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Relationship Between Family-Student and Teacher-Student on Learning Motivation Among College Students in Shandong, China

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Abstract: *This study investigated the dynamics of teaching approaches (family-student relationship and teacher-student relationship) and the relationship with learning motivation among college students in Shandong, China. The purpose of this study was to investigate the relationship between family-student relationship and teacher-student relationship and student motivation among college students in Shandong Province.*

Keywords: family-student relationship, teacher-student relationship, learning motivation

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1. Introduction

The study includes three variables. The dependent variable is learning motivation. The independent variables are family-student relationship and teacher-student relationship. Learning motivation includes 7 domains, there are intrinsic motivation, extrinsic motivation, achievement motivation, self-efficacy, goal orientation, interest and enjoyment, academic self-concept. Family-student relationship includes 7 domains, there are communication, emotional support, parental involvement, parental expectations, academic support, parental involvement in decision-making, family-school collaboration. Teacher-student relationship includes 7 domains. There are communication and listening skills, support and encouragement, fairness and respect, emotional support, autonomy and independence, instructional support, relationship satisfaction. This study adopted the method of quantitative research.

The researcher used a stratified sampling technique for students from three colleges in Shandong. The total number of samples used was 424 participants. This study emphasizes the importance of family-student relationship and teacher-student relationship as moderating factors with the support of five related theories.

2. Sampling and Instrumentation

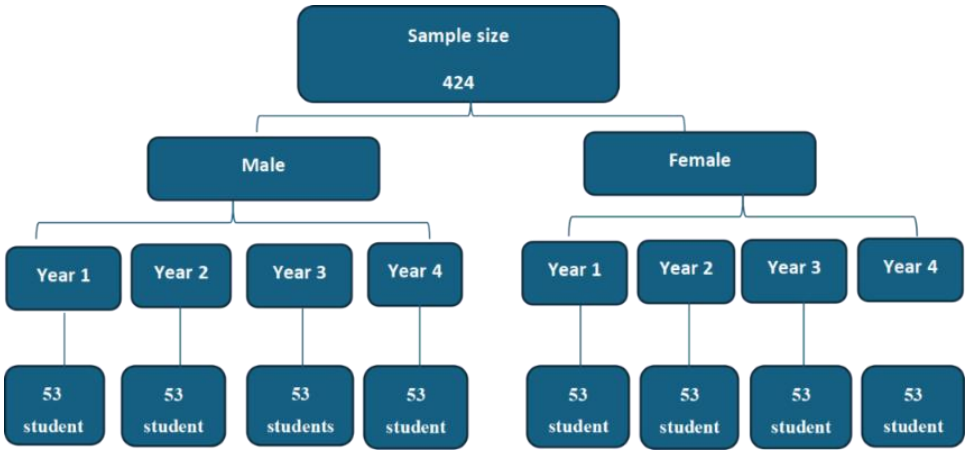

Figure 1: Sample Size

The present study initially provides an overview of the sample population, followed by the determination of an appropriate sample size using Krejcie and Morgan's (1970) table. This study was conducted in Shandong, the relationship between family-student and teacher-student on learning motivation. This study selects three colleges in Shandong, China. The 424 samples were stratified according to the first, second, third and fourth year of the college, with 106 students in each year.

This study will not be limited by the form of the questionnaire, using electronic questionnaire form, the investigator distributed the questionnaire in electronic form. For the sake of convenience, the five-point Likert scale is considered advantageous for respondents to clearly express their perceptions and quickly complete the questionnaire, although this approach may lack the rigor of other methods. this study uses independent sample T test, one-way analysis of variance (ANOVA) and multistage regression to analyses descriptive and extrapolated statistics. The next chapter will perform data analysis on the collected data.

3. Results and Analysis

Research Questions

RQ1: What is the level of learning motivation among different grades of the college students in Shandong, China?
RQ2: What is the difference in the learning motivation between male and female among college students in Shandong, China?
RQ3: What is the difference in the learning motivation between the different years of study (1st. year to 4th. Year) among college students in Shandong, China?
RQ4: What is the relationship between learning motivation and family-student relationship among college students in Shandong, China?
RQ5: What is the relationship between learning motivation and teacher-student relationship among college students in Shandong, China?
RQ6: How to enhance learning motivation among college students in Shandong, China?

Hypothesis Testing

Hypotheses 1: The learning motivation of college students in Shandong, China is relatively low.

Hypotheses 2: There is a difference in learning motivation of male and female among college students in Shandong, China.
Hypotheses 3: There is a difference in learning motivation of different years among college students in Shandong, China.
Hypotheses 4: Family-student relationship is significantly positive on students' learning motivation.
Hypotheses 5: Teacher-student relationship is significantly positive on students' learning motivation.

Demographic Analysis

The response rate in a research study is a critical indicator of the effectiveness of data collection efforts and can significantly impact the study's validity and generalizability of findings. In this study, a total of 424 questionnaires were distributed, but only 402 were deemed valid. This discrepancy between the number of distributed and valid questionnaires is an essential aspect of the research process and warrants careful consideration. Response Rate = (Number of Valid Responses / Total Questionnaires Distributed) * 100. Response Rate = (402/ 424) * 100 ≈ 94.81%. The response rate of approximately 94.81% is noteworthy and reflects a relatively high level of engagement from the study participants. In academic research, response rates above 70% are generally considered excellent, indicating that the sample obtained is likely to be representative of the population being studied.

The demographic profile is as follows in Table 1:

Table 1: Demographic Profile

Demographic Category	Frequency	Percentage
Gender Group		
Male	206	51.24%
Female	196	48.76%
Year Group		
First Year	99	24.63
Second Year	101	25.12
Third Year	100	24.88
Fourth Year	102	25.37
College Group		
Qilu Normal College	168	41.79
Shandong Women College	143	35.57
Jinan Preschool Education College	91	22.64

Variables are studied by descriptive statistical methods. Descriptive Statistics for Variables The purpose of descriptive statistics is to provide a summary of the key statistical measures for the various variables included in the study. The table provides readers with a comprehensive overview of the central trends, changes, and distribution of data collected from respondents at three colleges in Shandong, including Qilu Normal College, Shandong Women College, and Jinan Preschool Normal College. Descriptive statistics are an essential initial step in data analysis and interpretation to help researchers and readers understand the characteristics and patterns in a dataset.

Validity Test and Reliability

In this essay, researcher will delve into the intricate world of validity testing, exploring its various forms, the importance of each type, and its significance in upholding the credibility of research findings. Construct-validity: usually verified using "confirmatory factor analysis", that is, the analysis of the item through confirmatory factor analysis, if the output shows that the correspondence between the item and the variable is basically the same as expected, the construct validity is good. Convergence validity: a key component of construct validity, which focuses on demonstrating that different measures or indicators of the same construct are positively correlated. Discriminative validity: emphasizing that measures that should not be of the same factor are not under the same factor. Discriminative validity is measured using AVE values compared to correlated analysis results, etc. Through the measurement and analysis of 21 domains, including learning motivation, family-student relationship and teacher-student relationship, the construct validity, convergence validity and discriminative validity were all qualified. Therefore, the questionnaire passed the validity test, providing a solid foundation for subsequent data analysis and interpretation.

Reliability is a fundamental concept in research, particularly in the realm of quantitative analysis and measurement. Cronbach's Alpha is a statistical measure of the internal consistency of measurement tools, and is often used to assess the reliability of data collection tools such as questionnaires. Coefficients range from 0 to 1, with a score greater than 0.7 generally indicating good confidence. The calculation involves the correlation between questions and the variance of the overall score, which can be used to judge the reliability of data analysis. Through the measurement and analysis of 21 domains, including learning motivation, family-student relationship and teacher-student relationship, the reliability of the relationship was qualified. Therefore, the questionnaire passed the reliability test.

Research Questions Results and Discussion

RQ1 and H1

Research Question 1: What is the level of learning motivation among different grades of the college students in Shandong, China?
Hypothesis 1: The learning motivation of college students in Shandong, China is relatively low.

Table 2: Basic Indicator Data to Learning Motivation

Name	Minimum	Maximum	Average Value	Standard Deviation
Intrinsic motivation	1	5	2.869	1.041
Extrinsic motivation	1	5	2.848	1.031
Achievement motivation	1	5	2.78	1.008
Self-efficacy	1	5	2.869	1.052
Goal-oriented	1	5	2.82	1.053
Interest and enjoyment	1	5	2.854	1.049
Academic self-concept	1	5	2.761	1.035

From the perspective of basic index data, the average value of intrinsic motivation, extrinsic motivation, achievement motivation and other dimensions related to learning motivation is below 3 that the learning motivation of college students in Shandong Province is relatively low.
Li Yufei (2024) mentioned that Shandong is a major province in education, and in recent years, the province has always put education in a strategic position of priority development,

promoting education to be strengthened in reform and developed in innovation, and its comprehensive strength has reached a new level. In order to provide a detailed inquiry into the level of learning motivation of college students in Shandong, China, the results of Hypothesis 1 (H1) are moderated by learning motivation and provide a detailed investigation.

RQ2 and H2

Research Question 2: What is the difference in the learning motivation between male and female among college students in Shandong, China?
Hypothesis 2: There is a difference in learning motivation of male and female among college students in Shandong, China.

Table 3: T-Test Results of Gender Difference in Learning Motivation

	Your gender: (mean ± standard deviation)		t	p
	male(n=200)	female(n=202)		
Intrinsic motivation	2.75±1.01	2.99±1.06	-2.397	0.017*
Extrinsic motivation	2.74±0.99	2.95±1.06	-2.031	0.043*
Achievement motivation	2.66±1.00	2.90±1.00	2.373	0.018*
Self-efficacy	2.69±1.02	3.04±1.06	-3.410	0.001**
Goal-oriented	2.67±1.00	2.97±1.08	-2.885	0.004**
Interest and enjoyment	2.67±0.99	3.04±1.07	-3.649	0.000**
Academic self-concept	2.60±0.98	2.92±1.06	-3.093	0.002**
Learning motivation	2.68±0.68	2.97±0.82	-3.858	0.000**

* p<0.05 ** p<0.01

In each index, the mean value of women was higher than that of men, and the p-values of the t-test were all less than 0.05 and some were less than 0.01, indicating that the difference was statistically significant, which strongly supported the hypothesis that there was a difference in learning motivation between men and women in Shandong Province, China.

Nindya, *et al.* (2024) stated that the data show that there are obvious differences in the learning motivation of Chinese college students in Shandong Province of different genders, and the learning motivation of women is generally higher than that of men. Some studies have found that women may be more motivated to learn than men. Lu Wanhui (2023) and Tian Feng (2023) mentioned that gender difference is an important topic in the field of science and sociology of science, which has received great attention from all walks of life and has been studied in depth.

RQ3 and H3

Research Question 3: What is the difference in the learning motivation between the different years of study (1st. year to 4th. Year) among college students in Shandong, China?
Hypothesis 3: There is a difference in learning motivation of different years among college students in Shandong, China.

Table 4: ANOVA results to Different Years

	First Year (n=106)	Second Year (n=102)	Third Year (n=82)	Fourth Year (n=112)		
Intrinsic motivation	2.52±1.03	2.73±0.99	2.82±0.91	3.37±1.01	14.581	0.000**
Extrinsic motivation	2.54±1.00	2.65±0.93	2.96±1.00	3.23±1.05	10.600	0.000**
Achievement	2.57±0.96	2.64±0.98	2.66±0.89	3.20±1.04	9.859	0.000**

motivation						
Self-efficacy	2.58±1.05	2.66±0.97	2.91±0.98	3.30±1.05	11.145	0.000**
Goal-oriented	2.53±1.00	2.56±0.92	2.88±1.01	3.28±1.08	12.934	0.000**
Interest and enjoyment	2.66±1.06	2.63±0.98	2.78±0.96	3.30±1.04	10.468	0.000**
Academic self-concept	2.40±0.94	2.64±0.96	2.80±1.00	3.18±1.07	11.834	0.000**
Motivation to learn	2.54±0.73	2.64±0.68	2.83±0.60	3.27±0.81	21.886	0.000**

* p<0.05 ** p<0.01

The results of ANOVA showed that there were extremely significant differences between different college stages in intrinsic motivation, extrinsic motivation, achievement motivation and other aspects (all P values were 0.000, P<0.01).

First-year college students may be motivated to learn because of scholarships and parents' expectations of these external adjustments, and participate in school club activities for comprehensive test scores. In the second year of college, the external adjustment may turn into intrinsic motivation, and they may choose advanced courses because they like a certain major, and they may have a strong motivation to study because they like a certain course. Third-year college students are more externally goal-oriented, and are faced with the choice of continuing to study for a master's degree or finding a job. Students who choose to continue their studies to obtain a master's degree will face great study pressure to cope with the exam, and students who choose employment will have to study and practice intensively for the job exam. In the fourth year of college, in the face of the dual pressure of graduation exams and further studies or work, and at the same time developing a subject identity, under the dual relationships of external pressure and internal motivation, the learning motivation of fourth-year college students may reach the highest value.

RQ4 and H4

Research Question 4: What is the relationship between learning motivation and family-student relationship among college students in Shandong, China?
Hypothesis 4: Family-student relationship is significantly positive on students' learning motivation.

Table 5: Linear regression analysis results (n=402) to family-student relationship

	Non-normalized coefficients		Normalization factor	t	p	Collinearity diagnosis	
	B	Standard error	Beta			VIF	Tolerance
Constant	-0.597	0.089	-	-6.670	0.000**	-	-
Communicate	0.127	0.016	0.187	7.754	0.000**	1.342	0.745
Emotional support	0.097	0.017	0.125	5.853	0.000**	1.045	0.957
Parental involvement	0.152	0.017	0.236	9.009	0.000**	1.587	0.630
Parental expectations	0.144	0.016	0.213	8.780	0.000**	1.365	0.733
Academic support	0.135	0.016	0.204	8.700	0.000**	1.268	0.789
Parental involvement in decision-making	0.131	0.017	0.192	7.573	0.000**	1.478	0.677
Family-School Collaboration	0.159	0.017	0.233	9.058	0.000**	1.533	0.652
R 2			0.829				
adjust R 2			0.826				
F			F (7,394) =273.734, p=0.000				

Note: Dependent variable = learning motivation

According to the results of linear regression analysis of college students in Shandong, China, the family-student relationship has a significant positive relationship on college students' learning motivation. If the home environment is supportive, students may be more intrinsically motivated to learn, while a high-pressure home environment may cause anxiety and weaken students' motivation to learn. At the same time, different theoretical models need to be considered. For example, self-determination theory, emphasis on autonomy, competency, etc., can be related to learning motivation. Families, if they meet these needs, may promote student motivation to learn. At the same time, the daily behaviour of parents may have a role model relationship on students, correlate with students' learning motivation, and the academic level of parents may have a certain degree of assistance to students' learning, which may promote students' learning motivation.

RQ5 and H5

Research Question 5: What is the relationship between learning motivation and teacher-student relationship among college students in Shandong, China?
Hypothesis 5: Teacher-student relationship is significantly positive on students' learning motivation.

Table 6: Linear regression analysis results to teacher-student relationship

	Non-normalized coefficients		Normalization factor	*t*	*p*	Colinearity diagnosis	
	B	**Standard error**	***Beta***			**VI**	**Tolerance**
Constant	-1.579	0.124	-	12.698	0.000**	-	-
Communication and listening skills	0.157	0.019	0.210	8.410	0.000**	1.137	0.880
Support and encouragement	0.172	0.021	0.218	8.026	0.000**	1.343	0.744
Fairness and respect	0.157	0.019	0.216	8.267	0.000**	1.242	0.805
Emotional support	0.191	0.021	0.237	9.071	0.000**	1.235	0.810
Autonomy and independence	0.133	0.022	0.176	6.144	0.000**	1.490	0.671
Pedagogical support	0.239	0.023	0.278	10.241	0.000**	1.341	0.746
Relationship satisfaction	0.102	0.022	0.115	4.560	0.000**	1.150	0.870
R 2	0.783						
adjust R 2	0.779						
F	F (7,394) =202.968, p=0.000						
D-W value	-1.579						

Note: Dependent variable = learning motivation
* p<0.05 ** p<0.01

According to the results of linear regression analysis, the teacher-student relationship has a significant positive relationship on the learning motivation of college students in Shandong, China. In this study, 7 factors were considered, Communication and Listening Skills, Support and Encouragement, Fairness and Respect, Emotional Support, Autonomy and Independence, Teaching Support, Relationship Satisfaction. In the teacher-student relationship, the supportive teacher relationship stimulates students' motivation to learn by satisfying students' sense of autonomy, competence, and relevance. Emotional support from teachers may

increase student engagement in the classroom. Teachers should pay attention to the construction of academic identity, and teachers, as role models and career guides, need to help students form academic identity and career vision. In any case, there are still limitations to the factors that are considered, and the relevant factors may also include the frequency of teacher-student interaction, teachers' feedback patterns, career development suggestions, etc. Figueiredo, J., *et al.* (2024) mentioned that students in different majors have different motivations for learning in their respective majors. Therefore, the learning motivation of students in different majors cannot be generalized, and it is relatively easy to maintain students' learning motivation for majors with moderate difficulty and a certain degree of interest.

RQ6

Research Question 6: How to enhance learning motivation among college students in Shandong, China?

Structural Equation Modeling (SEM) is a statistical method that analyses complex relationships between multiple variables at once. The biggest feature of SEM is that it analyses the complex relationships between different variables as a whole, helping to understand the exercises between data more comprehensively. The questionnaire consisted of 3 variables, each containing 7 domains, and each domain containing 4 questions. There are 3 variables, 21 domains, and 84 questions. The researchers obtained raw data from 424 respondents, using stratified sampling techniques.

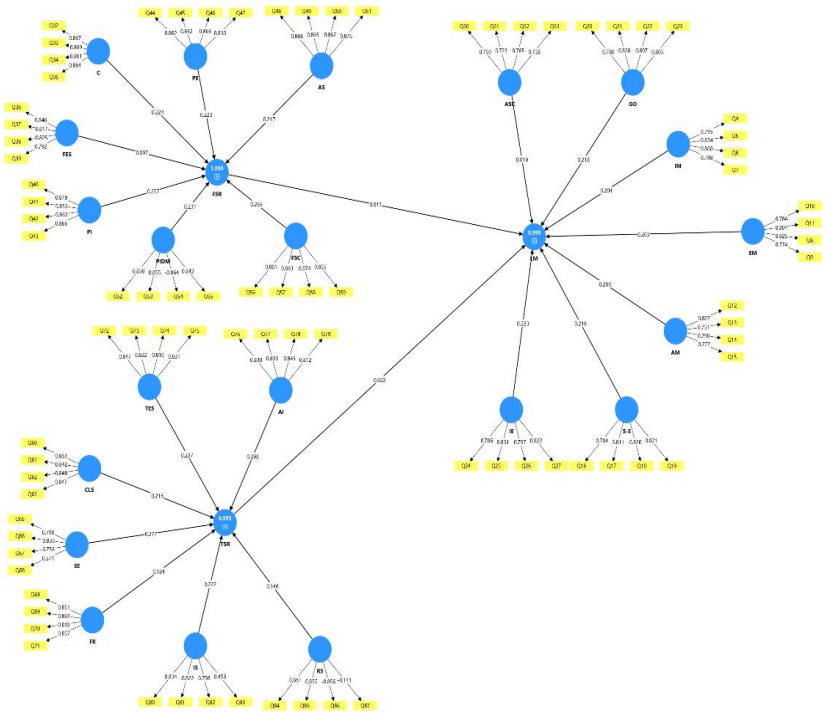

Figure 3: Structural Equation of the Relationship between FSR and TSR

Structural Equation Modeling (SEM) is implemented with Smart PLS4 and the data for each problem is embodied in Figure 3. Data showed that the 7 domains of family-student relationship, communication, emotional support, parental involvement, parental expectations, academic support, parental involvement in decision-making, and family-school collaboration were positively correlated with learning motivation. Data show that the 7 domains of teacher-

student relationships, communication and listening skills, support and encouragement, fairness and respect, emotional support, autonomy and independence, instructional support, and relationship satisfaction are positively correlated with learning motivation.

4. Findings, Discussion and Conclusion

Findings Summary and Discussions

Research Objective 1: To identify the level of learning motivation among the college students of different grades in Shandong, China.

The current situation of RO1 shows the current situation of learning motivation of college students in Shandong, and also indirectly reflects the current situation of education in Shandong and the problems in the implementation of education in various universities in Shandong at the college stage when leadership and autocracy are more relaxed. The results of this study highlight the need to consider the adaptability of cultural and educational dynamics in the low learning status of college students in Shandong, China. This analysis not only contributes to academic discussions on educational leadership, families, and teachers' motivation for student learning, but also provides practical insights for educational administrators, families, and teachers in Shandong and similar contexts in China.

Research Objective 2: To compare learning motivation of male and female among college students in Shandong, China.

The findings in this research show a similarity with Yu, *et al.* (2022) who did the research in Spain and the United Kingdom, women performed significantly better than men. Traditional expectations of men and women in academic settings relationship the way they approach learning. In terms of self-improvement needs, many women want to change their destiny through education, or pursue their personal interests and ideals through education, this idea is also an extension of goal-oriented theory, and this internal motivation also motivates them to study harder. Compared to women, some men may have high expectations of men due to social stereotypes, and some men may be confused by society's traditional expectations of men and do not know how to balance personal interests and career success, which can lead to a decline in men's motivation to learn.

Research Objective 3: To compare the learning motivation of students from different years (1st. year to 4th. Year) among college students in Shandong, China.

First-year college students need to adapt to a new environment, participate in military training, attend daily classes, and test their academic performance. First-year students are also required to participate in at least one club and student union. Students in their second year of college are in the period of foundation consolidation. In the second year of college, some students begin to think about future career directions, which further enhances their motivation to study. Students in their third year of college are in a critical decision-making period. Under the guidance and communication of parents and teachers, the future development plan will be put on the agenda in the third year of college. The results of the data show that the learning motivation of third-year college students is further strengthened. Fourth-year college students are in the testing phase. In addition to completing the academic results stipulated by the college, you need to prepare for the graduation examination and thesis defence that you need to complete for college graduation, and in this process, you need to choose the topic and complete the thesis writing with the college supervisor in advance. The results of the data show that the learning motivation of fourth-year college students is the highest among the four grades.

Research Objective 4: To investigate family-student relationship to the learning motivation among college students' learning motivation.
Zhang Xiaoyi (2024) and Huang Ximo (2024) mentioned in the study that in addition to the fact that family economic difficulties do not have a predictive relationship on the dimension of self-control, family-related factors such as family structure, family-student relationship, parenting style, family atmosphere, and family economic difficulties all have a predictive relationship on positive psychological quality. Parents need to understand their children's psychological activities and psychological state as college students, as college students, they hope that they can be completely independent, they hope to have their own independent space and privacy, they hope that they can move freely, and they hope that parents can interfere and control themselves less. With such psychological construction, parents can communicate relationship with college students, support the hobbies and meaningful ideas of the children as college students, improve personal cognition to shorten the psychological distance with the children, and put forward reasonable and scientific opinions and suggestions on the shortcomings of the children. College students have a relatively heavy academic load, and at the same time, they are under pressure to find employment or obtain a master's degree.

Research Objective 5: To investigate teacher-student relationship to the learning motivation among college students' learning motivation.
Tang Ying (2023) and Li Fei (2023) mentioned that the understanding teacher-student relationship has an important relationship on improving the quality of college education and promoting the level of college teaching. Establishing a good teacher-student relationship requires both teachers and students to have role awareness and role norms, which puts forward reasonable requirements for teachers' communication skills. Teachers should respect the individuality and innovation of college students, accept the learning ability and exploration spirit of college students, and encourage each student to express his or her own views and ideas. At the same time, it should treat every student squarely, and treat every college student with independent thinking in adulthood equally and fairly. This puts forward reasonable requirements for teachers' keen political literacy and high level of educational theory.

Research Objective 6: To propose strategies in enhancing learning motivation among college students in Shandong, China.
First, promote local cultural characteristics, deepen value guidance and cultural infiltration, and stimulate the inner identity of college students. Second, the role of parents should be included in the system to improve the learning motivation of college students in Shandong. Third, schools and teachers recommend education and teaching reforms to improve the attractiveness and the relationship of learning. Fourth, policymakers and school administrators need to strengthen institutional safeguards and incentive mechanisms.

Theoretical Implications
Goal-oriented theory emphasizes the motivating relationship of clear and challenging goals on individual behaviour and performance. College students may be mastery goal students (who want to learn knowledge well), performance goal students (who want to get high scores), or they may have both mastery and performance goals (they want to learn knowledge well and get high scores).

Self-determination theory reveals the essential characteristics of learning motivation, and the real motivation comes from students' independent construction of learning meaning. As educators, including school leaders, school policymakers, and teachers, roles should shift

from those of controllers to those of champions. Let college students experience a sense of control in independent choice, let college students accumulate a sense of efficacy through small successes, and let college students find a sense of belonging in supportive relationships.

Value theory provides a clear framework for understanding learning motivation: motivation = belief in success (expectation) + belief in what is worth doing (value). Educators can stimulate the learning motivation of college students by enhancing students' self-efficacy, putting the meaning of learning in an obvious position, and reducing the psychological cost. At the same time, in practical application, it is necessary to be individualized, taking into account short-term goals and long-term development, and ultimately help students form independent and lasting learning motivation.

Family system theory, such as parents passing on pressure to students, parents passing on expectations to students, and parents giving academic support to students, may affect college students' perception of learning, and thus affect college students' learning motivation. Secondly, in families with a high degree of self-differentiation, there are both connections and individuality among family members, and such an environment may promote the learning autonomy and initiative of college students, thereby enhancing the learning motivation of college students.

Social learning theory, by observing the consequences of their behaviour, college students adjust their behaviour, and the experience of others will become the motivation for their own learning, which in turn will affect their learning motivation. College students self-evaluate and regulate their behaviours based on their own internal standards, and through self-evaluation, they may have a relationship on their learning motivation. At the college level, college students already have independent thinking and independent academic ability, and through cognitive processing, college students will actively choose objects and behaviour patterns that they can imitate, so as to stimulate their personal interest and motivation for learning.

Implications

(1) Reasonable teaching strategies can increase the learning motivation of college students.
By providing challenging learning tasks and competition opportunities, the school makes college students feel a sense of competence and achievement, and enhances their self-worth. Guide students to establish positive interpersonal relationships, including teacher-student relationships, classmate relationships, etc., strengthen relationship communication and listening skills among members of various relationships, and let college students feel the support and care from teachers, so as to enhance their learning motivation.

(2) Parents and teachers can set clear and specific goals for college students, which can stimulate college students' learning initiative.
Parents and students regularly receive feedback from students and make relationship adjustments to the current learning status and learning methods of college students. Individuals should be involved in the goal setting of academic goals and future career planning, and the appropriate participation of parents, parents' participation in decision-making, as well as teachers' listening skills and teachers' teaching support will have a positive relationship on college students' willingness to implement and sense of responsibility.

Novelty of Research

(1) Geographical focus and cultural specificity.
(2) In-depth analysis of the relationships between variables.
(3) Application and Integration of Western Theory and Shandong Context.

Future Research

(1) In the specific context of Shandong, the correlation between the uniqueness of Shandong education and the learning motivation of college students. In order to prevent the one-sidedness of the study, region-specific factors need to be considered. Previous studies on college students' learning motivation have covered the most common motivations such as employment pressure, family expectations, and personal interests. Future research needs to look for regional factors unique to Shandong, such as regional economic characteristics, cultural background, or policy factors.
(2) In the digital age, social structural changes, policy and educational interventions have reshaped the family-student relationship. In the discussion of home-student relationship, it is necessary to consider the relevant role of the digital age on home-students. Social media and video calls have become the main medium of communication between college students and their parents, and it is worth studying whether such interaction patterns will have a close-knit relationship on the family-student relationship.
(3) The role of technological reconstruction, social transformation, and cross-cultural comparison in reshaping the teacher-student relationship. With the rapid development of information technology, the development of AI intelligence has brought new experiences and challenges to the teacher-student relationship.
(4) The in-depth construction of family-student relationship and teacher-student relationship in relevant education systems. Relevant education policies can formulate a statutory home-school communication platform, and implement the legalization of "home-school interaction day", such as a fixed time every month, set as a statutory home-school communication day, and require colleges and universities to open their classrooms, so that parents can also observe the learning status of college students at the college level.
(5) Institutional safeguards for the relevant education system and school administrators at the leadership level. The maintenance of healthy relationships between family-students, teachers, students, and home-school relationships may require policy safeguards at the leadership level of relevant education systems and school administrators.
(6) Construct a new model of family-school cooperation in colleges.

5. Conclusion

In conclusion, the study has been completed and the goal has been achieved. The researchers provide an important summary of the results and show how the goals were achieved and how the past literature on the topic supports the research hypothesis. A discussion of the results shows that most of the hypotheses are consistent with previous studies. There is a general direction for future research directions. In the digital age, social structural changes, policy and educational interventions have reshaped the family-student relationship and teacher-student relationship.

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Conflict of Interest Statement (Mandatory)

The authors declare that there is no conflict of interest regarding the publication of this study.

References

Li Yufei (2024-12-24). The construction of a strong education province in Shandong has entered a new stage. United Daily, 003.

Nindya, S. A., Aridah, A., Iswari, W. P., Rusmawaty, D. (2024). Do Gender and School Accreditation Affect Motivation?. New Language Dimensions, 5(2), 102-114.

Lu Wanhui & Tian Feng. (2023). Research on the Gender Structure of Scholars in the Field of Humanities and Social Sciences in China. Journal of Jiangsu College (Social Sciences) (05),113-124. doi: 10.13317/j.cnki.jdskxb.2023.050.

Figueiredo, J., García-Peñalvo, F. J. (2024). Design science research applied to difficulties of teaching and learning initial programming. Universal Access in the Information Society, 23(3), 1151-1161.

Lu Wanhui, Tian Feng. (2023). Research on the Gender Structure of Scholars in the Field of Humanities and Social Sciences in China. Journal of Jiangsu College (Social Sciences) (05),113-124. doi: 10.13317/j.cnki.jdskxb.2023.050.

Yu, Z., Deng, X. (2022). A meta-analysis of gender differences in e-learners' self-efficacy, satisfaction, motivation, attitude, and performance across the world. Frontiers in Psychology, 13, 897327.

Zhang Xiaoyi,Huang Ximo. (2024). The relationship between the development status of positive psychological quality and family-related factors in college students. Campus Psychology (06), 482-487. doi: 10.19521/j.cnki.1673-1662.2024.06.004.

Tang Ying & Li Fei. (2023). The Difficulty and Dimension of Solving the Construction of Comprehension Teacher-Student Relationship in the College Field. Higher Education Forum (08), 57-61. doi: CNKI:SUN:GGJY.0.2023-08-014.