

INFLUENCING FACTORS AND STUDENT SATISFACTION FOR ONLINE HIGH SCHOOL COURSES IN SHENZHEN

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Abstract

Primary and middle schools in Shenzhen have delayed their return to school due to the impact of the novel coronavirus pandemic and switched to online education. Then for the senior three students who are about to take the college entrance examination, through the self-designed scale, network questionnaire and analysis of Shenzhen senior three students online course satisfaction and influencing factors. Through "gender", "region", "online course time", "online course environment", "learning platform and equipment network situation", "students' own reasons", summed up the students' satisfaction and problems of online course, and put forward countermeasures and suggestions to improve the students' satisfaction of online course.

Keywords: high school students, satisfaction, online courses, influencing factors, Shenzhen

Introduction

Statement of the problems

Since the outbreak of COVID-19 around the Spring Festival in 2020, online teaching has become the preferred new teaching mode in urban schools with its unique advantages of breaking the limitations of time and space under the background of "ceaselessly teaching without stopping school". How can teachers and students better adapt to the online teaching model, especially how satisfied are students with online courses? Due to the impact of the COVID-19 outbreak, many major cities in China have switched to online teaching, including Shenzhen, and the satisfaction of online teaching has become a topic worthy of attention, especially for senior three students who are about to face the college entrance examination in their lives. Therefore, this research through the self-designed questionnaire and the questionnaire, the Shenzhen high three students online investigation, analysis of high three student distribution and influencing factors of the network course satisfaction ratio, aimed at the satisfaction of students understand the three online classes during learning, the school and the teacher better grasp of the college entrance examination online learning situation of students, In order to further optimize the focus and direction of online teaching research.

Research Objectives

Objective 1: Learn to analyze the current situation of online courses and relevant countermeasures through the questionnaire of online course satisfaction to make online course teaching more vivid and rich, and improve the enthusiasm of students to participate in online course learning.

Objective 2: To put forward good suggestions and countermeasures for school management and teachers' teaching based on the survey of students' satisfaction with online courses.

Objective 3: Schools should pay full attention to students' problems and actively solve them to improve students' initiative in online learning;

Objective 4: Schools should create a complete online class platform and improve the assessment management of online learning.

Research Hypothesis

Hypothesis 1: Men have higher satisfaction scores than women;

Hypothesis 2: Subjects in different regions have different satisfaction scores for online courses;

Hypothesis 3: The satisfaction score varies with the time of online class every day;

Hypothesis 4: The subjects who study in personal space have higher satisfaction scores than those who study in public environment.

Hypothesis 5: The subjects who study on class in have higher satisfaction scores than those who study on other platforms.

Hypothesis 6: The score of online course satisfaction varies with the electronic equipment used;

Hypothesis 7: Subjects who are not easily distracted during online class are more satisfied;

Hypothesis 8: Less Internet access Caton's subjects were more satisfied.

Benefits of Research

Through the Shenzhen high three student network class satisfaction under the background of the outbreak investigation, can reflect the current situation of network course, according to the status quo analysis of the influence factors of online classes and Suggestions related countermeasures, at the same time also see online classes is the Internet + age the importance of education, for a net class we can anytime, anywhere, across time and space to learn; The requirements for online courses in the new era are diverse and of high quality; For school management and teachers' teaching quality is also a new challenge and development.

Literature review

Concepts and theories

Network course is the sum of the teaching content of a certain subject and the teaching activities implemented through the network. It includes the teaching content organized according to certain teaching objectives and teaching strategies and the supporting environment of network teaching. The supporting environment of network teaching especially refers to the software tools, teaching resources and teaching activities implemented on the network teaching platform. The network course has the basic characteristics of interactivity, sharing, openness, collaboration and autonomy.

Lack of good learning environment and weak self-control become the main difficulties in online teaching. Students think that lack of good learning environment and lack of self-control are the main difficulties in online teaching.

Compared with the traditional teaching mode, the network teaching mode has a looser learning environment and a lack of discipline. It relies more on students' self-consciousness. In the face of computer and mobile phone screens for a long time, **3. The survey of influencing**

factors of students' satisfaction with online teaching shows that the main factors affecting students' satisfaction with online teaching are the common learning style, the amount of homework and whether online teaching is easy to play games and chat.

It is believed that students who are not easy to play games and chat are more satisfied with online teaching. Therefore, how to improve the supervision ability of online teaching and improve students' self-control ability in learning is very important. The amount of homework is an important factor affecting students' satisfaction with online teaching. Students with less homework are more satisfied with online teaching model. In network teaching mode, teachers to understand students' learning situation by other means, therefore, may to the completion of assignment and to feedback the teaching effect, but the more homework have a negative effect, result in too little time to rest, often can't concentrate on class time, moderate the work is helpful to improving the learning efficiency and learning satisfaction.

Suggestions for Strengthening the Construction of online Classroom Create a good online learning environment. The online learning environment is the basic condition for carrying out online teaching, including the place where the students are learning, the virtual environment of the online learning platform, and the teaching atmosphere jointly created by the school and the family.

The operability and stability of the network teaching platform is an important guarantee for the normal development of network teaching. Through the real-time interaction of online teaching platform, teachers can enhance the interaction with students, mobilize students' learning enthusiasm, and change the phenomenon of students playing games and chatting in class. In addition, to mobilize parents for real-time supervision, it is difficult to achieve high-quality learning results only by relying on teachers' supervision. Therefore, parental supervision is of great significance to create a good learning environment and improve the quality of learning.

Stimulate learning motivation drive, pay attention to the cultivation of self-directed learning ability Online teaching lacks the supervision of teachers and mutual promotion between students in the offline mode, so how to cultivate students' self-directed learning ability and self-control is very important.

On the one hand, teachers should guide students to establish the concept of autonomous learning, combine learning objectives and their own learning needs, arrange autonomous learning tasks, strengthen the supervision of their own learning, at the same time, through reasonable planning of time, reasonable formulation of tasks and other effective means to cultivate students' self-control ability. On the other hand, timely feedback and appropriate evaluation in the learning process can stimulate students' learning motivation, provide positive and effective guidance to students, and improve their learning enthusiasm.

A variety of methods to assess the teaching effect, reduce the workload burden, put forward to strictly control the amount of written homework, scientific and reasonable assignment of homework, to reverse the unscientific education evaluation guidance, promote the healthy growth of primary and middle school students.

Too much homework will have a negative effect on the learning quality and enthusiasm. Teachers are encouraged to take a variety of means to assess the teaching effect, through online video, voice, text real-time interaction, broadcasting room setting answer sheets, online answers and other forms, to test whether students understand and master the teaching content, to assess the teaching effect.

Research methods

Sample size calculation

As this study intends to collect data in 8 districts of Shenzhen city, the collection form is questionnaire star. Considering the inefficiency of 20%, the final sample number included in this study should be at least 279 cases. In the actual study, the sample number of 480 cases was larger than 279 cases,

Design of questionnaire and online course satisfaction Scale

Through preliminary investigation designed questionnaire to find out the existing problems and shortcomings,

Data Collection

The questionnaire star link survey was used to investigate the research objects, and the research objects were required to fill in the questionnaire and scale objectively and truthfully, to truly reflect the basic situation of the research objects and their satisfaction with online courses.

Statistical analysis methods

SPSS software was used for data collation, statistics and analysis.[n(%)] was used to describe the enumeration data, and the data of the scale were described. $\bar{x} \pm s$ Two independent sample t-test was used to compare and analyze the difference of scale scores between two groups, and ANOVA was used to compare and analyze the difference of scale scores between multiple groups. Multiple linear regression analysis was used to analyze the influencing factors of respondents' satisfaction with online courses.

Data analysis Results

Basic information of the research object

A total of 480 subjects were investigated, including 278 males (57.9%) and 202 females (42.1%). There were more students in Futian District, Luohu District and Nanshan District (95 cases (19.8%), 87 cases (18.1%) and 112 cases (23.3%); Most of the students spent 4-6 hours (399 cases, 83.1%) on online courses every day. Most of the learning environment was personal space (350 cases, 27.1%). classin was the most popular learning platform for online courses, accounting for 67.1% (322 cases). More than half of the subjects used computers during online class, 255 cases (53.1%). 299 subjects thought that online class was easier to wander, 299 cases (62.3%); 146 cases (69.6%) said that the network of the online department was often delayed. The satisfaction score of the subjects was (60.29±10.05). See Table 1 for details.

Comparison and analysis of differences in satisfaction scores of subjects with different characteristics

The satisfaction score of males was higher than that of females ($P < 0.001$). The satisfaction scores of subjects in different regions were different ($P < 0.001$). The satisfaction scores of subjects in different regions were as follows: Futian District > Nanshan District > Longgang District > Luohu District, Longhua District, Guangming New District and Yantian District > Pingshan District; The satisfaction scores varied with the time of daily online courses ($P < 0.001$). The satisfaction scores of 4-6h online courses were higher than those of ≥ 6 h online courses, and the satisfaction scores of ≥ 6 h online courses were higher than those of ≤ 6 h online courses. The satisfaction scores of subjects who studied in personal space were higher than those who studied in public environment ($P < 0.001$). The subjects who studied in classin had higher satisfaction scores of online courses than those who studied in Tencent Class, Dingding and Chaoxing. The subjects who studied in Tencent Class, Dingding and Chaoxing had higher satisfaction scores of online courses than those who studied on other platforms. Different electronic devices were used, the satisfaction scores of online courses were different ($P < 0.001$), and the satisfaction scores from high to low were: computer > iPad and mobile > other devices; The subjects who were not easily distracted during online class had higher satisfaction ($P < 0.001$). Those with infrequent Internet access had higher satisfaction ($P < 0.001$). See Table 2 for details.

Multiple linear regression analysis of respondents' satisfaction scores of online courses

Multiple linear regression analysis was used to analyze the influencing factors of respondents' satisfaction with online courses. Firstly, the statistically significant variables in the univariate analysis were taken as independent variables, and the multicollinearity between independent variables was verified. The results showed that all the coefficients in the autocorrelation matrix of independent variables were less than 0.8, and the inflation factor VIF of regression was less than 10. Therefore, it could be considered that there was no multicollinearity between independent variables. See Table 3 for the description of the assignment of independent variables.

The results show that the overall regression statistic of the model is $F=63.477$, $P < 0.001$, which means that the model is valid and $R^2=0.724$, adjusted $R^2=0.712$, which means that the model explains more than 70% of the variation in the dependent variable. Stepwise regression method was used to select independent variables. Eight variables were finally included in the model, including gender, daily online class time, learning environment, more likely to be distracted during online class, whether the network often slows down, region, online class learning platform and electronic equipment used during online class. The tolerance and VIF values showed that there was no multicollinearity in the linear model (both VIF values were less than 10 and tolerance values were greater than 0.1).

The satisfaction score of women was 4.801 units lower than that of men. The satisfaction score of personal space was 3.858 units higher than that of public space. The satisfaction score of network failure was higher than that of network failure. The dummy variable was set by region, and Futian District was taken as the control. It was found that the satisfaction scores of other regions were lower than Futian District. The satisfaction of Tencent classroom and other platforms is lower than that of classin platform. The satisfaction of computer and iPad is higher

than that of mobile phone users. For the comparison of learning time, 4H-6h was taken as the reference, and the satisfaction of $\leq 4h$ and $\geq 6h$ was lower than 4H-6h.

Conclusion and discussion

The satisfaction score varies with the time of daily online course. The satisfaction score of 4-6h daily is higher than that of $\geq 6h$ daily, and the satisfaction score of $\geq 6h$ daily is higher than that of $\leq 6h$ daily. The 4-6h learning time per day is in line with the learning time of students, which is acceptable to senior three students. Online classes are different from face-to-face classroom teaching, students do not have to stare at the screen all day, online classes can not be done, can only use computers or mobile phones, or tablets, but also close contact, in order to achieve teaching. And as we all know, long-term staring at the screen, the impact on children's eyesight can not be underestimated, long time sitting at the desk, the spine and so on is also harmful. Therefore, based on the analysis of physical and psychological reasons, 4-6H is more acceptable and more satisfying.

The subjects who studied on classin had higher satisfaction scores than those who studied on Tencent Class, Dingding and Chaoxing. The subjects who studied on Tencent Class, Dingding and Chaoxing had higher satisfaction scores than those who studied on other platforms.

The teaching functions of classin platform are more diverse, simple and convenient to operate, and more beneficial to the interaction between teachers and students in class, as well as the handing in and correction feedback of homework. This platform provides the comprehensive needs of teachers and students for online courses from many aspects.

The satisfaction scores of online courses vary with the electronic devices used. The satisfaction scores from high to low are: computer > iPad and mobile > other devices; Advantages of desktop computer. In terms of price, the configuration of desktop computer is higher than that of laptop computer for the same price. Heat dissipation, desktop computer main box space is large, conducive to heat dissipation, easy to remove the main box, conducive to the motherboard, fans, CPU dust; Computer upgrade, desktop chassis is convenient for users to upgrade the hardware, such as adding optical drive, hard disk, memory, replace the motherboard, CPU, etc. Desktop computer configuration is high, the monitor is big, watch video look comfortable. In general, computer learning screen is large, easy to operate, high configuration, during the study period is more stable.

Subjects who were not easily distracted during online study had higher satisfaction; Easy to wander, may be very tired, need to rest, adjust the state, after all, the body is the capital of the revolution, it is recommended that balanced nutrition, reasonable exercise. Arrange your time reasonably, so that you can study better. Online course environment is loose, no one constraints, should be their own constraints management, or learning efficiency is very low. The brain does not follow the thinking, easy to wander. Therefore, the class satisfaction is not high when the mind is wandering.

The Internet is less frequent. Caton's subjects were more satisfied; During the online course, the fluency of the network plays a crucial impact on students. If the network is blocked, it will not only affect the content of the class intermittently, affect the absorption of knowledge, but also affect the students' experience of the online course, so the bad experience will also bring bad satisfaction.

So during the online course, we should pay more attention to the experience and demand of girls for online courses. The curriculum content formulated by each district for online courses should be reasonable and meet the needs of students. The school should optimize the management system of online courses so that students can deepen their love for online courses. During the online course, students should have a personal space environment, prepare appropriate online course equipment and stable network environment, reduce the factors that interfere with learning, improve learning efficiency, adjust their mentality in time, strengthen self-control and learning management.

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