

THE RELATIONSHIP BETWEEN LEARNING SATISFACTION AND LEARNING ENGAGEMENT OF STUDENTS AT Z UNIVERSITY IN ZHENGZHOU, HENAN PROVINCE, CHINA

Jiang Yue ^{1*}

Shu-Ching Wu ²

¹ Master Candidate in Educational Administration, Stamford International University, Thailand

² Associate Professor, Graduate School, Stamford International University, Thailand

* **Corresponding Author, E-mail:** 331834325@qq.com

Abstract: This study aimed to investigate the current learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province, to understand the differences between different demographic backgrounds and explore the relationship between the two variables. The research mainly adopted a questionnaire method, taking Z University students in the Zhengzhou City of Henan Province as the research object, adopting a convenient sampling method, bringing 379 students, collecting data, and importing SPSS to complete statistical analysis. This research showed that Z University students' learning satisfaction and learning engagement were moderate in Zhengzhou City, Henan Province. There were significant differences in demographic backgrounds (gender, grade, birthplace, and parents' highest educational background) in learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province. There was a significant positive correlation between learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province. Based on this, suggestions were proposed to pay attention to students' academic development characteristics and meet their learning needs.

Keywords: Learning Satisfaction, Learning Engagement, College Students

Introduction

Since the National Survey of Student Engagement (NSSE) was organized by Indiana University in 2000, there has been a wave of research on the academic situation in universities internationally. Until that day, NSSE exceeded 20 sessions. This annual survey focusing on "college student learning engagement" rapidly expanded to some major countries in Europe (UK, France, Germany), Asia (Japan, South Korea), Oceania (Australia), South America (Chile, Mexico), and even Africa (South Africa), thus sparking a massive survey of college student learning engagement in the field of international higher education research. It became an essential way for current research on learning engagement

among college students.

In 2019, the "Implementation Opinions on the Construction of First-class Bachelor's Degrees" of the Ministry of Education of China clearly stated that "increasing students' learning engagement" should be included in the national policy discourse system, indicating that it had become a critical component to measure the quality of higher education.

In recent years, Chinese scholars have gradually paid more attention to learning engagement, especially college students' learning engagement. Many scholars realized that to improve the quality of a bachelor's degree and meet the requirements of the Chinese Government in the Implementation Opinions on the Construction of First-class Bachelor's degrees, it was necessary to pay close attention to the current situation of college students' learning engagement (Yin, 2020; Peng et al., 2022). Therefore, college students' learning engagement became an evaluation index that could reflect college students' learning quality more directly and accurately than social evaluation and hardware conditions. Paying attention to college students' learning engagement and exploring factors that might improve college students' learning engagement became the research direction of Chinese scholars in the topic of college students' learning engagement at that time.

"Satisfaction" was a psychological state, which was the pleasure after meeting personal needs. Satisfaction research was initially used in business and was mostly called "customer satisfaction." Since then, "satisfaction" extended to the education field, called "learning satisfaction." Learning satisfaction is a feeling or attitude of students toward learning activities, directly reflecting the degree of satisfaction students want to achieve in the learning process (Lu, 2022). The Outline of the National Medium-and Long-Term Education Reform and Development Plan (2010-2020) stated: "Improving quality was the core task of higher education development and the basic requirement of building a powerful country in higher education." In recent years, with the diversification of the focus of higher education quality evaluation (Teng & Deng, 2023), from focusing on the external resources of colleges to concentrating on students' learning development, the assessment based on students' learning process became a vital perspective to evaluate the quality of higher education (Wang & Gao, 2021). Therefore, "learning satisfaction," as an objective indicator to reflect the quality of education from the perspective of students, was widely considered by scholars.

Generally speaking, learning engagement reflected students' learning involvement, while learning satisfaction focused on revealing the current situation of college education quality from the perspective of students, paying attention to the degree of learning engagement and satisfaction of college students in the learning process, which could help universities better understand the quality of students' learning, understand the process and mechanism of effective learning, and promote universities to make corresponding improvements in education, teaching, and management services. However, a lack of research combined college students' learning engagement with their learning

satisfaction to that day. This research focused on the relationship between students' learning satisfaction and learning engagement at Z University of Zhengzhou City, Henan Province. Through empirical research, it investigated the current situation of students' learning satisfaction and learning engagement, the differences in demographic backgrounds, and their relationship. Finally, combined with the research conclusions, it put forward some suggestions from the perspective of students' learning satisfaction to improve the level of students' learning engagement, hoping to promote their academic development and enhance the quality of education.

Research Objectives

(1) To understand the current learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province.

(2) Differences in learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province, among different demographic backgrounds (gender, grade, birthplace, parent's highest education).

(3) To explore the relationship between learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province.

Literature Review

Research on Learning Satisfaction

Learning satisfaction originated from customer satisfaction, so early theoretical research on learning satisfaction was mainly based on customer satisfaction. Subsequently, many scholars combined the two elements of "expectation" and "experience" in customer satisfaction to further propose the concept of "expectation" in learning satisfaction. Knowles (1970) suggested that learning satisfaction referred to the learner's feelings during the learning process. Subsequently, scholars defined learning satisfaction based on the learning context, emphasizing that learning satisfaction was the emotional experience of learners interacting with relevant factors during the learning process. When learning expectations were consistent with their experiences, individuals would feel satisfied; on the contrary, students would feel dissatisfied.

After the 21st century, related research on learning satisfaction has penetrated the field of higher education in China, which promotes the increase of related theoretical research, especially in recent years. The research results on learning satisfaction in higher education have been increasing. After combining, the measurement of learning satisfaction included research on learning satisfaction for different teaching methods and research on learning satisfaction for students of other majors, that is, professional satisfaction research.

In the research on learning satisfaction with different teaching methods, Wang (2020) found

that students think that teachers have firm knowledge reserves. Still, the whole design of teaching courses needs to be improved, which can't catch students' attention, and was not designed according to the characteristics of online itself. The time arrangement was too trivial, which was not conducive to students' better understanding and digestion of the knowledge relationship between the two classes and further led to the reduction of students' learning satisfaction.

In terms of using rich teaching methods to improve students' learning satisfaction, Xia et al. (2020) found through investigation that students' satisfaction with online teaching quality was low. On the one hand, the form of recording and broadcasting by famous teachers adopted in some places was inconsistent with the learning situation of local students, resulting in some students being unable to accept the teaching progress. On the other hand, online teaching requires teachers to have specific information technology abilities. Still, now many teachers were not familiar with this aspect, and there were some setting problems in the teaching process, which directly affected the teaching quality. Zheng (2021) surveyed the blended learning process and found that the overall satisfaction was relatively satisfactory, with a score close to 78. Only the resource aspect was lower than the overall learning satisfaction, while other elements were higher than the overall learning satisfaction. There was no significant difference between male and female students, but there were differences in disciplines and study periods, especially in study periods.

Research on Learning Engagement

Learning engagement, also known as "academic engagement" or "learning engagement," originated from work engagement in the academic community.

In research on the impact of learning engagement, some scholars have found that environmental factors were significant factors affecting the learning engagement of college students. Environmental factors mainly referred to some social factors, including school factors such as peer relationships and teacher-student relationships, as well as family factors such as parental support and relationships.

In the study of the influence of the family environment on learning engagement, Li (2021) found that family education level positively impacted college students' learning engagement, and the higher the family education level, the higher the students' learning engagement. Chen (2021) conducted a questionnaire survey on 791 first-generation college students to study the impact of parental involvement on their learning engagement from the perspective of self-determination theory. The results showed that parents' academic expectations and self-support could not directly affect learning engagement but could be mediated by students' perseverance personalities, and the chain mediated by students' perseverance personality-academic self-efficacy indirectly affected learning engagement.

In addition, learning engagement was also related to individual differences among students. The research results of Li (2021) showed that males' learning engagement level was significantly higher than that of females, which could indicate to a certain extent that males realize the significance of

learning as students earlier, and society and families expect males to be much higher than females. Hence, the learning engagement level of males was higher.

Finally, learning engagement has a comprehensive impact on student academic performance, and exploring the factors that influence learning engagement has become a research hotspot in recent years. Zhang et al. (2021) used college students as samples to examine the performance of academic burnout and learning engagement in the college student population. The research results showed that academic self-efficacy and learning burnout could predict learning engagement well, suggesting that educators should develop corresponding intervention plans to improve college students' academic self-efficacy and learning engagement. Yuan et al. (2022) found that the sense of professional mission could significantly predict the learning engagement of free average students and revealed the internal mechanism of the role of professional mission in learning engagement, which provided the reference for the cultivation of typical students' sense of professional mission and the construction of high-quality teachers.

Research on the Relationship between Learning Satisfaction and Learning Engagement

There were many research results related to learning satisfaction and learning engagement, but the views were relatively inconsistent.

Xie (2022) surveyed 58 college students with an online learning engagement questionnaire and a learning satisfaction questionnaire. The survey results showed that students thought it was necessary to implement mixed teaching in educational psychology courses and believed that the shared resources of the online teaching platform were of great help to learning. Students had higher learning engagement and learning satisfaction with the blended teaching mode. Tu et al. (2023) showed that satisfaction was a partial intermediary between self-efficacy and online learning engagement. The study suggested that schools should promote students' self-efficacy and satisfaction in learning by setting reasonable learning goals, providing an excellent interactive platform, paying attention to process evaluation, and improving the efficiency of teacher-student interaction and student group discussion. Guo & Hu (2022) found that the overall level of teachers' care and students' learning engagement in online teaching was not high and needed further strengthening. Teachers' care in online teaching positively predicted learning satisfaction, while learning engagement was a partial intermediary between teachers' care and learning satisfaction. The research proposed that to ensure online teaching quality, it was necessary to improve the online teaching environment and provide teachers with online teaching training to enhance students' internal learning motivation.

Some scholars have shown that learning engagement has a highly predictive effect on learning satisfaction. Cai (2022) found that students' learning engagement indirectly affected their satisfaction with the educational environment and the school through fairness perception as a complete intermediary. It also affected their satisfaction with learning harvest and education quality in the form

of a partial intermediary. At the same time, the study further found that students' fairness perception could be decomposed into two factors: "rule fairness" and "result in fairness," and the "rule fairness" factor bore the intermediary role of fairness perception. Vocational colleges needed to pay more attention to creating a fair, open, and just atmosphere and environment to enhance the confidence and satisfaction of vocational students in vocational education.

However, some scholars have shown that different dimensions of learning engagement influence learning satisfaction differently. Ren (2023) found that cognitive input was the intermediary between emotional and behavioral input, and the predictive effect of dynamic input on learning harvest satisfaction was higher than cognitive input. Emotional input was the engine of behavioral input, and mental input was the core. Both of them had insufficient startup of behavioral input, which led to the failure of behavioral input to impact learning harvest satisfaction significantly.

Summary of Reviewed Literature

Through literature analysis, domestic and foreign scholars have engaged in rich discussions on student learning satisfaction and learning engagement, providing a substantial reference for this study. The relationship between student learning satisfaction and learning engagement exhibited the following research characteristics:

Firstly, in terms of research subjects, the research focused on learning satisfaction had primarily been on college students. Research on learning engagement has encompassed various student groups, including elementary school students, middle school students, and college students, resulting in a relatively diverse discussion. Secondly, regarding research methods, the study of learning satisfaction has discussed the composition and crucial factors through analytic hierarchy processes. Additionally, empirical studies on learning satisfaction have emerged by subdividing the concept. In the study of learning engagement, due to the influence of the National College Student Learning Engagement Survey, there has been a richness of empirical research, resulting in the development of several mature scales. Finally, numerous scholars have explored the relationship between the two in recent years concerning the direct research results of learning satisfaction and learning engagement. The existing research demonstrates a positive correlation between learning satisfaction and learning engagement, although scholars vary in their research approaches. For instance, Cai (2022) treated learning engagement as an independent variable and found that it influenced learning harvest satisfaction. Meanwhile, Guo & Hu (2022) considered learning engagement as an intermediary variable and discovered that learning engagement and teacher care collectively controlled learning satisfaction. The impact mechanism of learning engagement and satisfaction still requires further exploration.

Based on this, this study focused on the learning satisfaction and learning engagement of students at Z University in Zhengzhou City, Henan Province. Through empirical research, it explained the current situation of learning satisfaction and learning engagement of students at Z University in

Zhengzhou City, Henan Province, examined the differences in demographic backgrounds, and explored their correlations. Finally, starting from learning satisfaction as an objective index reflecting teaching quality, the study proposed strategies beneficial for improving the learning engagement of college students. The aim was that the research results could provide a practical basis and theoretical reference for enhancing teaching in universities.

Methodology

The subjects of this study were Z University students in Zhengzhou City, Henan Province, China. According to statistics, by March 2023, the number of college students in Zhengzhou City, Henan Province, China, was 1,198,300, ranking third in China. Due to the large number of survey groups, it was challenging to adopt random sampling. Therefore, this study employed a convenient sampling method and completed sampling at Z University in Zhengzhou City, Henan Province.

In the formal investigation stage, according to the research sample size standard of Krejcie and Morgan (1970), there were more than 30,000 full-time undergraduates, and the number of valid questionnaires should be 379. In this study, 400 questionnaires were distributed, and 379 valuable questionnaires were collected, the effective return rate reached 94.75%.

The questionnaire on students' learning satisfaction selected in this study, came from the Questionnaire of College Students' Learning Satisfaction in Wang (2020). This study tested the reliability and validity of 52 pre-test questionnaires of the learning satisfaction scale and found that Cronbach's α of 30 questions was 0.931 and KMO =0.739, which met the requirements of reliability and validity. The questionnaire on the learning engagement of students which was selected in this study, originated from the Academic Engagement Scale of Zhou (2015) in his doctoral thesis "Research on the Influence of Family Background on College Students' Learning Engagement." The questionnaire items mainly came from authoritative scales such as NSSE-China, Research University Student Experience Survey (SERU), CSEQ, and UWES-S. This study tested the reliability and validity of 52 pre-test questionnaires of the Learning Engagement Scale and found that Cronbach's α and KMO of 38 questions were 0.946 and 0.717, all of which met the requirements of reliability and validity.

Results

Demographic Analysis of the Respondents

Among the 379 questionnaires collected in this study, there were 191 males, accounting for 50.4%, and 188 females, accounting for 49.6%. The number of freshman students was 136, accounting for 35.9%; sophomore students were 106, accounting for 28.0%; juniors were 80, accounting for 21.1%; and seniors were 57, accounting for 15.0%. There were 147 students in urban areas, 38.8%, and 232 students in rural areas, accounting for 61.2%. There were 133 students whose parents have the highest

educational background in high school, accounting for 35.1%, 136 students whose parents have the highest educational background in a college degree, 76 students whose parents have the highest educational background in undergraduate, accounting for 20.1%, and 34 students whose parents have the highest educational background in master's degree or above, accounting for 9.0%.

Descriptive Statistics on the Current Learning Satisfaction and Learning Engagement among College Students

1) The overall learning satisfaction of college students in this study was moderate (M=3.481, SD=0.569). Among them, the means of teachers’ teaching were the highest, while the means of learning support systems and measures were the lowest, as Table 1 shows.

Table 1: Summary of Descriptive Statistics on Learning Satisfaction of Students (N=379)

Dimension	M	SD
Teachers’ teaching	3.787	0.708
Learning support conditions	3.432	0.680
Learning support systems and measures	3.136	0.653
Interpersonal relationship	3.568	0.768
Overall learning satisfaction	3.481	0.569

2) The overall learning engagement of college students in this study was moderate (M=3.299, SD=0.511). Among them, the mean of academic-persistent effort was the highest, and the mean of challenging academic engagement was the lowest, as shown in Table 2.

Table 2: Summary of Descriptive Statistics on Learning Engagement of Students (N=379)

Dimension	M	SD
Supporting academic engagement	3.380	0.642
Routine academic engagement	3.448	0.645
Challenging academic engagement	3.024	0.647
Communicative academic engagement	3.237	0.756
Academic-persistent effort	3.487	0.649
Academic-cognitive strategy	3.275	0.624
Academic-focused energy	3.243	0.613
Overall learning engagement	3.299	0.511

Analysis of Differences in the Current Learning Satisfaction and Learning Engagement among College Students

There were significant differences in learning satisfaction among demographic backgrounds (gender, grade, birthplace, parents' highest educational background). Males were significantly lower than females in learning support conditions and interpersonal relationships while learning support systems and measures were significantly higher than females. Freshmen were significantly higher than juniors and seniors, sophomores were significantly higher than seniors, students in urban areas were

significantly lower than students in rural areas, and students with the highest educational background of parents were significantly higher than students with the highest educational background of high school education and college degree. In learning engagement, males were significantly higher than females. Seniors were significantly higher than freshmen and sophomores. Juniors were significantly higher than freshmen. Sophomores were significantly higher than freshmen, students in urban areas were significantly lower than students in rural areas, students with master's degrees or above parents were significantly higher than students with high school and college degrees, students with a bachelor's degree were significantly higher than students with high school and college degree. Students with a college degree were significantly higher than students with high school and college degrees.

Analysis of the Correlation between Learning Satisfaction and Learning Engagement among College Students

Pearson correlation test showed a significant positive correlation between learning satisfaction and learning engagement. The correlation coefficient was 0.367, and there was a significant difference at the level of .001. The correlation coefficient r between the overall average learning satisfaction of college students and the dimensions of learning engagement ranged from 0.250 to 0.350, and there was a significant difference. .001 level. The correlation coefficient r between the average of college students' learning involvement and the dimensions of learning satisfaction ranged from 0.244 to 0.365, and there were significant differences at the level of .001. The results above showed a significant positive correlation between college students' learning satisfaction and learning engagement, as Table 3 shows.

Table 3: Correlation Analysis between Learning Satisfaction and Learning Engagement of College Students

	Teachers' teaching	Learning support conditions	Learning support systems and measures	Interpersonal relationship	Overall learning satisfaction
Supporting academic engagement	.272***	.232***	.115*	.186***	.250***
Routine academic engagement	.280***	.230***	.165**	.220***	.278***
Challenging academic engagement	.284***	.216***	.214***	.253***	.300***
Communicative academic engagement	.256***	.194***	.224***	.163**	.257***
Academic persistence and hard work	.266***	.208***	.196***	.200***	.269***
Academic-cognitive strategy	.330***	.277***	.215***	.304***	.350***
Academic-focused energy	.317***	.259***	.200***	.245***	.316***
Overall learning engagement	.365***	.294***	.244***	.284***	.367***

Discussion

Current Learning Satisfaction of Students at Z University in Zhengzhou City, Henan Province

The survey found that the overall learning satisfaction of students was moderate at Z University in Zhengzhou City, Henan Province, with the highest average teaching among teachers and the lowest average learning support systems and measures. In this study, the teaching level of teachers was the highest, indicating that most students recognized their teaching level and professional competence, believing that teachers could effectively promote their academic development through their teaching.

Current Learning Engagement of Students at Z University in Zhengzhou City, Henan Province

According to the survey, the students' learning engagement at Z University in Zhengzhou City, Henan Province, was generally at a medium level. Among them, the average value of academic-persistent efforts was the highest, and the average value of challenging academic engagement was the lowest. Academic-persisting efforts investigated the degree of college students' involvement in academic development during school, which was an index that could directly measure the performance of students' learning engagement. The higher average value of this dimension indicated that the surveyed college students had persistence in their academic activities and could devote themselves to learning activities for a long time. However, combined with the value of challenging academic engagement, it could be seen that the surveyed college students had low participation in some challenging learning contents, which needed the attention of subject teachers.

Differences in Learning Satisfaction of Students at Z University in Zhengzhou City, Henan Province

It was found that there was no significant difference in learning satisfaction between different genders. Still, males were significantly lower than females in learning support conditions and interpersonal relationships, and males were significantly higher than females in learning support systems and measures. Zhao & Yang (2017) found that female students had higher levels of interpersonal relationships, while Wang (2021) found that female students had higher satisfaction with their academic achievements.

It was found that there were significant differences in learning satisfaction among different grades of college students, and overall, the satisfaction of lower grades was higher. Zhou & Liu (2023) thought grades affected college students' learning satisfaction. This study found that college students' learning satisfaction decreased with the increase of students' grades. The reason was that lower-grade students had poor learning ability and needed to communicate with teachers, teaching materials, and classmates in the learning environment.

It was found that there were significant differences in learning satisfaction among college

students from different birthplaces, and students in rural areas were generally more satisfied. Yuan (2016) showed that students' satisfaction in big cities was significantly lower than that of students in urban and rural areas. The significant difference in learning satisfaction among college students may be due to China's uneven development level of urban and rural education resources.

It was found that there were significant differences in learning satisfaction among college students with different parents' highest educational backgrounds. Generally speaking, the higher their parents' educational background, the higher their learning satisfaction level. Many scholars paid attention to the influence of parents' educational background on their children's academic development. For example, Zheng & Niu (2016) thought students' satisfaction from highly educated families was significantly lower.

Differences in Learning Engagement of Students at Z University in Zhengzhou City, Henan Province

The survey found significant differences in learning engagement among college students of different genders, with male students having a higher overall level of learning engagement. Cao (2022) showed that males' learning engagement was slightly higher than that of females.

It was found that there were significant differences in learning engagement among different grades of college students. Generally speaking, the learning engagement of college students increased with the increase of grades. Li (2022) showed that seniors significantly higher than juniors index teacher-student interaction under learning behavior. This study also showed that seniors have higher learning engagement.

The survey found significant differences in learning engagement among college students from different birthplace, students from rural areas had higher levels of learning engagement. Zhou (2015) showed that rural students were more involved in their studies than urban students. Li (2022) showed that rural students higher in cognitive and emotional aspects of learning engagement, but there was no significant difference.

It was found that there were significant differences in learning engagement among college students with the highest educational background of different parents. Some scholars have verified the important role of parents' educational background on their children's academic development from the side. For example, Yang (2019) believed that parents with different educational background had different parenting knowledge and ideas and the creation and utilization of learning environment, which would further affect communication, motivation, evaluation and cooperation, especially for younger individuals with developing physical, mental and learning abilities.

Correlation between Learning Satisfaction and Learning Engagement of Students at Z University in Zhengzhou City, Henan Province

The survey found a significant positive correlation between learning satisfaction and learning

engagement among college students, indicating that students with higher learning satisfaction tend to have higher learning engagement behaviors. Zhou & Liu (2023) took online learning as an example, and the research showed a positive correlation between online learning satisfaction and learning engagement. Specifically, in this study, students with high learning satisfaction were reflected in their satisfaction with the teachers' teaching level and professional competence. They believed that the learning support conditions (software and hardware), the level of systems and measures provided by the school were relatively high, and there were also positive interpersonal relationships. The learning environment formed by these factors could play a good supporting role in the development of student learning activities, especially in terms of teachers. Combining the correlation could be seen that the overall mean correlation between teacher satisfaction with teaching and learning engagement was the highest, indicating that the surveyed college students have more learning engagement related to teachers' teaching.

Conclusions

1) Z University students' learning satisfaction and learning engagement in Zhengzhou City, Henan Province, were moderate.

2) There were significant differences in learning satisfaction among demographic backgrounds (gender, grade, birthplace, parents' highest educational background). Males were significantly lower than females in learning support conditions and interpersonal relationships while learning support systems and measures were significantly higher than females. Freshmen were significantly higher than juniors and seniors, sophomores were significantly higher than seniors, students in urban areas were significantly lower than students in rural areas, and students with the highest educational background of parents were significantly higher than students with the highest educational background of high school education and college degree. In learning engagement, males were significantly higher than females. Seniors were significantly higher than freshmen and sophomores. Juniors were significantly higher than freshmen. Sophomores were significantly higher than freshmen, students in urban areas were significantly lower than students in rural areas, students with master's degrees or above parents were significantly higher than students with high school and college degrees, students with a bachelor's degree were significantly higher than students with high school and college degree. Students with a college degree were significantly higher than students with high school and college degrees.

3) There was a significant positive correlation between learning satisfaction and learning engagement in Z universities in Zhengzhou City, Henan Province.

References

Cai, J. H. (2022). Research on the Relationship between Learning Engagement and Satisfaction of

- Higher Vocational Students--An Empirical Analysis Based on the Mediating Role of Fairness Perception. *Research on Vocational Education Development*, (01), 80-89.
- Cao, C. W. (2022). A survey and research on the current situation and influencing factors of learning engagement in blended learning spaces. *Master's thesis from Guangzhou University*.
- Chen, F., & Fan, Y. Y. (2021). Research on Learning Satisfaction and Improvement Strategies of College Students - Based on Empirical Data from S Normal University. *Journal of the Education College of the Production and Construction Corps*, (02), 48-53.
- Guo, L. J., & Hu, H. Q. (2022). The relationship between teacher care and college student learning satisfaction in online teaching: the mediating role of learning engagement. *Contemporary Education Forum*, (02), 42-50.
- Knowles, M. S. (1970). The modern practice of adult education: Andragogy versus earning and the learning organization: Examining the connection between the individual and the learning environment. *Human Resource Development Quarterly*, 9(4), 365-375.
- Li, J. (2022). Investigation on college students' self-efficacy and learning engagement in blended learning environment. *Master thesis of Xinjiang Normal University*.
- Li, J. Y. (2021). How classroom teaching methods affect the level of learning engagement of vocational college students - based on the perspective of self-determination theory. *Vocational Education (Second Quarter)*, 13(05), 22-33.
- Lu, H. M. (2022). Research on the Relationship between Skiing Self-efficacy, Learning Satisfaction, and Exercise Continuation Willingness of Physical Education Majors. *Master's thesis of Yanbian University*.
- Peng, J., Wang, L., & Jiang, L. (2022). Research on the Present Situation and Countermeasures of College Students' Learning Engagement--Based on the Investigation of Pedagogy Major in H University. *Journal of Adult Education College of Hebei University*, (04), 81-87.
- Ren, Q. M. (2023). The predictive effect of English classroom learning engagement on satisfaction with learning outcomes. *Modern Foreign Languages*, (04), 540-551.
- Teng, C. L., & Deng, R. P. (2023). From Digital Attachment to High-Quality Assessment: Paradigm Shift in Higher Education Quality Assessment. *Jiangsu Higher Education*, (01), 17-24.
- Tu, R. P., Huang, J. H., Wang, X. Y., Dai, Y., Chen, X. Y., & Chen, C. (2023). A study on the relationship among self-efficacy, satisfaction, and learning engagement of college students in online learning during the epidemic period- a case study of a university in Fujian. *Journal of Fujian Medical University (Social Science Edition)*, (02), 67-72.
- Wang, C. L. (2020). Exploring the Satisfaction of College Students with Online Learning. *Master's thesis of Central China Normal University*.
- Wang, H. C. (2021). A study on the relationship between overseas learning engagement and learning

- satisfaction among college students. *Master's thesis from Shanghai Normal University*.
- Wang, Y. (2020). Current situation and improvement strategies of students' learning satisfaction in independent colleges. *Master's thesis from Shanxi Normal University*.
- Wang, L., & Gao, N. (2021). The construction of evaluation indicators for bachelor's degree teaching quality - based on the perspective of student experience. *Research on Higher Engineering Education*, (02), 195-200.
- Xia, J., Deng, J. L., & Xiang, Y. B. (2020). Investigation of the effect of online learning on middle school students during the epidemic period from a multi-dimensional perspective based on the analysis of 466 questionnaires on the satisfaction of middle school students. *China Education Informatization*, (24), 18-23.
- Xie, L. P. (2022). Research on Learning Engagement and Learning Satisfaction in Educational Psychology under the Blended Teaching Model. *Journal of Xingyi Ethnic Normal University*, (04), 59-63.
- Yang, X. F. (2019). Investigation on parents' trust in kindergarten teachers. *Master's thesis of Jiangxi Normal University*.
- Yin, H. B. (2020). Behavioral View, Psychological View and Social and Cultural View: The Horizon Shift of College Students' Learning Engagement Research--Also on the Improvement of Teaching Quality in Chinese Universities. *Journal of East China Normal University (Educational Science Edition)*, 37(11), 1-20.
- Yuan, L., Zheng, J. F., & Hou, Y. Q. (2022). The influence of typical students' sense of professional mission on learning engagement: the intermediary role of professional identity and the regulatory role of psychological capital. *Journal of Southwest University: Social Science Edition*, 48(6), 218-227.
- Zhang, W. J., Jin, L. L., & Zhang, M. (2021). The relationship between academic engagement, self-efficacy, and academic burnout among college students. *Journal of the Education College of the Xinjiang Production and Construction Corps*, 31(4), 39-43+54.
- Zhao, D. M., & Yang, L. (2017). Research on the Relationship between Internet Dependence and Interpersonal Relations in Dormitories among College Students. *Research on Ethnic Higher Education*, (04), 70-75
- Zheng, X. H. (2021). A Study on the Learning Satisfaction of College Students in the Process of Blended Learning. *Master's thesis of Shenyang Normal University*.
- Zheng, Y. J., & Niu, X. C. (2016). The better your family, the more satisfied you are with your university. Non-linear relationship between student satisfaction and family background from the perspective of two-factor incentive theory. *Research on Educational Development*, (17), 43-51.
- Zhou, F. (2015). A study on the influence of family background on the learning engagement of college

students. *Doctoral Dissertation from Nanjing University.*

Zhou, X. H., & Liu, H. (2023). The relationship between the quality of online teaching services and the learning satisfaction of college students: the mediating role of learning engagement. *Adult Education in China*, (17), 24-28.