

The Influence of Mixed Online to Offline Teaching on the Academic Motivation of Students in Vocational College

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Abstract: *With the development of education informatization, the popularization and development of the Internet and the leapfrog development of vocational education, which industry in our country rises suddenly. People pay more and more attention to vocational education, which makes the mixed Online to Offline (OTO) teaching devices become the focus of educators. Mixed teaching, as an innovative teaching devices, makes maximum use of classroom learning time and resources, promotes students' personalized learning, and subverts the convention teaching devices to a large extent. However, due to the fact that a considerable number of students in vocational colleges have unknown learning purpose, academic motivation is insufficient. Therefore, how to stimulate and cultivate the academic motivation of higher vocational students these aspects of research is particularly important. Based on the data studies, the comparison method and the questionnaire survey method, this paper studies the influence of mixed OTO teaching on the academic motivation of higher vocational students. Research findings: the current mixed OTO teaching devices can realize the effective reform of the convention education mode, significantly improve the quality and effect of teaching, boost development of students' autonomous learning ability, improve students' ability to find and solve problems, and improve students' comprehensive quality. Therefore, mixed teaching has a positive and positive impact on the academic motivation, learning habits and learning methods of higher vocational students.*

Keywords: *OTO, Mixed Teaching, Higher Vocational Learning, Motivation for Learning*

1. Introduction

Academic motivation is the driving force of learning action. The academic motivation mentioned here is an internal psychological activity that promotes and maintains learning action and makes learning action tend to the objects set by teachers, and is the most direct internal motivation to push students' learning [1], and it motivates and guides the development of students' learning action. The use of mixed OTO teaching devices can help teachers adapt to the information teaching environment, change the passive learning mode of students, elevate the availability of classroom teaching, so as to achieve the main educational purpose of vocational colleges.

In recent years, the mixed teaching devices of OTO has attracted extensive attention from scholars at home and abroad. Miao Y [2] explored the teaching effect of mixed OTO English teaching courses and found that mixed OTO teaching is very popular with students. And a hybrid intelligent teaching assistant model based on mobile information system is proposed, but this model cannot supervise students' learning situation. Wu X[3] put forward suggestions on the reform of the evaluation system of mixed teaching through the analysis of mixed teaching methods. Wang N[4] proposed promotion strategies for the application of network integrated teaching platform to promote the improvement of teaching level and teaching effect. The research of these scholars proves that the mixed teaching method of OTO can help teachers improve their teaching level and teaching effect. However, the study motivation of students is not discussed from the perspective of students

Therefore, based on the advantages of mixed OTO teaching, this paper discusses the impact of this teaching devices on the academic motivation of higher vocational students [5]. The research finds that the mixed OTO teaching devices is welcomed by students, and has a good promoting effect on improving students' academic performance and interest, cultivating good academic motivation and improving students' learning attitude.

2. Contrasted with the Convention Teaching Mode, the Advantages of Mixed OTO Teaching

In the convention mode, the learning method is single, students only listen to class, only take notes, almost no communication with the teacher, lack of independent opinions, problems can not get timely feedback, in the long run, it will reduce students' interest in learning, reduce the ability of autonomy. Therefore, how to change this situation has become a common concern of the education community. The convention teaching devices is difficult to achieve personalized teaching, limited by the course progress and students' mastery of knowledge, the same teaching progress can not make every student achieve a good mastery of knowledge. [6].

However, the OTO hybrid first-class course adopts a new teaching devices, which is fundamentally different from the convention teaching evaluation method. Compared with the convention writing teaching mode, the OTO hybrid teaching devices take into account the characteristics and advantages of offline teaching and online learning [7]. It is a feasible choice to adopt the blended learning method combining OTO. Online learning has the advantages of flexible and diverse preview and review time, flexible and diverse learning places, reconstruction of learning content, diversified teaching devices, multi-dimensional learning evaluation, appropriate learning resources, convenient learning space, reasonable technology application, effective learning support, and so on.

3. Design of Mixed OTO Teaching Devices

The mixed teaching design is guided by educational theories, namely constructivism learning theory and humanism learning theory [8], and then based on the German design-oriented vocational education theory; the teaching flow chart design is carried out. The teaching guidance chart is mainly composed of three major structures: pre-teaching analysis, process design and evaluation design. The specific process guidance chart is shown in Figure 1:

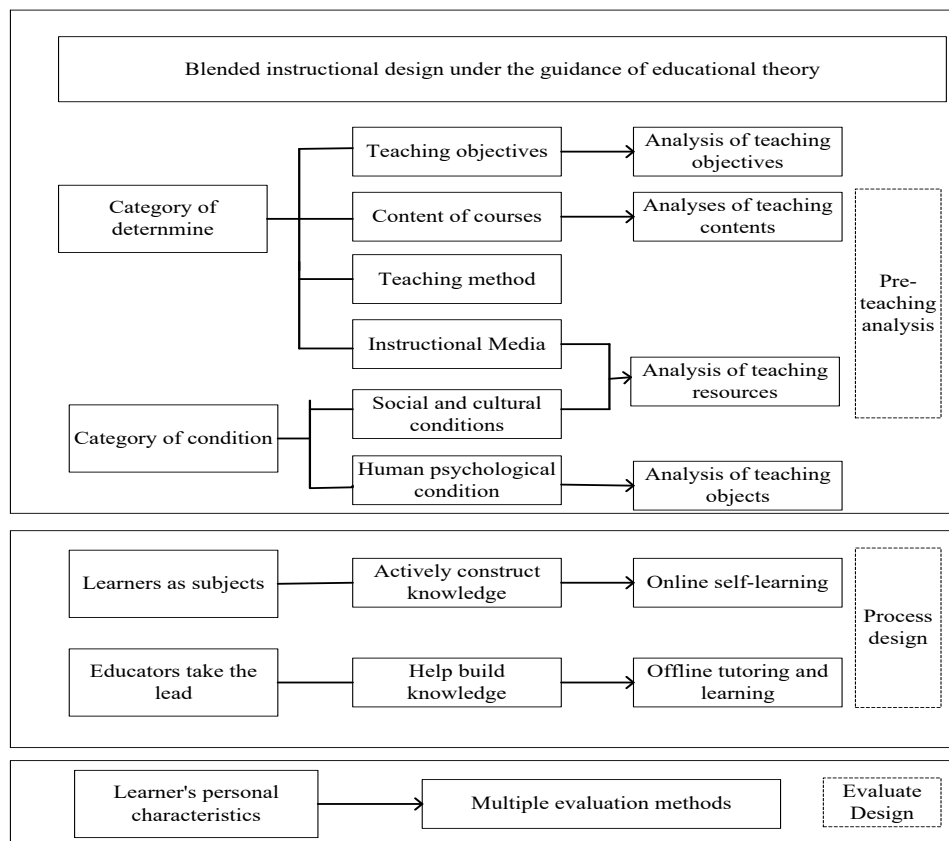


Figure 1: Theoretical basis and guidance diagram of mixed teaching

3.1 Mixed OTO Teaching Practice

The OTO hybrid writing teaching devices organically integrates the advantages of convention

teaching devices and network teaching [9], which not only plays the role of teachers' guidance, inspiration and monitoring play a leading role in the teaching process, but also fully reflects the main initiative, enthusiasm and creativity of students in the learning process.

3.2 Pre-class tasks

The main task of teachers before class is to prepare teaching resources and make a "learning task list" [10]. Teachers make, push and upload resources such as background materials and PPT related to teaching topics on relevant online teaching platforms to attract students' interest and guide students to discuss relevant issues. By studying the course in advance and participating in practical activities, students can deepen their understanding of the course, as is shown in Figure 2.

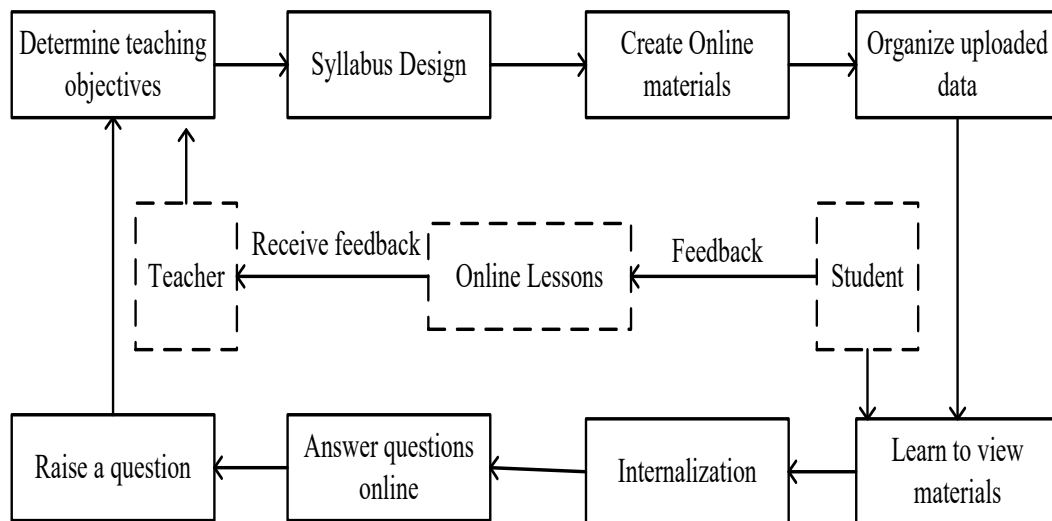


Figure 2: Online learning process before class.

3.3 Teaching Stage in Class

Part of the mixed online and offline teaching is the face-to-face classroom teaching, which is the most important part of teaching activities and design [11]. The smooth development of offline teaching and the effective realization of teaching effects need teachers' careful attention. Teachers should adopt problem-oriented teaching devices in the process of teaching, so as to check the effect of students' self-study, answer questions for students, and generalize and extend. Take English writing course as an example: first of all, teachers need to check the students' preview and solve the problems in the process of students' preview[12-13]. Then show the explanation of an English writing model, and let the students write imitation. Finally, the teacher comments and then independent writing, and then assign homework. After completing the task, students upload the project results to the teaching platform or display them in the classroom.

3.4 Review and Promotion Stage after Class

Review and practice after class are the extension and application of pre-class preview and teaching in class. The main task of teachers after class is to summarize the learning data of students and conduct analysis and evaluation. The online experimental platform accumulates students' learning behavior data before, during and after class, and provides intelligent analysis tools to facilitate teachers to supervise the whole teaching process in an all-round way. In addition, students should open the cloud classroom at an appropriate time after class, open the courseware uploaded by the teacher in my learning interface for review, complete the homework, consolidate the knowledge learned in this class, and check their mastery level through the examination, so as to achieve knowledge internalization and clear and solid memory[14].

4. Investigation of Teaching Practice

After the teaching, the author distributed the "Mixed OTO Teaching Questionnaire for Vocational

Students (post-test paper)" to the students. Forty questionnaires were collected, with complete data and 100% effective rate. The results according to the questionnaire are shown in Table 1 below [15]:

Table 1: Results of the questionnaire survey

Questions of the questionnaire		Option scores(5points)	Mean value
1.Study Attitude Survey	Like mixed OTO teaching	2,23,10,2,0	3.68
	Like online teaching platform for preview, review	0,20,10,7,0	3.35
2.Course learning effect	Improved academic performance	7,25,5,0,0	4.05
	Improve the learning efficiency, learning ability, operation ability	4,25,5,3,0	3.81
3. Completion of exercises after class	Carefully completed the online platform exercises	3,22,12,0,0	3.76
	Actively ask questions and help students to answer doubts	1,19,14,3,0	3.49
4.Student evaluation of the course	The teacher's teaching activities are well designed	2,23,10,2,0	3.68
	The teaching effect of mixed OTO teaching is very good	3,22,12,0,0	3.76

In Table 1, according to the mean value analysis of the course evaluation of the questionnaire, the scores of the options show that students have a high evaluation on the mixed OTO teaching mode. In the learning effect, the score of "improved academic performance" (4.05) is selected, which indicates that students are like the mixed OTO teaching mode, and it has significantly improved their performance. However, there is some practice after class. "Actively asking questions and helping students to solve doubts and answer doubts" (3.49) indicates that students in vocational colleges are not good at learning and communicating with classmates and teachers, which needs to be improved.

4.1 Influence of Mixed OTO Teaching Devices on Students with Different Basic Levels

According to the previous test scores of the students, they were divided into three groups with 13 students in each group based on the basic level of the students. Students No. 1, 3, 6, 8, 10, 11, 12, 14, 15, 17, 18, 19, 20 were selected as a group (high group), with the best performance and an mean value of 89.7; Students No. 2, 4, 5, 13, 22, 21, 23, 26, 28, 33, 34, 36, 38 were selected as group 2 (middle group), with mean value of 75.5; Students No. 7, 9, 16, 24, 25, 27, 29, 30, 31, 32, 35, 37, and 40 were selected as the three groups (low group), which had the worst performance with an mean value of 60.8.

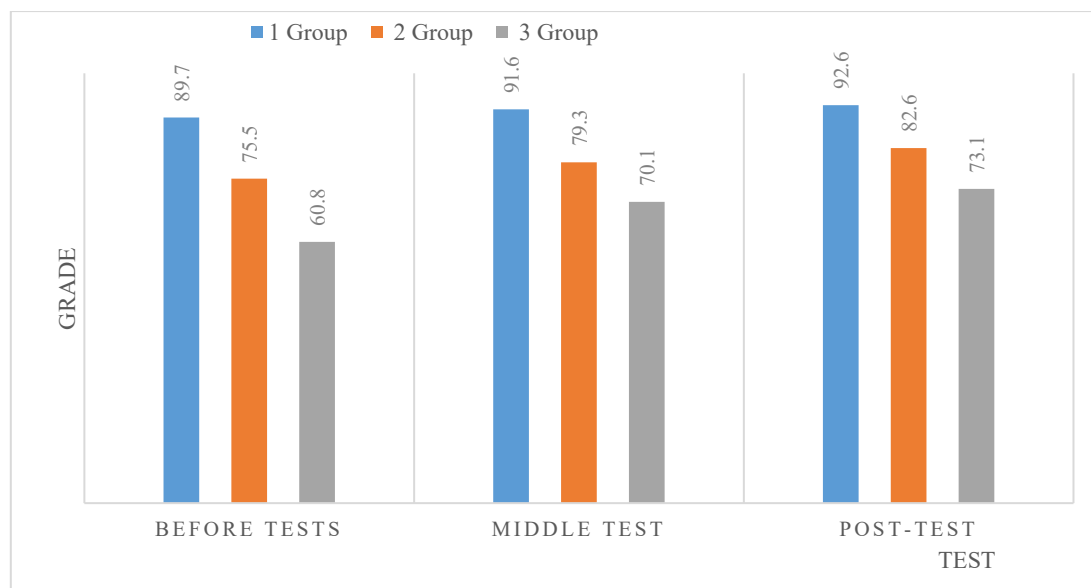


Figure 3: Graph of changes in the performance of three groups of students

Through student performance analysis of three groups in Figure 3, it can be seen that the performance of a group of students has not improved significantly, with an average value of 92.6 points, an increase of 3.1% compared with the mean value of the previous test. The mean value of the two

groups was 82.6, which increased by 8.59% compared with the average value of 75.5 in the previous test. The mean value of the three groups was 73.1, an increase of 16.82% compared with the mean value of 60.8 in the previous test. All the students in Group two and group three have improved their grades. From the perspective of the increase, group three is the best, group two is the second, and group one is the least. This shows that the combination of OTO teaching devices is helpful to improve the performance of the three groups of students, especially for the students with middle and lower scores, the effect is better.

4.2 Relationship between Academic Motivation and Learning Performance

In order to analyze the relationship between academic motivation, practical ability and academic performance of students in vocational colleges, the self-evaluation questions of "practical ability" and "academic performance" are designed in this paper.

Table 2: Self-evaluation results of actual ability and academic performance of higher vocational students

Actual Ability	power	A little power	Ordinary	Relatively weak	Very weak
Number	10	15	20	3	2
Percentage	25%	37.5%	50%	7.5%	5%
Academic record	Good	Relatively good	Ordinary	Worse	Very bad
Number	5	10	15	6	4
Percentage	12.5%	25%	37.5%	15%	10%

It can be seen from Table 2 that the number of people with strong and excellent self-rated actual ability is significantly more than the number of people with excellent and excellent self-rated academic performance, and the number of people with weak and excellent self-rated actual ability is less than the number of people with poor self-rated academic performance. The results show that the actual ability of students in vocational colleges reflects one of the characteristics of students in vocational colleges -- ability standard, rather than subject standard. And there is an activity correlation between academic motivation and actual ability, and learning achievement, which has a positive impact on achievement. Therefore, the self-evaluation for students also needs to help them establish a correct outlook on life by cultivating and stimulating their academic motivation clear learning purpose correct learning attitude. In addition, we should pay attention to the stratified guidance of students at different levels, so that more students can obtain satisfactory answers in self-evaluation; At the same time, they can also choose appropriate forms to guide them to participate in some activities or self-study according to their own conditions, so that they can constantly improve their comprehensive quality and achieve the goal of self-improvement.

4.3 Research Results

According to Table 1, Table 2 and Figure 3 above, we can know that the mixed teaching devices of OTO is welcomed by students, and plays a good role in improving students' academic performance and interest, cultivating good learning habits and improving students' learning attitude. After the application of mixed OTO teaching in teaching practice, students can effectively use the online platform for learning in extracurricular time. In the mixed teaching devices of OTO, students can select video resources suitable for their knowledge acceptance in real time according to their own learning effects, and the results can be statistically displayed on the teacher's end in real time, so that teachers can master students' learning dynamics in real time and adjust their interactive strategies in time.

5. Conclusion

According to the teaching status of higher learning and the learning situation of students, under the guidance of design-oriented theory, constructivism learning theory and humanistic learning theory, this paper designs the process of mixed OTO teaching mode, and builds a bridge between the theory of Mixed teaching and the practical application of teaching. Under the guidance of the mode and process of Mixed teaching, teachers design the course teaching, and teach the teaching knowledge step by step and in an orderly manner, which is convenient for students to construct learning and internalize knowledge. In addition, the teaching effect can be fully demonstrated through this questionnaire, and

corresponding suggestions for improvement can be put forward based on the results of the questionnaire for students' course teaching activities, so as to provide better support and services for the teaching application research of OTO hybrid first-class courses in the future. However, the process construction and design of mixed OTO teaching devices still has certain complicated characteristics, which needs to be improved in teaching design. For example, some teaching contents are suitable for mixed OTO teaching mode, and some teaching contents are not suitable for mixed OTO teaching mode. How to better carry out mixed OTO teaching in teaching design needs further exploration and practice

References

- [1] Goto T, Nakanishi K, Kano K. (2018) *A large-scale longitudinal survey of participation in scientific events with a focus on students' academic motivation for science: Antecedents and consequences. Learning & Individual Differences*, 61(10):181-187.
- [2] Miao Y. (2021) *OTO Mixed Intelligent Teaching Assistant Mode of English Based on Mobile Information System. Mobile Information Systems*, 2021(1):1-6.
- [3] Wu X. (2022) *Research on the Reform of Ideological and Political Teaching Evaluation Method of College English Course Based on "OTO" Teaching. Journal of vocational education Research*, 3(1):87-90.
- [4] Wang N, Zhang Y. (2019) *Application Status and Promotion Strategy of Integrated Network Teaching Platform—Taking Northwest A&F University as an Example. Asian Agricultural Research*, 11(04):94-96.
- [5] Avci U. (2022) *A predictive analysis of academic motivation and reflective thinking skills on computer programming achievement. Computer applications in engineering education*, 30(4): 1102-1116
- [6] Zhi Hong L. (2020) *Research on teaching devices of "Advanced Manufacturing Technology" Based on the OTO Mixed Module for the Future. Creative Education Studies*, 08(5):787-791.
- [7] Shen Yanfei. (2019) *Research on the Construction of College English Diversified Learning Assessment System under the O2O teaching devices. Transactions on Computer Science and Technology: Chinese and English editions*, 7(1):37-40.
- [8] R Yan, LJ Wang, L Liu. (2021) *A preliminary study on the mixed teaching of human parasitology based on MOOC resources and the experimental teaching digital platform. Chinese Journal of Schistosomiasis Control*, 33(1):74-78.
- [9] Qiong L I. (2022) *Research on the mixed teaching devices of "Intermediate Speaking" Based on SPOC. Psychology Research*, 12(4):176-182.
- [10] Zhang Y. (2021) *Reflections on the Role of Teachers under the Concept of Flipped Classroom—A Case Study of Rain Classroom Practice in Basic Japanese Course. Sino-US English Teaching*, 018(003):P.66-71.
- [11] Shang Y, Zhong Y, Chen Z. (2021) *Exploration of OTO Mixed Classroom Teaching Practice Based on the Flow Theory. Education Study*, 3(1):45-49.
- [12] Wang X. (2021) *Study on the Mixed Learning Model of English Talents Based on Wisdom Classroom. Journal of Physics: Conference Series*, 1744(4):042031-042037.
- [13] Zhang Y. (2019) *Case Study of the Application of Rain Classroom in Japanese Teaching in Universities. Teaching Chinese and American English: English version*, 16(11):461-465.
- [14] Hong, Y., & Xu, M. (2021). *Autonomous Motivation and Information Security Policy Compliance: Role of Job Satisfaction, Responsibility, and Deterrence. Journal of Organizational and End User Computing (JOEUC)*, 33(6), 1-17.
- [15] Sujanta Kazemanzadeh. (2022) *Distributed System Integrating Virtual Reality Technology in English Teaching. Distributed Processing System, Vol. 3, Issue 1: 62-70.*