Influences and Strategies of Online Teaching on English Major Students' Effective Learning under Pandemic

—Taking Zhejiang Yuexiu University as an Example

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Abstract

Online teaching supported a lot during pandemic. However, it has also inevitably produced some drawbacks, such as poor teacher-student interaction, low student concentration, and a lack of effective monitoring mechanisms for classroom discipline, so it is urgent to study how to improve the effectiveness of students' online learning. This study investigates the online learning of English major students in Zhejiang Yuexiu university during the pandemic through questionnaires and in-depth interviews, conducts a quantitative and qualitative analysis of the experimental data derived, and on this basis proposes relevant strategies to improve the effectiveness of students' online learning. The author hopes that this study will provide reference suggestions for the effective implementation of online English teaching in the future and that it will be used to continuously improve the online teaching model, enhance online teaching techniques and ultimately create an efficient online classroom.

Subject Areas

E-Learning and Knowledge Management, Educational Technology

Keywords

Pandemic, Online Teaching, Effective Learning, English Major Students

1. Introduction

The Internet has evolved to the extent that it has today not only offered us regular public services in daily life but also provided users with a completely new

platform to carry out teaching activities. What is beyond doubt is that online education plays an important role in this new form of education, which gives students the freedom and the flexibility to organize their learning tasks. Particularly during COVID-19, online education has been a great help to Chinese students and teachers in fulfilling the "Suspend Classes without Stopping Studying" policy. However, online classes take learning effectiveness to get into trouble, especially in English learning, due to its peculiarities of unidirectionality, weak interaction, and feedback lag. In order to cope with teaching closures due to possible public health issues in the future, optimizing online teaching is imperative to commence.

1.1. Literature Review

1.1.1. Effective Language Learning

1) Studies Abroad

Chomsky defines competence as the ideal user's knowledge of the rules of his language, and performance as the actual realization of this knowledge in linguistic communication. Ideally, the former is the language ability learners should have, while the latter is the actual ability learners should have (Dai & He, 2018) [1]. Finding out an effective way to study a new language is significant in language acquisition. When students lack specific learning strategies to improve their proficiency in the target language in class, the effectiveness of language learning would be decreased (Rybicki, 2002) [2]. Language learners should also choose their learning methods based on their understanding of their learning situation. For example, the assessment plays a key role in English study. Self-assessment and peer-assessment are useful to enhance the learning process (Qasem, 2020) [3]. As the subject of language learning, students' learning state and behavior will affect the effectiveness of language learning, and teachers' teaching methods will also affect the effectiveness of language learning. For example, teachers' reflective practice enables them to better manage classes and objectively evaluate students' needs and learning results (Hashim, 2020) [4]. If teachers do not often discuss language learning strategies, the integration of these strategies may greatly affect the achievement and success rate of second language learning (Rybicki, 2002) [2].

2) Studies at Home

At present, English learning is based on exam-oriented education, a Duck-stuffing type of teaching. However, it's not conducive to language learning. In order to improve the effectiveness of students' English learning, cultivating students' interest is the beginning of language learning. They can usually find some movies and music which is related to the target language, feel the charm of language, developing an interest in language learning, so as to integrate interest and learning (Xu, 2021) [5]. To organize the foreign language system in college English class, STUDY, TEACH, and TEST are none can be dispensed with. STUDY, including studying and students; TEACH means teaching and teacher; TEST means test and evaluation. Test is used to evaluate the results of

learning and teaching efficiency (Chang, 2018, as cited in Hu, 2021) [6]. Of course, experts have also done similar surveys on the study of learning effectiveness based on learners' learning situations. The research dimension is mainly based on the following contents of learners: individual effort, collaborative interaction, focus, persistence, time management, and strategy adjustment. The results point out that in the habitual behaviors of learners, the more metacognitive input, the higher learning efficiency and effectiveness are (Mao & Zhou, 2019) [7].

1.1.2. Studies of Effective Online Teaching

1) Studies Abroad

Root *et al.* (2020) [8] mentioned that under the pandemic situation, online teaching provides personalized, programmed, and self-paced teaching, which is self-evident in practicality and convenience. However, the online class offers users convenience but that doesn't mean it's completely proper. Others raised their opposite opinions.

With the online course system being used now, getting students to fully use it may require a change in their learning routine. When using an e-learning system, students who can achieve immersion are more likely to use it effectively; the usefulness and ease of use of the system have also become factors affecting the effective use of e-learning by students. Therefore, providing sufficient support for computer-mediated interaction should be an urgent problem to be solved for the current network learning platform (Moreno *et al.*, 2017) [9]. Abou-Khalil *et al.* (2021) [10] surveyed higher education students taking emergency online courses in resource-poor settings to examine the perceived effectiveness of different engagement strategies. Experiments show that sharing teacher-student screens is the most effective strategy of all categories. However, in this strategy, students expressed more hope that teachers could provide them with the content to participate in class, so as to improve the convenience.

2) Studies at Home

Students as the main part of learning, their learning attitude and learning state directly affect the efficiency of learning. Researchers have done experiments on this issue and put forward their views. Ma Zhongling (2021, as cited in He, 2021) [11] believes that teachers can better provide personalized teaching content for learners, education workers can offer scientific education decision support, and promote the accuracy of data-driven teaching. Xu Weibo (2021) [12] pointed out that the learning situation of independent learning and self-management is not encouraging. Some students think that teachers cannot supervise their learning state through web line, so they began to do something that is not relevant with the class.

After Zhang Xinyuan (2021) [13] mentioned that the network environment breaks the face-to-face interaction between students and teachers, so classroom participation was decreased; under the unsupervised learning environment, the interference of irrelevant information and network causes the students to lose

concentration in learning. Guan Zengrong and Jiangrong (2021) [14] researched in the evaluation mode of study, they put forward that combine effective learning with practice, focusing on "process" as the guiding ideology, through the process of teaching and learning evaluation feedback information and data, improving learning efficiency, so as to build for an effective learning assessment center, the combination of formative assessment and summative assessment system create a comprehensive evaluation.

1.1.3. Comments on Previous Studies

Some achievements have been made in the research of language learning and online teaching at home and abroad, but there are still some problems. In language learning, foreign scholars put forward more theoretical knowledge based on learners' physiological aspects, but seldom put forward specific learning programs, and did not give more suggestions on the skills of teachers. Domestic scholars in this study, however, selected the majority of junior middle school, high school students as the research object, but university students should also be regarded as research samples, because the foreign language will be treated as a professional for more detailed teaching in the university.

In online teaching, most researchers are focused on traditional E-learning, rather than online teaching during the pandemic, some differences in the concept and implementation process between those two online teachings, so the pandemic of online learning needs to intensify research. Moreover, scholars who have started to study online teaching should put forward constructive suggestions suitable for students and teachers to improve efficiency, such as how to supervise students' learning and how to improve teachers' teaching methods. University students are also not the focus of their research. In addition, scholars could catch online teaching which is held under the small-scale pandemic, it would more effectively. For example, taking students' assignments or examination results that are finished under the online class as their reaching statistics would make the experiment more convincing.

In this study, premised on the collection of online teaching data during the pandemic, the writer investigated the online learning of major English students in Zhejiang Yuexiu university through questionnaires and in-depth interviews, conducted a quantitative and qualitative analysis of the experimental data derived, and on this basis proposed relevant strategies to improve students' online English learning, teachers' online teaching models, and enhance online teaching technology, ultimately creating an effective online classroom.

1.2. Research Methodology

1.2.1. Purpose of Research

This paper integrated both qualitative and quantitative research methods to collect information on three aspects: students' learning status, teachers' teaching style and objective factors to understand the impression factors of online learning under the pandemic in an all-around way.

1.2.2. Objects of Research

There were 68 participants who took part in this questionnaire survey all studied at Zhe Jiang Yuexiu university (Table 1). The author interviewed 8 students after questionnaires, they are 4 boys and 4 girls who studied at English class 1803 (Table 2).

1.2.3. Instrument of Research

The questionnaire aims to understand the learning situations and regular attitudes about online teaching from college students who experienced the long-run online class at the beginning of the pandemic. The questionnaire survey is based on a certain number of samples that affords objective statistics, more than that it provides direction for the later deep-interview content.

The questions outline is the structure of the deep interview, the interviewer constantly asks "what" and "why" questions according to the outline. From the superficial questions to the deep ones according to the responses of interviewees, dig out the real reasons and the problems. Finally, through a comprehensive analysis of the problem, find out the solution.

2. Results and Discussion

2.1. Procedure of the Research

2.1.1. Questionnaire

1) Preparation of the Questionnaire

Before making the questionnaire, firstly the author consulted the adviser about some matters which need to be noticed when collecting data, such as the source and grade of samples. And thought about the aspects involved in the design of this questionnaire, include the interaction between teachers and students, the way of teaching online, the practicality of equipment, and so on. To ensure the integrity of the questionnaire, the author made this questionnaire in a reference way.

2) Structure of the Questionnaire

Based on the literature and the adviser, finally formed the author's investigation questionnaire, can be divided into 3 parts. The first is the basic information of the participants involved, such as gender, and grade. The second part includes the objective factors such as the practicality and operability of teaching equipment, the network situations, the learning environment, and the teaching modes. The third part is about subjective issues, including students' enthusiasm and autonomy in class, completion of homework and so on. The second and third parts are the focus of the questionnaire, and the follow-up deep interviews will also focus on this aspect.

3) Filling out the Questionnaire

The questionnaire was distributed to the target students through the Questionnaire Star platform. A total of 68 questionnaires were collected to do a basic survey on online learning under the pandemic. The data was kept by Questionnaire Star. The data was exported for analysis after the questionnaires were completed.

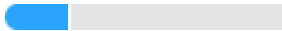**Table 1.** Questionnaire samples composition.

		Total	Proportions	
Sex	Males	15		22.06%
	Females	53		77.94%

Table 2. Deep interviews samples composition.

Gender Class	Former English class 1803
Boys	4
Girls	4
Total	8

2.1.2. Deep-Interview

1) Pre-call Preparation

Developed an outline of questions. In view of the scientific nature, the interview content was improved on the original research that merged the author's view with the experience and perspectives of former researchers.

Confirmed the interviewees. The interviewees were chosen from the class English 1803 and told them the purpose of this interview and the main topic of this interview, and assured them that the interview is strictly anonymous and confidential. Then it began with their consent.

Determined the interview method. The interview was conducted through WeChat, and the incomplete face-to-face contact could make the interviewees less nervous. Secondly, the data would be systematically recorded in detail to provide a guarantee for the subsequent data collation.

2) During the Interview

Started with the basic questions through the outline, and followed up with their answers to find out the results. By calming their emotions, relaxing their defensive nerves, emphasizing the confidentiality of the conversation, and continuing to guide them until a more truthful answer is given. During this period, the way to responses questions can also reveal their personality traits, which will also become one of the aspects to analyze their learning effectiveness.

3) After the Interview

Once finished each interview, the writer thanks to the interviewee. In addition, the interview content was sorted out and classified in time, and made into tables or charts to make the results more intuitive and clearer for subsequent data analysis. During the data reorganization, if some details were not asked or can be supplemented, respondents should be followed up and interviewed in time to improve the data content and promote accuracy.

2.2. Results of Questionnaire

Summarizing participants' opinions, taking the experimental data into a unified table and sorting out the following results. According to the results, objective and subjective factors that may both affect the effectiveness of online education,

including the studying environment and network, situations of teachers and students, the results are as follows (Table 3).

From this chart, we know that students believe in learning devices and networks with more or fewer affections on their learning effectiveness. Stability of teaching platform and network speed and stability obviously impacted them.

Besides more than half of the students think how did the teacher do has more influences: proficiency of using teaching tools and teaching strategies and methods affected them most.

In addition, 86.76% of students believe that autonomous learning ability influenced their study; and 89.7% of students think that learning behavior influenced the effectiveness most, 85.3% of students believe that proficiency in teaching platforms and tools caused influence. The students' learning situation is shown in Table 4:
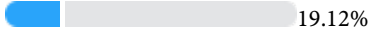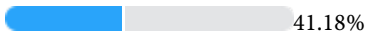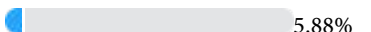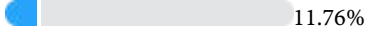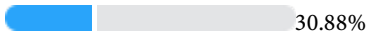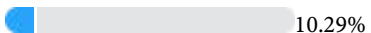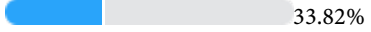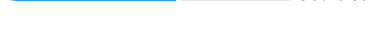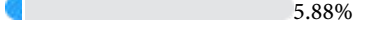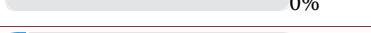
According to these 4 questions, only 52.94% of students would answer teachers' questions positively in class; 52.82% of students prefer to raise, but the class performance of the rest students is not so active. About their assignment, more than half of students would like to finish their homework with others' help. In such a learning environment, only 7.35% of students mastered knowledge perfectly, 45.59% and 44.12% of students with general mastery.
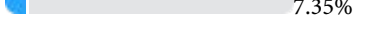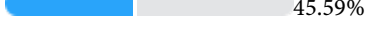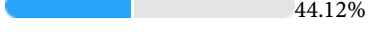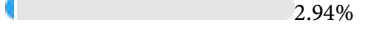
Table 5 shows students' attitudes towards online teaching.

Table 3. The influence of objective and subjective factors.

Questions	Answers	Deep Influence	Relative Influence	General Influence	Not Really	Not at All
Environment and network	Studying space and terminal equipment support	14 (20.59%)	21 (30.88%)	22 (32.35%)	9 (13.24%)	2 (2.94%)
	The stability of teaching platform	18 (26.47%)	26 (38.24%)	19 (27.94%)	3 (4.41%)	2 (2.94%)
	Network speed and stability	21 (30.88%)	25 (36.76%)	16 (23.53%)	4 (5.88%)	2 (2.94%)
Situations of Teachers	Proficiency in teaching platforms and tools	18 (26.47%)	26 (38.24%)	19 (27.94%)	3 (4.41%)	2 (2.94%)
	Timely Q&A and Coaching	18 (26.47%)	20 (29.41%)	22 (32.35%)	6 (8.82%)	2 (2.94%)
	Teaching strategies and teaching methods	22 (32.35%)	20 (29.41%)	21 (30.88%)	3 (4.41%)	2 (2.94%)
Situations of Students	Autonomous learning ability	22 (32.35%)	18 (26.47%)	19 (27.94%)	5 (7.35%)	4 (5.88%)
	Good online learning behavior (e.g., attending class on time, learning self-discipline, etc.)	24 (35.29%)	18 (26.47%)	19 (27.94%)	5 (7.35%)	2 (2.94%)
	Proficiency in teaching platforms and tools	14 (20.59%)	13 (19.12%)	31 (45.59%)	8 (11.76%)	2 (2.94%)

Table 4. Students' learning situations.

Questions	Answers	Totally	Proportions	
Q1	Always	13		19.12%
	Often	23		33.82%
	Sometimes	28		41.18%
	Never	4		5.88%
Q2	Always	8		11.76%
	Often	32		47.06%
	Sometimes	21		30.88%
	Never	7		10.29%
Q3	Finish by themselves.	23		33.82%
	Finish by themselves most but sometimes ask classmates or search online.	41		60.29%
	Ask classmates or search online directly.	4		5.88%
	Do nothing.	0		0%
Q4	Pretty good	5		7.35%
	Good	31		45.59%
	Just so so	30		44.12%
	Bad	2		2.94%
	Very bad	0		0%

Related Questions:
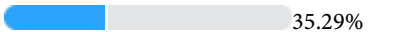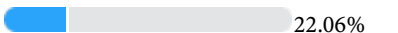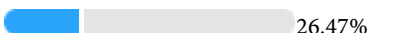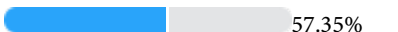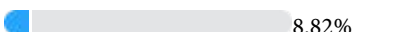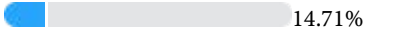
Q1: Did you take the initiative to answer teachers' questions during the online learning of COVID-19?

Q2: Did you take the initiative to ask teachers questions during the online learning of COVID-19?
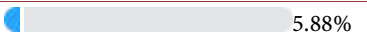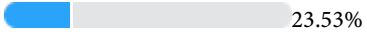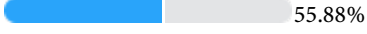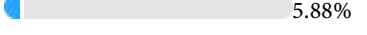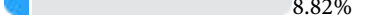
Q3: During the pandemic online learning, how did you complete the homework assigned by the teacher?

Q4: How well have you mastered the knowledge through online learning?

Table 5. The attitudes of online teaching.

Questions	Answers	Totally	Proportions	
Q1	Online teaching is better.	11		16.18%
	Offline teaching is better.	24		35.29%
	Same.	15		22.06%
	Depends on reality.	18		26.47%
Q2	Too many temptations around (e.g. games, TV dramas, etc).	48		70.59%
	Teachers answer questions and feedback is not timely.	19		27.94%
	Lack of supervision leads to laziness.	45		66.18%
	Too many external distractions to concentrate in class.	39		57.35%
	Others.	6		8.82%
Q3	Yes.	10		14.71%
	No.	58		85.29%

Continued

	Online class only.	4		5.88%
	Online teaching leading, offline assistant.	16		23.53%
Q4	Offline teaching leading, online assistant.	38		55.88%
	Offline class only.	4		5.88%
	Both ok.	6		8.82%

Related Questions:

Q1: Online and offline teaching, which one is better?

Q2: What are the main problems affecting online learning during COVID-19?

Q3: Do you think online teaching can completely replace offline teaching?

Q4: What kind of teaching method you prefer to have after pandemic?

Above all, when asked whether online teaching or offline teaching is better, the answers given are fairly even, only 35.29% of students believe offline is better. Students said that the study environment during online classes brought them too many distractions, so they can't discipline themselves well. Obviously, offline courses are impossible to quit, 85.29% of students support them. At last, students still think offline teaching occupies the main part of their courses and online class can assist them as an extra part.

2.3. Results of Deep Interview

This chart is about the first part of the question, which is mainly about their background in online English study, such as if they would find the other ways to study English except what they have learned from teachers; and during the pandemic, what kind of medium they used and how many hours they spent on it, and what content they studied. It's divided into 2 groups, boys and girls (Table 6).

It is obvious that only 25% students won't use the extra time to study English, moreover, the time that they spend on extra practice, girls were more than boys did (Figure 1 and Figure 2).

Except the subjective efficiency, each of them has their own thought on the choice of medium, because it would affect their behavior on the study. 62.5% of students would like to use a computer, and 25% prefer to use iPad, and only 12.5% willing to use mobile phone (Figure 3).

The second part of the question is about if they have their learning plan. 6 of them have their plan of study, even 1 person (Student B) has a clear timetable like "finish something 10:00-11:00"; students C and D said they didn't have a clear schedule, but she would write a "To do list" for a day; student A told that she may divide her plan into preview part, review part, and the part of review for English level test. However, both of them would be disturbed by something that makes them can't finish their task on time and no one would like to work overtime to make up for the lost time. Students E and F would imagine their plan in their minds and finish it on time. But 2 of them don't have any plan but just follow teachers (Table 7).

Table 6. Learning background.

	Girls				Boys			
	A	B	C	D	E	F	G	H
1. If used any online way to study English before pandemic								
	Yes	Yes	Yes	Yes	No	Yes	No	Yes
2. What medium was used during livestreaming class								
	C	C	P	C	Ph/ C	C	P	C
3. How long (online class + extra practice)								
	3/4 + 2 h	3/4 + 0.5 h	3/4 + 1.5 h	3/4 + 0.5 h	3/4 + 0 h	3/4 + 1 h	3/4 + 0 h	3/4 + 0.5 h
4. Content								
	G/L/O/R/V	G/L/R/V	G/L/R/V	G/L/R/V	G/L/R	G/L/R/V	G/L/R	G/L/R/V

C: computer; P: pad; Ph: phone; G: grammar; L: listening; O: oral; R: reading; V: vocabulary.

Table 7. Study plan and completion.

	A	B	C	D	E	F	G	H
a	Yes	Yes	Yes	Yes	Yes	Yes		
b	Preview/review/review for English major test	Clear timetable	To do list	To do list	Follow their inclinations	No		
c	Never work overtime				On time			
d	No							

Related Questions:

a: Do you have any study plan when you at school?

b: How do you make your plan? Is that clear?

c: What will do if you didn't finish your plan? Will you work overtime for it?

d: Do you have any plan during online class?
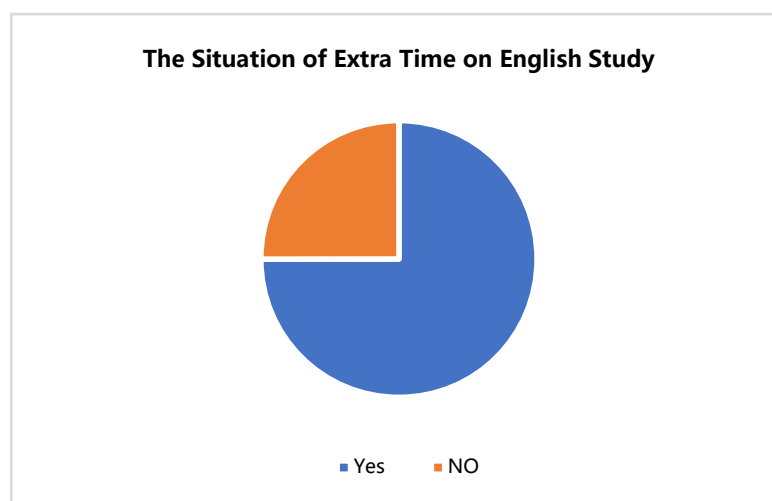
Figure 1. Station of extra time on english study.

The Average Time of Extra Learning (Hours)
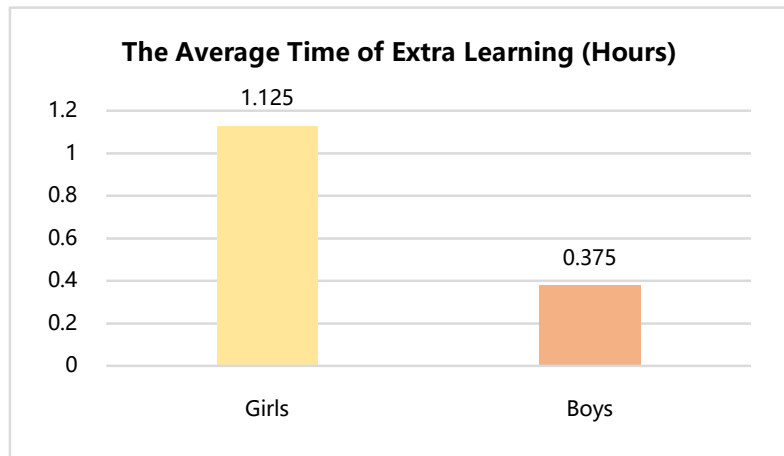
Figure 2. Average time of extra learning (Hours).
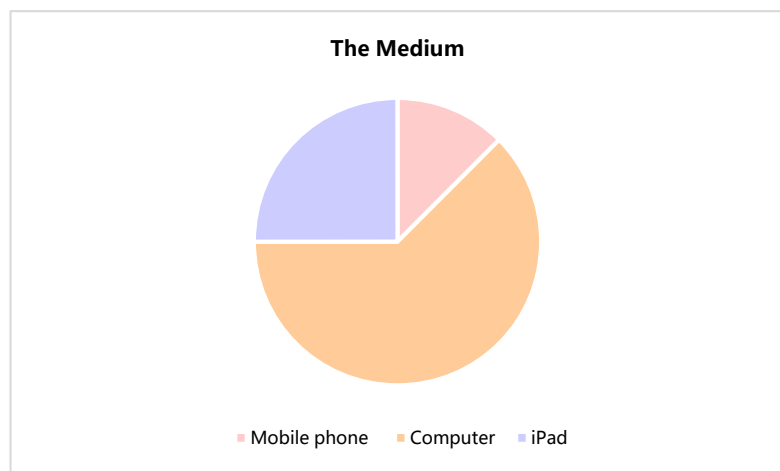
The Medium

Figure 3. The medium.

The third part of the interview is about their learning state and behavior. All of them have the experience that distracted in class, 3/8 of them (A, B, D) would recognize their state and adjust the state to continue the class seriously, but student A honestly said even she controls herself at this moment, several minutes later she would distract again. Student D said she can't pay attention to the class because she can't understand what did the teacher say. Students B, E, F, G, and H both think whether they are distracted or not depends on the class content or teacher. Some subjects which they aren't interested in or they think that is not important so they may not listen to teacher anymore.

And during the online class, all of them can't control themselves to listen to teachers seriously because there're so many other things they're interested in but has no relevance to studying.

2.4. Analysis of the Results

1) The Problems of Students' Self-discipline

In questionnaire, more than half of students believe that there are too many

temptations and distractions around them to concentrate on lectures during online classes. Even student A who had good academic performance also mentioned that she would inevitably get distracted during the online class.

Study attitude and study habits determine the grade. In college, with the exception of a few take-home assignments, most are weekly or semester assignments that require learners to organize their tasks. Especially for English majors, improving grades requires more accumulation, and self-discipline is the primary determinant. But in the more liberal environment of college, students have less sense of self-directed learning.

2) The Problems of Learning State Supervision

Due to the lack of supervision even though students have more sufficient free time at home than at university they can't organize their learning process in the proper way. Students didn't plan their learning tasks in terms of difficulty and mastery during the online learning period, to complete the assignments only following the basic requirements given by the teacher. Aiming to finish not learning causes lower effectiveness. According to Social Constructivism, communication is the crux, the closed environment gives a person a kind of illusion, people lack the sense as time passes. Students always stay alone; they would feel less competitive pressure. The important exams were delayed because of the pandemic prevention, which prolonged the preparation time, students are less motivated to prepare for exams, the purpose of learning is not clear, so learning initiative decreased.

3) The Problems of Online Study Experience

Due to their lack of experience in online teaching, as well as the rapid implementation and short preparation time of online courses during the pandemic, teachers have also exposed their shortcomings in teaching methods. Secondly, no one has such teaching experience before, teachers who explored and developed online teaching methods in a short time would limit results. Transferring the traditional classroom lectures to online directly, there is no novel way to teach the class, which can't stimulate students' interest and motivation to learn. Furthermore, because this form of class is unprecedented, it is a challenge not only for teachers and students but also a shock for online learning platforms, there are some potential problems when learning online, which need to be optimized and innovated by these companies in the future of their products. Not only that, but the learning equipment also affects students' problems in class.

In general, teachers lack such experience in teaching, it does not bring students a better class experience, the teaching method is monotonous, and students are not enthusiastic in class. Secondly, the government hasn't supported such technical skills, so the terrible web environment broke the continuity of class.

3. Strategies of Improving Online Effective Study

In the previous chapter, the factors affecting the effectiveness of online teaching

were summarized in terms of students, teachers and online environment. It is easy to find that the students' own class status and learning style are the most critical factors affecting learning efficiency. The author believes that when students are in a closed environment for a long time and lose contact with others, they will gradually lose their way, so it is important to improve the learning style of students in the pandemic. With the suddenness of the pandemic, teachers were unable to adapt to new teaching methods at the beginning, and this chapter will further explain the teaching methods that teachers can use in online teaching. Finally, the development of an online environment will also help to improve the effectiveness of online teaching.

3.1. Reinforcing the Students' Awareness of Discipline

The learning environment affects the learner subtly. The learning environment on campus constantly has a hidden infection that has a binding effect on the learning behaviors of students and therefore more engaged in learning. As well, the real learning environment of online learning must be artificially shaped to facilitate student learning. A tranquil learning environment is the first guarantee for learners to enter the learning state. From the results of the interviews, the interviewees all think that an overly comfortable and free learning environment is not conducive to independent learning, which is one of the reasons for the low level of participation in online classes. As college students who are about to enter the society, it is necessary to cultivate the ability to create a quiet learning environment by themselves, for example, students who have the conditions must go to the study room to supervise that they must sit and study, and the rest of students try to study away from the bed; students who study by computer only need to face the computer, do not log into social software other than the class platform, and stay away from cell phones; do not put too many snacks within reach. If a learner's study environment includes a comfortable bed, a good meal, or a TV showing a TV program, then it is definitely not a beneficial environment for students to study.

3.2. Improving Teachers' Guidance

Due to the particularity of online teaching, teachers and students can't communicate face to face, such teaching form broke the interactive learning in English class. Therefore, guidance plays a significant role in the online class, setting up more interactions with students, asking questions, and organizing in-class quizzes which can understand the situation of students and teachers can adjust teaching plans flexibly. What's more, establishing after-class contact with students, understanding their suggestions and confusion during online teaching, and reflecting on the classification process based on the feedback given by students, improve the class quality.

It can be seen from the research results that the influence of homework feedback has been ignored, hence, assigning effective homework, the teachers correct

the answers submitted by the students in time, and make suggestions in the next class. However, assignment not only based on the regular form, arranging students to learn an English song, to practice how to read an English poem, or to make an English film review, etc. It can provide a clear learning state for both teachers and students to promote learning efficiency.

According to the questions raised by the interviewers, boring online classes cannot provide a good learning environment for students. To improve students' interest in learning, teachers play an important role. Turn on the camera so that students can see the state of the teacher to better enter the atmosphere of the class. Playing English songs relieves the fatigue of students in class and get proper relaxation.

In general, teachers should improve their online teaching ability and teaching innovation ability. Online teaching provides a new mode for teaching. In the post-pandemic era, the convenience brought by the Internet can be utilized to combine online and offline teaching flexibly, to reshape the traditional offline teaching.

3.3. Providing Technical Assistance by Government

3.3.1. Technology Optimization

Teachers can not directly see the students' learning status and the learning situation, the live platform not only provides a way for teachers and students to attend classes, but it should also assist teachers to supervise students' learning. For example, every few minutes to appear the logo, which requires students to check-in; supervise students' behavior of switching software, whether to switch to another platform to do things unrelated to learning. As a large number of students have joined the ranks of online learning, the problems of network lag and black screens have emerged, each platform should optimize the product for such problems to give teachers and students a smooth learning classroom; the way of uploading students' homework also needs to be convenient, and what is presented to teachers should be clearer, so that teachers can correct and give feedback to students in time, and go deeper into each link of teaching, learning, practice, and examination so that students and teachers can have a better experience in it.

3.3.2. Technology Innovation

First of all, improve the background big data analysis, the process of online learning class participation of students and effective learning situation statistics can be analyzed through the big data, and after the class, data results will be reflected by the students and teachers promptly which not only enables teachers to grasp students' online learning to improve effective teaching, but also allows effective supervision and management of students from the online learning situation, and better for students to find their problems, correct their attitudes and promote effective learning. Secondly, learning is important, but so is health. Long hours of paperless learning is no more than written learning, it will dam-

age students' eyesight, so teachers and students should be reminded to relax their eyes and protect their eyesight at certain times. At last, in order to avoid students' resistance to online live software, the interface style of the software should be livelier in the main tone, and some puzzle and knowledge games can be added, but only open during non-online classes.

4. Strategies in Post-Pandemic Teaching

The above strategies are suggestions for improvement based on a complete shutdown at home. The pandemic is gradually improving at the moment, and scientific methods of pandemic prevention are available in all regions, which means we are entering the "Post-Pandemic Era". The post-pandemic is not equal to no pandemic, the pandemic still exists. It just breaks out in some areas with nonsense. Each school arranges for students to return to school in an orderly manner. So after returning to school, each mission should be fully prepared.

1) Setting Goals and Using Exams to Promote Learning

People always didn't start a task until the deadline is near. Procrastination is a contemporary disease, as the interviewees mentioned, they will spend more time on their studies when final exams are coming. Therefore, goal setting plays a crucial role in effective learning. As an English major, it is inevitable to take part in various examinations, here is a thought—not to "learn" for the test, but to "learn" for the improvement. For example, if TEM-4 and TEM-8 are the two mountains that English students need to climb, then another small exam can be used as a rehearsal, such as CET exams. As we all know, the bottleneck period of language learning lasts for a long time, as an old Chinese proverb goes "to rise abruptly based on its accumulated strength", so to accomplish breakthrough needs learners take more effort. Spontaneously participate in some certificate exams, such as English competitions for college students, CATTI certificates, etc. which can help learners improve their learning enthusiasm and clear their learning direction.

2) Strengthen the Psychological Construction of Students

Mental health is an important topic in today's society, and after this particular experience, mental health issues should also be taken seriously. For example, long periods of time at home may lead to anxiety and fatigue, and students may not be able to adapt quickly to back-to-school life; long periods of solitude may lead to interpersonal barriers. For this reason, communication between teachers and students should be strengthened, so that they can understand the psychological state of students and provide some counseling in a timely manner.

3) Coordinate Offline and Online Classes

When the normal class mode is resumed, teachers should test the results of students' online learning during the holidays and reasonably arrange the teaching schedule; they can provide quality courses by combining online and offline classes, explaining difficult and complicated knowledge points thoroughly in offline lectures, and online classes can expand the teaching content in the form of

video lessons to enrich the teaching content so that students can have their own arrangement time; for low-risk areas, extra-curricular practical activities related to the major can be arranged in batches to enrich students' lives and not just stick to within the school.

4) Make a Proper Epidemic Planning Mechanism

In the face of recurring epidemics, the university is densely populated, which makes it more difficult to control the pandemic. Schools should set up a good defense mechanism to maximize the protection of teachers' and students' lives and health issues, strengthen the management of people entering the school, and equip adequate medical supplies, etc. If there is a large-scale epidemic in the society during the students' school days and students need to study intensively in their dormitories, the school should provide high-quality network equipment conditions, so the school needs to optimize the school network in advance and avoid the phenomenon of network lag when concentrating on a large number of online classes; to effectively optimize and popularize online education, so that emergency teaching mode can be carried out in an orderly manner in case of emergency so that the students can really suspend classes without stopping learning.

5. Conclusion

This thesis sets out to investigate the factors that affect the effectiveness of online learning for English college students by combining a current hot phenomenon with scientific research. It proposes strategies to cope with the actual situation. It also makes suggestions for teaching in the post-epidemic era, hoping that students and teachers will cooperate with the teaching mode in the special period and that the school will provide stable logistical support to truly stop classes without stopping learning.

Conflicts of Interest

The authors declare no conflicts of interest.

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