cultural connotation and language background, which makes it easy for students to have communication adaptation obstacles, and then dare not communicate in English, resulting in relevant psychological problems. Online English teaching broadens students' access to English resources and reduces the classroom embarrassment of students' English communication. Therefore, exploring the intervention effect of English online teaching on students' communication adaptation barriers has important practical significance and value.

**Objective:** Based on the understanding of the characteristics of English teaching and students' communication adaptation barriers, this paper explores the impact mechanism of online teaching on students' learning emotions and psychological problems from the perspective of communication adaptation barriers, and compares it with English online classroom teaching, so as to better alleviate the negative emotions of students with communication adaptation barriers.

Research objects and methods: The research first makes statistics on the current situation of English teaching and psychological problems of 600 English majors in different grades in a university, then selects students with communication adaptation barriers as the research object, and explores the intervention effect of English online teaching on students' communication adaptation barriers.

**Method design:** Then the subjects were randomly divided into online English teaching group and offline English teaching group to explore the psychological improvement of students with different degrees of communication adaptation disorder after three months, such as semantic ambiguity, correct and wrong use of grammar, and explore the improvement of online teaching on students' communication adaptation disorder with the help of association rule mining algorithm.

**Methods:** The association rule mining algorithm was used to analyze the correlation between communication adaptation disorder and English online teaching, and the statistical analysis tool was used to process and analyze the data, and the experimental results were obtained.

**Results:** English online teaching gave the students more autonomy and practical innovation in the search of teaching means and teaching resources, overcome the fear of English communication of students with communication adaptation obstacles, and effectively improved the students' learning effect and mental health level. Table 1 shows the scores of students' communication adaptation barriers before and after online English teaching.

**Table 1.** Statistics of scores of various dimensions of students' communication adaptation barriers before and after English online teaching

Psychological barrier dimension	Before	After
Barriers to knowledge understanding	26.3±2.4	14.7±2.6
Information cognitive impairment	31.2±2.9	13.1±2.4
Language expression disorder	27.4±2.3	10.4±3.8

Conclusions: Language and cultural differences and the neglect of traditional offline English teaching on students' English practical ability often led to the phenomenon of "language inferiority" or "language embarrassment" in the process of English learning, resulting in communication and adaptation obstacles, which further affect the learning quality and mental health. From the perspective of communication adaptation barriers, exploring the improvement of students' psychological status in English online classroom will help to grasp students' dominant position in teaching, pay attention to their psychological status and level in the teaching process, and improve their communication and expression ability.

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## THE INFLUENCE OF COMPUTER NETWORK SECURITY DATA ENCRYPTION TECHNOLOGY ON INTERNET ANXIETY PATIENTS

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**Background:** The development of Internet technology is getting better and better. For patients, various complex and high-tech Internet technologies make them feel novel and enjoy the convenience brought by the Internet, but they are also worried about the hidden dangers on the Internet. Internet fraud occurs frequently. Many people have been cheated a lot of money through the Internet, but people don't know how to prevent it. They are afraid that ill-intentioned people steal their personal information through the

Internet, so that patients have Internet anxiety. Among them, the cause of patients' Internet anxiety is the problems of computer network. These network security problems include illegal intrusion, server information leakage, computer virus and network vulnerability. Hackers illegally obtain IP packets, user names and other information of computer network system through monitoring, control and other ways. After relevant analysis, hackers destroy or tamper with computer network data, causing great losses to users. This situation is called illegal intrusion. Hacker technology is more advanced, which makes it impossible to prevent. This potential threat makes patients feel nervous and worried, resulting in Internet anxiety. There will inevitably be some defects and vulnerabilities in the computer system, and hackers with high-level computer technology will use these vulnerabilities to maliciously attack the computer network, so as to obtain some network data, make the server information leaked, and pose varying degrees of threats to the computer network security. This situation is called server information disclosure. Similarly, because hackers hide under the Internet, it is difficult for people to find their traces. They are not sure when they will attack the server. The hidden threat is difficult to control, which will also make patients anxious about the Internet. Computer viruses have the characteristics of fast propagation, great harm and wide variety. All kinds of computer viruses are hard to prevent. Each component of the computer has a corresponding computer virus, which will pose a great threat to the security of the computer network, and people are always vigilant to prevent being invaded by computer viruses. Because the openness of network technology provides convenience for the spread of network virus, the spread of network virus leads to network paralysis and the disclosure of relevant information of users. The insecurity of this network makes patients worry that their information will also be leaked, which inadvertently brings losses to themselves and makes patients have a certain degree of network anxiety. In recent years, the concept of data encryption technology has been put forward in the computer field. By means of encryption key and other means, the information can be converted into ciphertext to prevent others from reading the information, so as to protect the security of information and data. In the process of information transmission, it will maintain a high degree of concealment. Data encryption technology includes symmetric encryption technology and asymmetric encryption technology. Through these two data encryption technologies, data information can be protected from destruction or theft. According to the characteristics of data encryption technology, it can be used in computer network security protection, and its impact on Internet anxiety patients can be studied.

**Objective:** To understand the meaning of Internet anxiety and the causes of anxiety of Internet anxiety patients, analyze the problems of computer network security, study the characteristics and types of Internet encryption technology, and explore the impact of computer network security data encryption technology on Internet anxiety patients.

Research objects and methods: The subjects of the study were Internet anxiety patients. They learned about their Internet anxiety, their related activities on the Internet and their views on computer network security, introduced the application and function of computer network security data encryption technology, recorded relevant data, and evaluated the impact of computer network security data encryption technology on Internet anxiety patients through fuzzy evaluation method, grade 1-5 score is adopted. The higher the score, the greater the impact. SAS software is used for data processing and analysis.

**Results:** In recent years, the continuous development of network technology has made great changes in people's life. All kinds of daily necessities, home appliances and furniture can be purchased through the Internet, which greatly facilitates people's life. However, there are also various security problems in the Internet, leading to some people's Internet anxiety. In order to solve these computer network security problems, data encryption technology is applied to computer network security. Through computer network security data encryption technology, the security of data information is protected and the network security is improved. Among them, the impact score of cryptographic key data technology on young and middle-aged patients with Internet anxiety is 4, and the results are shown in Table 1.

Table 1. Influence of computer network security data encryption technology on Internet anxiety patients

Age group	Cryptographic key data	Node data encryption	Link data encryption
	technology	technology	technology
Juvenile	4	4	5
Youth	5	4	4
Young and middle-aged	4	5	4

**Conclusions:** By using a variety of computer network security data encryption technologies, the computer network security information is significantly improved, the phenomena of data loss and data destruction are significantly reduced, the user information security is guaranteed, and the Internet anxiety of Internet anxiety patients is significantly improved.

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## THE INFLUENCE OF COLLEGE ENGLISH ONLINE AND OFFLINE MIXED TEACHING ON COLLEGE STUDENTS' ANXIETY

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Background: Anxiety refers to the nervous and uneasy psychology of individuals when they encounter unsolvable problems or threats in the process of achieving goals. This is a special representation of internal psychology. During this period, individual self-esteem will be damaged and self-confidence will be hit. This kind of emotion will also appear in the process of English learning, and you will feel panic because you can't keep up with the progress of teaching. In general, normal anxiety will help students improve their learning attention, students will study more attentively, have a correct learning attitude, students' thinking will become active, students' enthusiasm will be significantly improved, and help students learn English better. When students are in excessive anxiety, their thinking will become chaotic, their thinking activity will be reduced, and students will be nervous. Once they are too nervous, mistakes will inevitably occur in the learning process, which is a great blow to students' learning enthusiasm, so as to further reduce their learning efficiency. In such a vicious circle, students' body and mind have been tortured. In the long run, students may have a psychological resistance to English, do not want to learn English and get tired of English learning. In the process of English learning, students will have varying degrees of anxiety in listening, speaking, reading and writing. English as a foreign language, students have a natural sense of strangeness, differences in different cultures and language habits, which makes students more difficult in the learning process and need to spend a lot of energy on learning and understanding. When students don't understand well and can't turn the content explained by the teacher into their own knowledge and apply it flexibly, students will have anxiety. There are many reasons for English learning anxiety, such as personal factors. There are differences in each student's learning ability, self-emotion regulation ability and competitive consciousness. Students with poor learning ability, weak self-emotion regulation ability and strong competitive consciousness are more likely to have anxiety. Because of the anxiety caused by the form of teaching activities, many students do not like to speak English in public, which will produce tension, uneasiness and cramped expression. When facing unfamiliar problems, it is easier to cause students' anxiety. Aiming at students' anxiety in English learning, this paper reforms the traditional teaching mode, and studies the impact of college English online and offline hybrid teaching on college students' anxiety.

**Objective:** To understand the anxiety of college students in the process of English learning and analyze its causes. On this basis, reform the traditional English teaching mode and adopt online and offline mixed teaching, so as to improve students' learning enthusiasm. Let students continue to study through offline teaching, improve their English learning level and alleviate students' anxiety imperceptibly.

Research objects and methods: The research objects are college students, randomly selected from three colleges and universities, 320 college students were selected from these schools to understand their problems in the process of English learning, master their relevant personal information, and analyze the causes of their anxiety. These students were taught English online and offline for one semester, and the relevant experimental data were recorded during the experiment. The fuzzy comprehensive evaluation method is used to evaluate the impact of college English online and offline mixed teaching on college students' anxiety, and the relevant influencing factors are quantified. The higher the score is, the greater the degree of influence is. The SAS software is used to process and analyze the relevant experimental data.

Table 1. Students' anxiety scores after the reform of college English teaching model

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Grade	Listening anxiety	Writing anxiety	Reading anxiety	Oral anxiety	
Freshman	2	1	1	2	
Sophomore	1	2	1	1	
Junior	2	1	1	1	

**Results:** Anxiety is common in college English learning. There are many reasons for students' anxiety, including personal factors and environmental factors. Among the environmental factors, influenced by the traditional teaching mode, students' learning enthusiasm is not high, and students' anxiety is more obvious. After the reform of the traditional teaching mode, students' anxiety has been significantly alleviated, the relationship between teachers and students has gradually improved, and the learning efficiency has been