

Research on the Evaluation of Online Learning Effect in Local Universities

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Abstract: *In order to understand the online learning effect of local college students and improve the quality of online teaching, a questionnaire survey was conducted among local college students by using the learning input scale and a self-designed supplementary questionnaire. The research shows that local college students' online learning input is in a good state, and self-discipline ability, teachers' teaching ability, family learning environment and online learning resources are the main factors that affect college students' online learning effect. Based on this, this paper puts forward relevant countermeasures and suggestions, in order to provide reference for improving the quality of online learning of college students.*

Keywords: *online learning; learning quality; improvement path*

1. Introduction

The sudden epidemic of COVID-19 has not only pushed college teachers to the front line of online teaching, but also brought great challenges to students' online learning. In the face of the learning style and learning environment of teaching separation, teacher-student separation, student-student separation and time-space separation, whether students can adjust their learning status in time and ensure the time investment of online learning has become the key factors affecting the effect of online learning. Especially for local colleges and universities, students are young, and their status and performance in the online learning process without guides, supervisors and collaborators is also an important reference basis for whether and how to further promote online teaching and learning methods in the future. In the process of changing from offline learning to online learning, students' learning places have changed from school classrooms, self-study rooms, libraries or laboratories to family studies, bedrooms or living rooms. Teachers' teaching methods or mentors' guidance methods have changed from "face-to-face" to "screen-to-screen" or "key-to-key", and students' learning companions have also changed from many people to individuals. With the gradual restoration of teaching order, online and offline hybrid teaching has become the norm, but the existing studies mainly focus on the characteristics of online teaching and learning of undergraduates, explore the opportunities and challenges of online teaching and learning, and lack of empirical basis; or focus on describing the current learning status and feelings of students, lack of comparative analysis between online and offline.

Based on this, this study uses the online teaching and learning survey data of undergraduates from Taishan University, Shandong Agricultural University and Shandong first Medical University. to explore the differences and influencing factors between online learning input and offline learning input of local college students, in order to deeply understand the status and performance of students' online learning, in order to provide empirical reference for the reform of teaching methods or learning methods in the future.

2. Research object

This paper takes the freshmen, sophomores and juniors of Taishan University, Shandong Agricultural University and Shandong first Medical University as the subjects of the survey.

3. Investigation process

This survey is mainly conducted by the method of questionnaire survey. Students' learning engagement was measured by Schaufeli's learning engagement scale, which was divided into three dimensions: motivation, concentration and energy, with a total of 17 items. Assist to develop a

supplementary questionnaire on the learning effect of college students, and set up open-ended questions, involving the effect of online learning, influencing factors and so on. The questionnaire adopts the method of network survey, which is mainly collected through the questionnaire Star Survey Network (<http://www.sojump.com/>). 2161 questionnaires are collected, and 2014 questionnaires are valid in the interim, with an effective rate of 93.19%. The survey time of the questionnaire is concentrated from May 1, 2020 to September 1, 2020 (Table 1 for details). At the same time, the research group conducted open interviews with some students, teachers and relevant managers of the surveyed colleges and universities as a supplement to this survey.

Table 1 Basic information of the students surveyed

Gender Grade	Male		Female		Total	
	Quantity (person)	Proportion (%)	Quantity (person)	Proportion (%)	Quantity (person)	Proportion (%)
Freshman year	395	19.61	527	26.17	922	45.78
Sophomore year	355	17.63	485	24.08	840	41.71
Junior year	124	6.16	128	6.36	252	12.51

4. Results and analysis

4.1 Self-evaluation of online learning quality of college students

Table 2 self-evaluation form of online learning quality of college students surveyed

Project – Option	Obvious improvement	Improve somewhat	Uncertain	A slight decline	Obvious decline
Quantity(person)	241	272	1112	255	134
Proportion (%)	11.97	13.51	55.21	12.66	6.65

As can be seen from Table 2, 11.97% and 13.51% of the students who think that the effect of online learning has been significantly improved and 55.21% of the students have chosen "uncertainty", while 12.66% and 6.65% of the students have chosen "slightly decreased" and "significantly decreased". This data not only reflects the problem of many students' self-learning evaluation ability. It also reflects the "uncertainty" of the learning evaluation status of the teachers of this part of the students in their daily teaching, and the role of the evaluation results in promoting the development of students needs to be further brought into play.

4.2 The input of College students in online and offline Learning

Table 3 Online and offline learning input of college students surveyed

	Learning motivation	Learning energy	Focus on learning	Total investment in learning
Online	4.751±0.426	4.025±0.644	4.084±0.635	4.286±0.685
Offline	4.642±0.745	4.193±0.528	4.264±0.741	4.366±0.594

Note: different lowercase letters represent significant differences at $P < 0.05$ level.

As can be seen from Table 3, there is no significant difference in learning motivation between online and offline learning of local college students. in terms of learning energy and focus, offline learning is significantly higher than online learning, and in terms of total investment, online learning is significantly higher than offline learning. The reason for this may be related to the characteristics of online learning and teachers' effective control over online teaching. For example, online learning is more flexible and flexible, and students can repeatedly call the learning video materials at any time according to their own needs, especially for college students with high self-consciousness and strong self-management ability. At the same time, students also reflect that after online learning has been carried out for a period of time, teachers not only timely monitor students' classroom input and homework completion through the curriculum management platform, but also carry out a considerable amount of interaction through on-screen comments, contributions, discussion forums and other ways. Many students reflect that online teaching students ask more questions than offline teaching, especially for those relatively introverted college students. Online teaching avoids face-to-face tension, and they

are more motivated.

4.3 Influencing factors of College students' online Learning

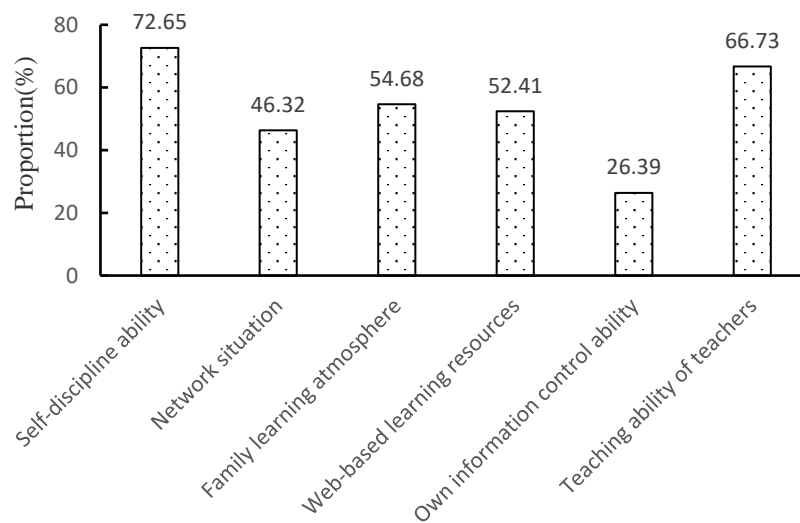


Fig. 1 Influencing factors of college students' online learning

As can be seen from figure 1, compared with offline learning, the factors that affect the quality of college students' online learning are more diverse. The survey results show that. The order of influencing factors of online learning effect from high to low is: self-discipline ability (72.65%), teachers' teaching ability (66.73%), family learning environment (54.68%), web-based learning resources (52.41%), network situation (46.32%), and self-information control ability (26.39%). It can be seen that whether online learning or offline learning, students are the main body of learning, and self-discipline ability is the most core and key factor affecting the quality of learning. For students with weak self-discipline, too free learning environment can easily lead to disorder of learning order, obvious decline in learning quality, and teachers' teaching ability is particularly important. how to effectively organize teaching online and improve students' learning enthusiasm is particularly important. Compared with the highly regulated and uniform offline learning environment, the online learning environment at home is relatively free and loose, even without any constraints, which requires higher self-discipline ability of students.

5. Analysis of the ways to improve the effect of College students' online Learning

5.1 Strengthen ideological guidance

Under the special background of epidemic prevention and control, students' thinking is easily affected by various social factors. Online teaching should strengthen students' ideological and political education and guide students' thoughts correctly. On the choice of online learning platform, do a good job of screening. Teachers should help students get rid of invalid resource platform in advance in order to choose a group of high-quality learning resources. Secondly, help students to establish a good concept of learning, develop good learning habits, so as to mobilize students' enthusiasm for learning and improve their enthusiasm for autonomous learning.

5.2 Improve the enthusiasm of college students for autonomous learning

The first is to help students establish learning goals. The first lesson of the semester is to guide students to make an in-depth analysis of the current social situation and enhance their political awareness and a clear understanding of the current social situation, so as to stimulate their own enthusiasm for learning. Second, adopt a variety of feedback and interaction ways. In online teaching, the learning effect of students who are more extroverted is more obvious. In view of this situation, in the way of interaction, teachers can use a variety of ways, such as discussion area messages, exchange group interaction, online classroom questions and other ways to enhance interaction with students, so

as to stimulate students' interest in learning. Third, in the process of online teaching, teachers should pay attention to the change of the way to explain the important and difficult knowledge. Choose one or two knowledge points in each class and explain them clearly and thoroughly. Students have a sense of achievement in every class, which can greatly improve students' enthusiasm for learning. In the autonomous learning after class, it will also be more active.

5.3 Help college students find learning methods that suit them

In order to solve the problem that students can not find suitable learning methods, a special discussion area can be set up in the class, and students can provide the sharing of the collected learning methods, so as to help students with uncertain learning methods to find their own learning methods. In class, teachers pay attention to guide teaching, publish thinking problems in real time, and encourage students to study independently. Pay attention to answering questions after class, make mutual evaluation between teachers and students, and pay attention to the application of the second classroom. Teachers' attention to students' feedback can also improve teachers' understanding of students, timely supplement the knowledge points that students do not understand in class, better understand students' learning preferences, adjust teaching models, and improve students' learning enthusiasm. Teachers' evaluation of students can be adjusted according to the online teaching mode. For example, add some evaluation contents, such as the participation of rush response in class, the number of real-time comments in online classroom, etc., as evaluation criteria. After each class, the teacher can evaluate the students in this class, and the students can see their own performance in this class, and the lack of comparison can be adjusted in time. Students with lower scores, if there is a more obvious improvement in the next class, teachers can give extra points to encourage students to learn.

5.4 Improve teachers' online teaching ability

The teaching quality of teachers plays a vital role in whether students can achieve the desired learning effect. However, online teaching requires rapid development in a short period of time, which is also a challenge for many teachers. In the early stage of teaching, many teachers are tired of learning and using all kinds of software, and often ignore the rationality of the curriculum. Therefore, teachers should conduct many software drills before class to avoid poor classroom effect caused by the poor use of software in class. In the curriculum setting, we can combine the software functions to set up more student interaction links, so that more students have a sense of participation in the classroom and stimulate students' enthusiasm for learning. Therefore, in teaching, do a good job of supervision. We can increase the contact with the students' parents, find out the learning situation of the students, and supervise and guide them according to the interaction and homework completion of the students. Therefore, to improve the online teaching level of teachers, to a certain extent, can not only improve students' learning effect, but also promote students' initiative in learning.

5.5 Enrich teaching resources

The quantity of online teaching resources does not represent the quality of online teaching resources. Therefore, each resource platform not only needs to increase the quantity, but also needs to do a good job of quality monitoring. At the same time, enhance the background data management to avoid stutter phenomenon. For teachers, they should be proficient in curriculum management, do a good job in course management such as check-in and problem feedback, so as to ensure students' commitment in class. For after-class homework to do a good job of online and timely feedback, urge students to read and receive relevant learning materials.

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