Scholar Publishing Group
International Journal of Educational Curriculum Management and Research
https://doi.org/10.38007/IJECMR.2024.050105
ISSN 2790-0967 Vol. 5, Issue 1: 23-29

Structural Relationship among Teacher Support, Academic Self-efficacy and College Students' Learning Engagement in Online English Learning

Linyi Dai

School of Language and Media, Anhui University of Finance & Economic, Bengbu, Anhui, China

763807351@qq.com

Keywords: Teacher Support, Academic Self-Efficacy, Online Learning, Comprehensive Engagement Index

Abstract: In today's educational environment, college students often need to learn English online, which is a supplement to offline learning, so it has a profound impact on the learning quality of college students. In order to enhance the educational quality of online learning, this paper believes that students' input in learning is directly related to the educational quality, and the important reasons are teacher support and academic self-efficacy, and students' sufficient teacher support and positive self-efficacy will greatly improve their learning engagement and academic performance. In order to demonstrate this point, a comparative experiment was specially set up in this paper. In the comparative experiment of comprehensive input index, the average comprehensive input index of the experimental group with a higher degree of teacher support was 97.06, while the average comprehensive input index of the control group was only 94.51. Through the comparison of experimental results, it is not difficult to see that teacher support can effectively improve students' learning engagement, and thus bring positive effects on online learning.

1. Introduction

In order to improve the English level of college students, it is very important to conduct high-quality online learning, so this paper hopes to find the relationship between teacher support and academic self-efficacy and college students' English online learning engagement, so as to improve their learning engagement and academic performance. This paper also analyzes the effects of teacher support and academic self-efficacy on online learning, so as to improve students' learning engagement.

Firstly, this paper analyzes the influence factors of online learning input, and points out that learning interaction, teaching quality and students' own quality are very important factors. Then, this paper analyzes the effects of teacher support and academic self-efficacy. It is not difficult to understand that these two points are closely related to learning interaction and teaching quality.

Finally, two comparative experiments are conducted to verify the effects of these two points, and it is found that they can jointly affect learning engagement and learning effectiveness.

2. Related Work

Online learning, as one of the learning methods of current college students, can undoubtedly play a positive role in promoting their studies, and many researchers have also put forward their views. Barrot J S believes that the education system needs to be reformed, that is, to use online learning to help students carry out more detailed learning [1]. Esra M proposes that motivation is the key factor affecting language learners, so students' desire to socialize with the language they have learned will become the main reason affecting their enthusiasm [2]. Ferrer J believes that the environment of online learning changes the pattern of educational learning, and attitudes towards online learning and language learning affect the engagement in online learning, thus further affecting the learning efficiency [3]. Landrum B' s research attempts to assess the factors that affect students' satisfaction with online courses, and finally comes to the conclusion that students' satisfaction depends on their convergence towards the overall education and life goals of the courses [4]. It is obvious that students' satisfaction with online courses can affect their engagement in online learning to some extent, and thus affect the quality of online education.

This paper argues that teacher support and academic self-efficacy can influence online learning and further affect college students' input in online learning. Romano L found in his research that teachers' emotional support can, to a certain extent, promote students' well-being and improve their ability to overcome setbacks in the academic environment [5]. Khan M pointed out that college academic self-efficacy was closely related to students' study pressure and academic performance [6]. Green Z A believes that broad sense of self-efficacy plays an important role in strengthening college students' online education. His research reveals many major sources of academic anxiety, such as Internet connection problems, increased academic demands, lack of active participation in online courses, and inability to understand difficult topics [7]. In addition to causing academic anxiety, these factors may also be potential reasons for reducing students' online engagement, so practitioners and students themselves need to avoid these phenomena.

3. Method

3.1 Influencing Factors of Online Learning Engagement

As one of the main subjects of education in China, students still need to learn English at the university level. Moreover, with the continuous development of Internet technology and online tutoring resources, students are beginning to experiment with the switch to online English learning. Online learning often relies on online courses, video tutorials, language learning and other applications and web resources, these web resources or live or video, can meet the learning needs of students from different angles, with enough convenience, so as to improve their English listening, speaking, reading and writing skills. Shi N J proposed the use of massive open online courses to help students learn English online [8]. In his opinion, using such an organized and large-scale online learning platform can significantly improve students' learning efficiency. However, Yu H proposed a strategy to improve college students' satisfaction with online English learning [9]. College students' satisfaction with the network platform and learning resources determines their learning quality and willingness to invest, which has a profound impact on learning efficiency. Among them, the satisfaction degree of college students is affected by multiple dimensions, the first is the content dimension. The content quality of educational resources inside the platform directly affects the learning engagement, and the quality of educational resources is related to the service quality of the

platform, the level of teachers and the richness of resources. The second is the value dimension, because learners need to face different challenges in the process of social change, so their educational needs are constantly changing. To some extent, college students need to realize their own value in English learning, and the realization of their value and the establishment of online learning platforms can affect their learning status to some extent. The last is the communication dimension. As we all know, language learning requires communication. The platform also needs sufficient conditions to support the English communication between students and students and between students and teachers, so that students not only learn English on paper, but also practice their listening and speaking ability through communication. Wei D's research is not limited to English learning, but focuses on the overall study of online learning engagement, trying to analyze the relationship between them [10].

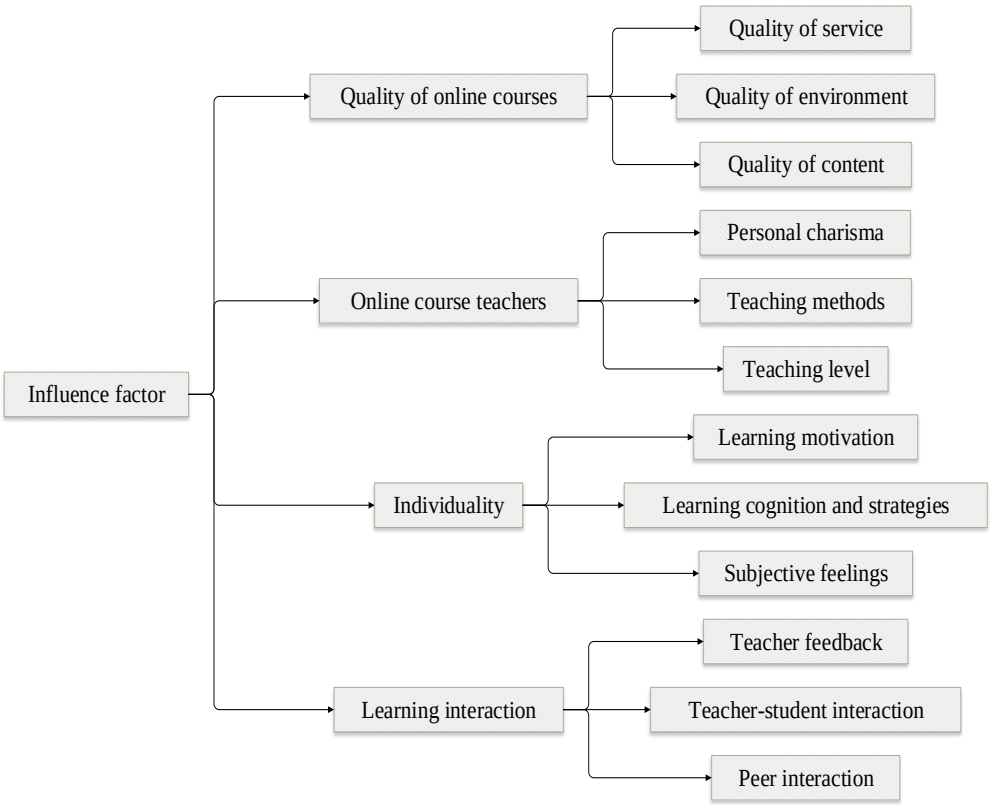

Figure 1. Multiple factors influencing online learning engagement

Figure 1 shows the multiple factors that influence online learning engagement. In this summary of the influencing factors, it is mainly divided into online course quality, online course teachers, personal characteristics and learning interaction. The quality of online courses mainly includes service quality, environmental quality and content quality, which are the main evaluation elements of online courses. Online course teachers mainly aim at the ability of teachers, that is, personal charm, teaching methods and teaching level. Personal traits refer to students' learning motivation, cognition and strategy as well as students' subjective feelings. Similarly, learning interaction will also be one of the main influencing factors, such as teacher feedback, teacher-student interaction and peer interaction.

3.2 The Role of Teacher Support and Academic Self-Efficacy

It is obvious that the factors that affect college students' online English learning involvement are

basically related to teachers, students and platforms. In order to further study them, Xia X J and Ji C M believe that teacher support and academic self-efficacy will play a key role [11-12]. Generally speaking, although English learning is one of the main subjects of college students, online learning is still a supplementary learning mode at the current stage. Therefore, it is inevitable that there will be many influencing factors to improve students' engagement in online learning. Teacher support includes encouragement, feedback and understanding, and when students feel supported by their teachers, they are often more motivated to learn. Academic self-efficacy refers to students' confidence and judgment in completing their own learning tasks, which is closely related to students' self-esteem, motivation and learning achievement. It can be said that the higher the sense of efficacy, the higher students' learning enthusiasm, so it is easier to complete the learning task. Sun X J investigated the influence of teacher support and academic self-efficacy on students' learning engagement [13].

Table 1. Investigation of the influence of different factors on students

Factor	Score	Standard deviation
Confidence	4.06	0.651
Perseverance	4.25	0.673
Self-assessment	3.89	0.552
Teacher support	4.37	1.031

The survey on the influence of different influences on students is shown in Table 1. In this survey, a score of 1-5 represents the degree of influence of this factor on learning in the eyes of students. It can be seen that the influence of teacher support on students is the highest among many factors, but the degree of influence in student groups seems to be very different, and its standard deviation is also the largest among many factors. However, Rao Ajj conducted A study on the effectiveness of students' online learning input [14].

$$Effect = \lambda_1 S_D + \lambda_2 S_E \quad (1)$$

$$Input_C = \lambda_a Input_T + \lambda_b Input_M + \lambda_c Input_E \quad (2)$$

Among them, $Effect$ is the learning effect, S_D, S_E are the scores of daily exams and final exams respectively, λ_1, λ_2 are the weighting coefficients of the two scores respectively. While $Input_C$, $Input_T$, $Input_M$, $Input_E$ are the comprehensive input, time input, money input and energy input respectively, λ_a, λ_b, λ_c are the weighting coefficients of the three sub-inputs respectively. Through the calculation of this formula, students' score indicators and online learning engagement can be perceived.

4. Results and Discussions

4.1 Comparative Experiment of Comprehensive Input Index

In order to verify the effectiveness of the method proposed in this paper, it is considered necessary to compare students' learning engagement in online English learning under different circumstances. The specific method is to take a learning platform as the experimental object, from which 100 students are randomly selected and divided into 2 groups, with 50 students in each group. One group was set as the experimental group, allowing the teachers of this group to give full play to their educational ways of supporting students, and the other group was set as the control group, where the teachers of this group basically did not encourage students, but would not interfere with

students' learning from other angles. Finally, the comprehensive input of the two groups of students was counted.

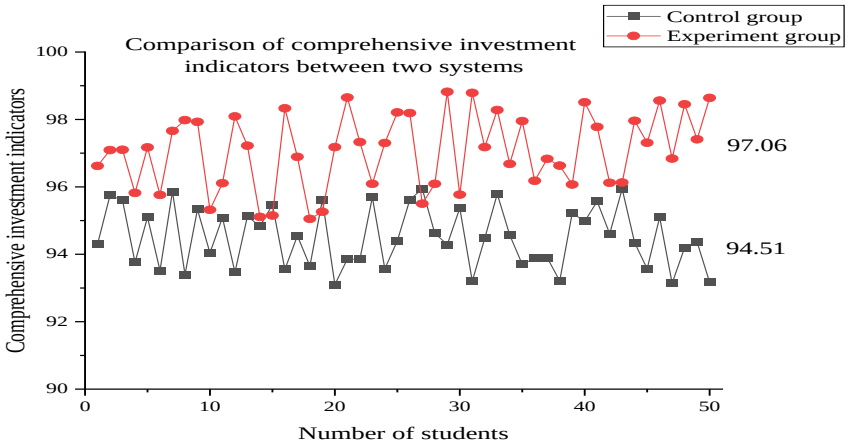

Figure 2. Comparative experiment of comprehensive input index

The comparative experimental results of comprehensive input indicators are shown in Figure 2. In the comparison between the two groups of 50 students each, the comprehensive input index of the experimental group was basically higher than that of the control group, and the average data comparison at the end also reflected this. The average comprehensive input index of the experimental group was 97.06, while that of the control group was 94.51. It can be seen that teachers supporting more experimental groups can promote students to increase their online learning input.

4.2 Comparative Experiment of Learning Effect

Now that the effectiveness of teacher support has been verified, this paper will also compare with other mainstream methods. Liu FH proposed in his research that teachers can effectively improve the input of online learning by grasping students' learning dynamics in real time and taking certain intervention [15]. In this paper, the same experimental method will be adopted, but the method is set as the control group and the method in this paper as the experimental group, and the learning effectiveness of 50 students in each group will be investigated.

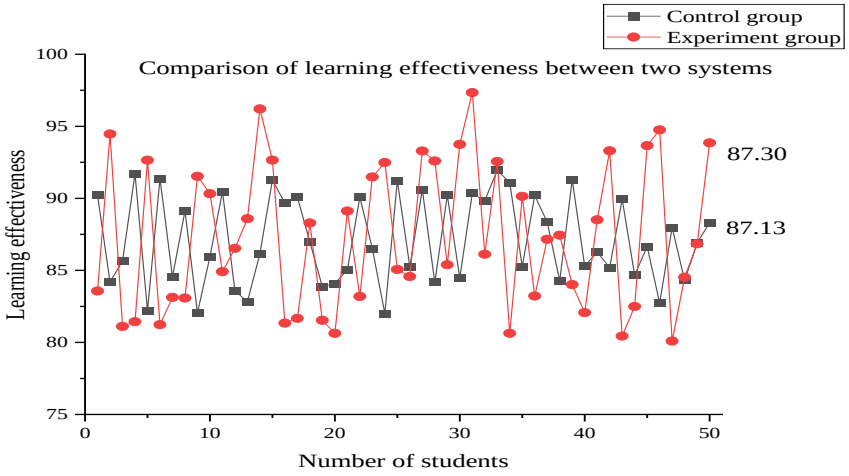

Figure 3. Comparative experiment of learning effectiveness

The experimental results of learning effectiveness comparison are shown in Figure 3. The statistics of learning effectiveness are based on the weighted calculation of daily exams and final exams, and the learning effectiveness of the two groups is actually very close. In order to compare the gap between the two groups, the average data of the two groups will be collected in this paper. The average learning outcome of the experimental group was 87.30, and the average learning outcome of the control group was 87.13. In other words, there is not much difference between the two groups' methods in helping students, but the experimental group based on the method in this paper is still better, which can be demonstrated by the comparison of learning results based on test scores.

5. Conclusion

This paper analyzes teacher support, academic self-efficacy and online learning engagement respectively, and then studies the relationship between them. Finally, a comparative experiment is carried out to verify the viewpoints of this paper, and the experimental indicators of the comparative experiment are comprehensive engagement index and learning effect, which can reflect students' learning engagement and achievement. However, the experiment in this paper still has some shortcomings, that is, as the experimental group that adopts the method in this paper, it only realizes the teacher's support, and it is difficult to reflect the academic self-efficacy. In general, this paper puts forward ways to improve college students' online learning input and broadens ideas for this field. Obviously, the status of online learning engagement will be increased in the future, and students' input in it will directly affect their own learning.

Funding

If any, should be placed before the references section without numbering.

Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

References

[1] Barrot J S, Llenares I I, Del Rosario L S. Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. Education and information technologies, 2021, 26(6): 7321-7338

[2] Esra M, Sevilen Ç. Factors influencing EFL students' motivation in online learning: A qualitative case study. Journal of Educational Technology and Online Learning, 2021, 4(1): 11-22

[3] Ferrer J, Ringer A, Saville K, et al. Students' motivation and engagement in higher education: The importance of attitude to online learning. Higher Education, 2022, 83(2): 317-338

[4] Landrum B, Bannister J, Garza G, et al. A class of one: Students' satisfaction with online learning. Journal of Education for Business, 2021, 96(2): 82-88

[5] Romano L, Angelini G, Consiglio P, et al. Academic resilience and engagement in high school students: The mediating role of perceived teacher emotional support. European journal of investigation in health, psychology and education, 2021, 11(2): 334-344

[6] Khan M. Academic self-efficacy, coping, and academic performance in college. International Journal of undergraduate research and creative activities, 2023, 5(1): 1-14

[7] Green Z A. Generalized self-efficacy shields on the negative effect of academic anxiety on academic self-efficacy during COVID-19 over time: A mixed-method study. Journal of School and Educational Psychology, 2022, 2(1): 44-59

[8] Shi N J. Research on personalized English learning system based on MOOC. Information Technology,2023,47(7):34-37

[9] Yu H, Huang Y. Research on the Strategies of Improving College Students' Satisfaction with English Online Learning from the Perspective of 4I Theory. Journal of Jilin Engineering Normal University,2023,39(9):61-66

[10] Wei D D, Zeng Y P. Study of Factors upon Online Learning Engagement. Chinese Journal of ICT in Education,2023,29(9):74-81

[11] Xia X J, Cai L, Lin L, Lin C D. The Relationship between Perceived Teachers' Support and Academic Engagement among High School Students: The Chain Mediating Effect of Academic Self-efficacy and Achievement Goal Orientation. Psychological Development and Education,2020,36(6):700-707

[12] Ji C M, Zhao H. The Relationship Between Teacher Support, Academic Self-efficacy, and Academic Achievement of Primary and Middle School Students: A Meta-analytic Structural Equation Model. Teacher Education Research,2021,33(6):106-113

[13] Sun X J, Song N Q, Liang X Y. The Effects of Perceived Parent and Teacher Support on Continuing Motivation for STEAM Education: The Mediating Roles of Learning Interest and Self-Efficacy. Studies of Psychology and Behavior,2021,19(1):37-44

[14] Rao A J, Wan K. A Study on the Influence of online learning readiness on College students' online learning engagement. Education Science,2020,36(2):31-38

[15] Liu F H, Yi X T. Research on Construction and Application of Analysis Model of Online Learning Engagement. E-education Research,2021,42(9):69-75