	.048
Anxiety and guilt	3.0167±.77816	2.9051±.82267	2.002	.073

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

* p<0.05 ** p<0.01

It can be seen from Table 5 that in the analysis of professional differences, English majors and business English majors also show significant differences in some dimensions of classroom academic emotions. On the boredom and boredom dimensions, the average score of business English majors is 2.3710, which is significantly lower than that of English majors (2.5846), and the significance level of t-test is. 002. This may reflect the low level of boredom of business English majors with classroom content. In the dimension of relaxation and calmness, the average score of business English majors is 3.4353, which is higher than that of English majors (3.3007), and the significance level of t-test is. 018, which indicates that business English majors feel more relaxed and calm emotions in class. On the happiness and expectation dimensions, the scores of the two majors are similar, but the score of the students majoring in Business English is slightly higher, and the significance level of t-test is. 048. In the dimensions of anxiety and guilt, the average score of business English majors is 2. 9051, which is lower than that of English majors (3. 0167), but the difference is not significant.

These data may reflect the psychological experience and emotional reactions of students with different gender and professional backgrounds during classroom learning. Gender differences may be related to individual physiological, psychological and sociocultural factors, for example, female students may be more inclined to express emotions or feel more social pressure on their studies. Major differences may be related to curriculum, teaching methods, learning motivation and professional characteristics. For example, business English majors may pay more attention to practice and application, thus reducing students' boredom and enhancing their emotional experience of relaxation and calmness.

Taken together, these findings provide insights into gender and professional differences in the factors that influence college students' academic emotions in the classroom, and help educators and school administrators design more personalized and effective teaching strategies to meet the needs of different groups of students, optimize the learning experience, and improve the quality of education.

5.2.3Correlation Analysis

In order to explore the correlation between the four dimensions of college students' classroom academic emotions, this study uses Pearson correlation analysis to analyze the correlation between the four dimensions of boredom and boredom, relaxation and calmness, happiness and expectation, anxiety and guilt. The analysis results are shown in Table 6.

[Table 6] Correlation analysis of influencing factors of college students' classroom academic emotions

(N = 710)

Variable name	Boredom and boredom	Relax and calm	Happy and look forward to	Anxiety and guilt
Boredom and boredom		1		
Relax and calm	-.499**		1	
Happy and look forward to	-.363**	.410**		1
Anxiety and guilt	.280**	-.252**	.002**	1

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

* *. Correlation is significant at the 0.01 level (two-tailed).

*. At the 0.05 level (two-tailed), the correlation is significant.

Correlation analysis is a statistical technique used to assess the strength and direction of a linear relationship between two or more variables. From Table 4, we can see that the table lists the names of four dimensions, which are boredom and boredom, relaxation and calmness, happiness and expectation, and anxiety and guilt. These dimensions represent different emotional States that students may experience in the classroom. The correlation coefficients between these dimensions are shown in the table. The correlation coefficient is a value between -1 and 1, where 1 is a perfect positive correlation, -1 is a perfect negative correlation, and 0 is no linear correlation. The correlation coefficient between boredom and dullness and relaxation and calmness is -0.499, which indicates that there is a moderately strong negative correlation between the two dimensions, that is, when the score of one-dimension increases, the score of the other dimension tends to decrease. The correlation coefficient between boredom and boredom and happiness and expectation is -0.363, while the correlation coefficient between anxiety and guilt is 0.280, which indicates that there is a weak negative correlation between the high arousal state of positive emotion and the high arousal state of negative emotion, and a weak positive correlation between the low arousal state of negative emotion. The table also shows that the correlation coefficient between relaxation and calmness, happiness and expectation is 0.410, and the correlation coefficient between anxiety and guilt is -0.252, which indicates that there is a moderate negative correlation between the low arousal state of positive emotion and the two dimensions of negative emotion. Taken together, this chart reveals the correlation between different dimensions of college students' classroom academic emotions through Pearson correlation analysis, which provides valuable information for us to understand the interaction between students' emotional States. These findings help to further explore the influence of emotion on learning process and academic performance.

5.3 Analysis of Structural Equation Modeling（SEM）

A structural equation model (SEM) was constructed to further explore the effects of the production-oriented approach (POA) teaching model on students' academic emotions in the classroom. Amos 26.0 software was used for analysis, and a model containing four main emotional dimensions (boredom and boredom, relaxation and calmness, joy and expectation, anxiety and guilt) was constructed.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

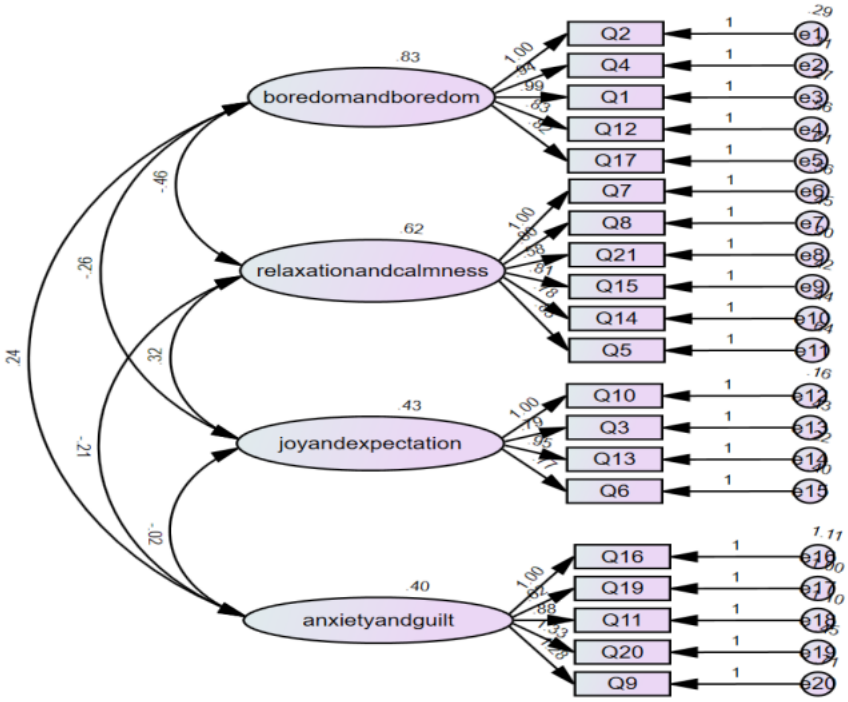


Figure 1 Map of Structural Equation Model (SEM) (N = 710)

[Table 7] Initial Model Fit Indices

Common Indices	χ^2	df	^{2}/df	GFI	RMSEA	RMR
Judgment Criteria	-	-	<5	>0.9	<0.10	<0.05
Initial Model	824.255	164	5.026	0.891	0.075	0.085
Other Indices	TLI	CFI	AGFI	IFI	SRMR	NFI
Judgment Criteria	>0.9	>0.9	>0.9	>0.9	<0.1	>0.9
Initial Model	0.875	0.892	0.860	0.892	---	0.869

Analysis of the model fit indices reveals that $\chi^2/df = 5.026$, which exceeds the commonly accepted threshold of 5, suggesting that the fit between the model and the data may need improvement. The GFI is 0.891, which is close to 0.9, indicating that the overall fit of the model is acceptable. The RMSEA is 0.075, which is below 0.1, suggesting that the root mean square error of approximation is within an acceptable range. The RMR is 0.085, slightly above 0.05, indicating that the root mean square residual is relatively low. From Table 7, although the indices such as RMSEA, RMR, GFI, and AGFI are close to the acceptable reference range, the primary fit index, χ^2/df, has not reached the reference value. This suggests that further improvement is needed in the fit of the initial model to better align the structural equation model with the relationships reflected in the questionnaire data.

According to Table 7, the analysis results are as follows: Boredom and monotony have a significant negative impact on happiness and anticipation, with a coefficient of -0.26, indicating that an increase in boredom

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

and monotony will reduce the experience of happiness and anticipation. Relaxation and calmness have a significant negative impact on anxiety and guilt, with a coefficient of -0.21, suggesting that more relaxation and calmness can alleviate feelings of anxiety and guilt. Happiness and anticipation do not have a significant direct impact on anxiety and guilt, with a coefficient of 0.02. The model fit indices indicate that the overall model fit is acceptable, with $\chi^2/df = 5.026$, GFI = 0.891, NFI = 0.869, RMR = 0.085, and RMSEA = 0.075.

6. Research Conclusions and Suggestions

Through the above empirical research results, we can draw the following main conclusions: The overall situation of students' classroom academic emotions under the output-oriented approach: students' emotional performance is the best in the dimension of "joy and expectation", while the emotional performance is relatively poor in the dimension of "boredom and boredom". On the whole, students' positive emotions are stronger than their negative emotions under the production-oriented approach. Gender differences: Female students scored significantly higher than males in the two dimensions of "happiness and expectation" and "anxiety and guilt", which is related to gender differences in emotional expression and perception. Major differences: There are significant differences between English majors and Business English majors in the two dimensions of "boredom and boredom" and "relaxation and calmness", and Business English majors have more positive classroom academic emotions. This reflects the impact of differences in curriculum and learning content of different majors on students' emotions. Relationships among emotional dimensions: Correlations among dimensions revealed the interaction of emotional States, and the negative correlations of boredom and dullness with other emotional dimensions indicated that negative emotions may weaken students' positive emotional experiences.

To sum up, the output-oriented method effectively improves students' positive emotions in classroom learning, especially the emotions of "joy and expectation". Gender and major have a significant impact on students' classroom academic emotions, especially in the feelings of anxiety and guilt, and there are also differences in emotional experience among students of different majors. There are complex interrelationships among emotional dimensions, and teachers should pay attention to students' overall emotional experience in order to optimize teaching effectiveness.

The suggestions are as follows: Teachers should strengthen the guidance of students' positive emotions, especially in the process of task design and feedback, and pay attention to enhancing students' sense of participation and achievement. Individualized teaching strategies are implemented for students of different genders and majors to meet the needs of different students and optimize the learning experience. In the process of teaching, we should pay attention to the emotional changes of students, adjust teaching strategies in time, reduce the negative emotions of students, and improve the enthusiasm and effectiveness of classroom learning. This study provides a new perspective for the study of students' academic emotions under the production-oriented approach, and provides a useful reference for emotional management in teaching practice. Future research can further explore the changing rules of students' academic emotions in other disciplines and different teaching modes, as well as more detailed emotion regulation strategies.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

7. Limitations of the Study

This study explores the differences of students' classroom academic emotions under the production-oriented teaching mode, but there are still some limitations. First, the sample includes only 710 college students majoring in English and Business English from all over the country, which may not be enough to represent all disciplines and levels of students comprehensively. Second, this study mainly relies on questionnaires to collect data, which may lead to bias in self-reported data. Finally, the cross section of the study set. However, it limits the further exploration of causality, and future studies can consider the longitudinal study design to explore the changes in time.

8. Research Prospect

Future research can be carried out in the following three aspects: First, expand the scope of the sample to cover more disciplines and educational levels to improve the universality and representativeness of the research results. Secondly, quantitative and qualitative research methods, such as interviews and observations, are combined to obtain more comprehensive data on students' emotions. Thirdly, a longitudinal study was conducted to examine the long-term effects and changes of the production-oriented approach on students' academic emotions. In addition, the specific effects of different teaching strategies on academic emotions can be explored to provide more targeted suggestions for improving teaching practice.

9. Conclusion

To sum up, this study explores the differences of students' academic emotions in the classroom under the output-oriented teaching mode, and reveals the differences between students' positive and negative academic emotions. Although there are some limitations, the results still have some reference value for understanding the differences of academic emotions among students of different majors and genders. This provides valuable insights for future teaching practice and further research, which can help teachers better adjust their teaching strategies and promote students' positive emotions and learning results.

Funding

This article is one of the research results of the 2023 Tianjin Municipal Education Commission Scientific Research Project: "Research on the Cultivation Path and Development Strategies of Critical Thinking Skills for English Major Students from the Perspective of Multiple Intelligences Theory," Project Number: 2023SK149.

References

[1]Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approach (4th ed.). SAGE Publications.

[2]Daniels, L. M., V. M. C. Tze & T. Goetz. (2015). Examining boredom: Different causes for different cop-

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

ing profiles. Learning and Individual Differences, 37(1), 255-261.
[3]Dao, P. & K. McDonough. (2018). Effect of proficiency on Vietnamese EFL learners' engagement in peer interaction. International Journal of Educational Research, 88(2), 60-72.
[4]Dewaele, J. M., X. Chen, A. M. Padilla & J. Lake. (2019). The flowering of positive psychology in foreign language teaching and acquisition research. Frontiers in Psychology, 10(1), 1-13.
[5]Dewaele, J. M. & P. D. MacIntyre. (2014). The two faces of Janus? Anxiety and enjoyment in the foreign language classroom. Studies in Second Language Learning and Teaching, 4(2), 237-274.
[6] Dewaele, J. M., P. D. MacIntyre, C. Boudreau & L. Dewaele. (2016). Do girls have all the fun? Anxiety and enjoyment in the foreign language classroom. Theory and Practice of Second Language Acquisition, 2(1), 41-63.
[7]Dincer, A., S. Yeşilyurt, K. A. Noels & D. I. V. Lascano. (2019). Self-determination and classroom engagement of EFL Learners: A mixed-methods study of the self-system model of motivational development. SAGE Open, 9(2): 1-15.
[8]Dörnyei, Z. (2005). The Psychology of the Language Learner: Individual Differences in Second Language Acquisition. Lawrence Erlbaum Associates.
[9]Ellis, R. (2003). Task-based language learning and teaching. Oxford University Press.
[10]Ellis, R. (2009). Task-based Language Teaching: Sorting out the Misunderstandings. International Journal of Language Studies, 3(3), 1-26.
[11]Fan, Y.M, & Long, Z.B. (2022). A Study on the Relationship between College Students' Basic Psychological Needs and Academic English Initiative Engagement from the Perspective of Self-Determination Theory . Modern Foreign Language, (1), 1-12.
[12]Fredricks, J. A., P. C. Blumenfeld & A. H. Paris. (2004). School engagement: Potential of the concept, state of the evidence. Review of Education Research, 74(1), 59-109.
[13]Fredrickson, B. L. (2003). The value of positive emotions: The emerging science of positive psychology is coming to understand why it's good to feel good. American Scientist, 91(4), 330-335.
[14]Gao, X. (2020). The Role of Output in L2 Learning: A Review of Research. Language Teaching Research, 24(4), 432-455.
[15]Guo, J.D.,& Li. Y. (2018). Development and Validation of the Foreign Language Learning Initiative Engagement Scale . Foreign Language Teaching, (5), 66-69.
[16] Horwitz, E., M. Horwitz & J. Cope. (1986). Foreign language classroom anxiety. Modern Language Journal, 70(2), 125-132.
[17] Jiang, Y. (2020). A Study of Teacher Factors Affecting Chinese College Students' Foreign Language Pleasure . Foreign Language Circle, (1), 60-68.
[18] Jiang, Y. & J. M. Dewaele. (2019). How unique is the foreign language classroom enjoyment and anxiety of Chinese EFL learners? System, 82(1), 13-25.
[19] Jin, Y. & L. J. Zhang. (2019). A comparative study of two scales for foreign language classroom enjoyment. Perceptual and Motor Skills, 126(1), 1024-1041.
[20] Kozaki, Y. & S. J. Ross. (2011). Contextual dynamics in foreign language learning motivation. Language Learning, 61(4), 1328-1354.
[21] Lambert, C., J. Philp. & S. Nakao. (2017). Learner generated content and engagement in second language task performance. Language Teaching Research, 21(6), 665-680.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

[22] Li, C., J. -M. Dewaele & Y. Hu. (2021). Foreign language learning boredom: Conceptualization and measurement. Applied Linguistics Review. 14(2).
[23] Liu, M. (2021). The Effect of Output-Oriented Instruction on Student Engagement in Language Learning. Educational Studies, 47(2), 123-138.
[24] Liu, M., & Chen, L. (2019). Exploring the Impact of Task-Based Learning on Student Motivation and Engagement. Teaching English as a Second Language Quarterly, 11(1), 45-60.
[25] Liu, R. D., R. Zhen, Y. Ding, Y. Liu, J. Wang, R. Ji ang & L. Xu. (2018). Teacher support and math engagement: Roles of academic self efficacy and positive emotions. Educational Psychology, 38(1), 3-16.
[26] Liu, X.H.,& Guo, J.D. (2021). The Relationship between Teacher Support and Student Engagement and Learning Pleasure in Online Foreign Language Teaching . Journal of Foreign Languages Institute of PLA, (5), 34-42. 160.
[27] Meyer, D. K., & Turner, J. C. (2006). The Role of Teacher-Student Relationships in Student Engagement. Educational Psychologist, 41(3), 151-169.
[28] Pekrun, R. (2006). The control-value theory of achievement emotions: Assumptions, corollaries, and implications for educational research and practice. Educational Psychology Review, 18(4), 315-341.
[29] Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-Regulated learning and achievement: A program of qualitative and quantitative research. Educational Psychologist, 37(2), 91-105.
[30] Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). Classroom Assessment Scoring System (CLASS). Baltimore: Paul H. Brookes Publishing.
[31] Ren, Q.M.(2021). A Theoretical Framework of Multidimensional Assessment System for College Students' English Classroom Learning Engagement . Foreign Language Circles, (2): 37-45.
[32] Schunk, D. H., & Zimmerman, B. J. (2008). Motivation and Self-Regulated Learning: Theory, Research, and Applications. New York: Routledge.
[33] Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), Sociocultural theory and second language learning (pp. 97-114). Oxford University Press.
[34] Swain, M. (2005). The Output Hypothesis: Theory and Research. In E. Hinkel (Ed.), Handbook of Research in Second Language Teaching and Learning (pp. 471-483). Mahwah, NJ: Lawrence Erlbaum Associates.
[35] Wen, Q. (2016). The production-oriented approach: A pedagogical innovation in language teaching in China. Chinese Journal of Applied Linguistics, 39(1), 109-124.
[36] Wentzel, K. R. (2009). Student Motivation in Middle School: The Role of Social Relationships. Educational Psychologist, 44(3), 159-171.
[37] Xerri, M. J., K. Radford & K. Shacklock. (2018). Student engagement in academic activities: A social support perspective. Higher Education, 75(4), 589-605.
[38] Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). SAGE Publications.

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

[39] Yuan, H. (2021). Task-Based Language Teaching and Learner Motivation: A Study on EFL Context. Journal of Language Teaching and Research, 12(4), 724-732.
[40] Zaccoletti, S., G. Altoè & L. Mason. (2020). Enjoyment, anxiety and boredom, and their control value antecedents as predictors of reading comprehension. Learning and Individual Differences, 793), 32-45.
[41] Zawodniak, J., M. Kruk & J. Chumas. (2017). Towards conceptualizing boredom as an emotion in the EFL academic context. Konin Language Studies, 5(4), 425-441.
[42] Zhang, X., & Cheng, L. (2020). The Influence of Output-Oriented Teaching on Student Autonomy in Language Learning. Journal of Educational Research, 113(5), 321-329.
[43] Zhang, W., & Zou, D. (2021). A meta-analysis of the effectiveness of production-oriented approach in EFL teaching. Language Teaching Research, 25(5), 657-682.

Appendix *Classroom Academic Emotions Scale for English Majors*

Dear students:

You are cordially invited to participate in a scientific research project: “Research on the Impact of College Students’ Critical Thinking Ability on Academic Achievement-Mediated by Academic Emotion”. The purpose of this test is to investigate the factors that influence the classroom academic emotions of Chinese college English majors. “This is a scientific research questionnaire, which has nothing to do with your personal, your teacher’s and the school’s evaluation.” The answer does not need to be signed. We will keep your personal information strictly confidential. Please rest assured that you will help complete the survey.

Please tick the appropriate answer after each question. Note that only one answer can be selected for each question. There is no right or wrong answer. Please complete it independently and do not consult with others. Please do not hesitate or think too long when answering questions. For questions that are not easy to answer, please make a choice that is closer to the actual situation.

Thank you again for your support and cooperation. In order to make the survey more valuable, please fill in the following information:

Your gender: ○ Male ○ Female

Which province or city are you from: ____ Province,_____ Name of your university in the city: _____

Your major: ○ English ○ Business English Major

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)

Classroom Academic Emotions Scale for English Majors

Items	Completely disagree				Completely agree
1. I always feel bored in English class.	1	2	3	4	5
2. English teacher's way of teaching makes me feel dull in class.	1	2	3	4	5
3., I always hope that I can learn English well.	1	2	3	4	5
4. English class is boring and makes me sleepy.	1	2	3	4	5
5. in English class, I will finish the class task in a relaxed state.	1	2	3	4	5
6. I will be very happy to understand the English teacher's teaching content	1	2	3	4	5
7. I can calmly deal with the teacher's questions in English class.	1	2	3	4	5
8. I am very glad to have the opportunity to study with my classmates in English class	1	2	3	4	5
9. I couldn't understand the English teacher's teaching content, and I felt very anxious.	1	2	3	4	5
10. I hope I can do well in English class	1	2	3	4	5
11. if the other students know that I do not understand the English teacher's teaching content, I'll feel guilty.	1	2	3	4	5
12. I can't concentrate on what is being taught in the English class	1	2	3	4	5
13. I hope I can make a good impression on my English teacher	1	2	3	4	5
14. I will calmly finish any task assigned by my English teacher.	1	2	3	4	5
15. I can understand the English teacher's teaching content and feel relaxed in class.	1	2	3	4	5
16. I feel guilty about my poor English pronunciation.	1	2	3	4	5
17. I feel that the time of English class passes very slowly. I hope the class will be over soon.	1	2	3	4	5
18. I will calmly deal with the problems I encounter in English class.	1	2	3	4	5
19. I didn't take an active part in the English class and I felt ashamed of my teacher.	1	2	3	4	5
20. the English course is very difficult, I can't keep up with the progress, and I feel very anxious.	1	2	3	4	5
21. I was in English class, and I didn't feel any tension.	1	2	3	4	5

© 2025 by the author(s); licensee Mason Publish Group, this work for open access publication is under the Creative Commons Attribution International License (CC BY 4.0). (http://creativecommons.org/licenses/by/4.0/)