Analysis of the Influencing Factors of Higher Vocational Students' Learning Ability in the Information Age

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Abstracts*

Learning ability is an important indicator to measure whether a person can better deal with the development characteristics and situation of the Times, including information, knowledge update and post change, and plays an important role in the growth and development of contemporary vocational college students. This paper takes contemporary vocational college students as the research object, based on the theoretical basis and analysis in the early stage, and discusses the important influence on learning ability from four factors, such as learning habit, learning motivation, learning environment and learning attitude.

After research and analysis, it is found that there are different positive relations between the four influencing factors of learning ability and learning ability, and the significant degree of influence is: learning motivation, learning habit, learning environment and learning attitude.

Keywords: Higher Vocational Students; Learning Ability; Influencing Factors

Introduction

The emergence and popularization of computers has brought human society into the information age. The information age with information technology as the core and supported by high technology as the support has had a huge impact on people's social life and study (Ruan Xiaofang, 2016 : 54). With the development of the information age, the concept of "lifelong learning" has been continuously popularized, and it has become an important concept to enhance the comprehensive competitiveness of individuals and even the country. As an important concept to improve individual and national competitiveness, lifelong learning has had a profound impact on the development of the information age. The UNESCO (UNESCO, 2015) Declaration sets out the goals of global education development, emphasizing the importance of lifelong learning to meet the challenges of the 21st century. The European Commission memorandum highlighted lifelong learning as a key factor in improving individual and national competitiveness (European Commission, 2000).

The Times are developing, information is updating, learning is continuing, and talent is being eliminated. Sang Xinmin (2004 : 41) believes that it is more important to change the learning style and improve the learning ability than to change the technology. Sun Jianzhao (2022 : 160-171) proposed that it is more important for college students to master self-study ability in school than to acquire knowledge. We only have a strong learning ability as the support, only a strong learning adaptability as the basis of the ability, can be invincible. So

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vocational students also must have strong learning ability, with strong adapt to learning, learn to learn, active learning, innovation learning ability, to grow up to meet the demand of national economic development innovation skilled talents, to have for the future professional learning ability, to better cope with information, knowledge update fast, post change fast era development characteristics and situation.

Research Objective

This paper takes contemporary vocational college students as the research object, based on the theoretical basis and analysis in the early stage, and discusses the important influence on learning ability from four factors, such as learning habit, learning motivation, learning environment and learning attitude.

Literature Review

According to the early stage of higher vocational college students 'learning factors, index system and analysis of the elements of higher vocational college students' learning ability measurement scale, using Likert five scale method of higher vocational college students 'learning ability influence factors and learning ability of questionnaire survey and analysis, inquiry learning habits, learning motivation, learning environment and learning attitude of four factors such as important influence on higher vocational college students' learning ability.

According to the theoretical combing and construction in the early stage, the influencing factors of learning ability mainly include four aspects: learning habit, learning motivation, learning environment and learning attitude. According to the theoretical model of learning ability components of higher vocational students constructed in the early stage, learning motivation, learning perseverance, learning ability and learning adaptability are established as the constituent elements of learning ability. Among them, learning motivation is divided into two dimensions: internal needs and external needs. Learning perseverance is composed of three dimensions: learning confidence, learning self-control and learning willpower. Learning ability and learning ability are different concepts. Chen zhong (2011 : 76-79) and Wang Zhongkun (2010 : 64-65) in the early study discusses the concept of learning ability, wang fei and Zhang Yan (2018 : 65-73) think, learning is the use of knowledge and practical experience, in learning activities, support students keep learning, learning goals or achieve new energy of comprehensive elements of the system. This paper holds that learning ability is a kind of comprehensive ability, is a sustainable competitiveness, including learning ability, focusing on the ability to create and regenerate knowledge. In the narrow sense, it mainly refers to the learning ability of individuals (students), which is the dynamic development process of acquiring knowledge, reorganizing knowledge and updating knowledge, creating new knowledge, applying and transforming new knowledge and new skills, reproducing new knowledge, reorganizing new knowledge and updating knowledge, and creating new knowledge... thus constantly changing the spiral of life, work and learning ability. The learning ability is more specific, focusing on the ability to apply what you learn in understanding and practical activities, that is, the ability to learn, which is mainly reflected in the three dimensions of information technology ability, learning transformation ability and learning cooperation. Learning adaptability is composed of two dimensions of learning environment adaptability and professional adaptability.

Research Method

This paper takes contemporary vocational college students as the research object, based on the theoretical basis and analysis in the early stage, and discusses the important influence on learning ability from four factors, such as learning habit, learning motivation, learning environment and learning attitude.

In order to understand the factors affecting the development of higher vocational learning ability, this study will use SPSS 25 statistical analysis software for higher vocational learning ability influence factors of the questionnaire data sorting and analysis, specific using descriptive analysis, from learning motivation, learning habits, learning environment and learning attitude four dimensions data statistics.

Research Results

According to the average and ranking data of all dimensions in Table 1, it is found that the average values of learning motivation and learning habit are 4.07 and 4.03, and the average values of learning environment and learning attitude are 3. 94 and 3. 89, less than 4.0, the average and close to good; the average ranking of learning ability is learning motivation, learning habit, learning environment and learning attitude.

Table 1 General analysis of the influencing factors of the learning ability of higher vocational students

	N	mean	standard deviations	R
academic motivation	516	4.07	0.63	1
study habit	516	4.03	0.66	2
academic environment	516	3.94	0.66	3
attitude to learning	516	3.89	0.59	4

In order to understand the higher vocational students believe that the specific distribution of learning factors group, this study using SPSS 25 statistical analysis software to describe the frequency analysis, the following table 2 data shows that learning motivation influence learning groups, in a good and above level of learners accounted for 83.14%, in the average level of learners accounted for 15.70%, in the general level of learners group accounted for 1.17%. For the group believing that learning habits affect learning ability, 79.27% were learners at the good or above level, 19.38% were learners at the middle general level, and 1.16% were learners below the general level. For the group that learning environment affects learning ability, 75.39% are learners at good or above level, 24.22% at medium i. e. average level, and 0.39% at below. For the group that learning attitude affects learning ability, 74.80% are learners at the good or above level, 23.64% are learners at the middle or general level, and 1.35% are learners below the general level

Table 2 Frequency distribution analysis of influencing factors of learning ability of higher vocational students

influencing factor	population	number of people	percentage (%)
academic motivation	.54 <X 5 is very good	127	24.61%
	3.5 <X 4 is better.5	302	58.53%
	2.5 <X 3 in general.5	81	15.70%
	1.5 <X 2 is worse.5	4	0.78%
	.5 1 <X 1 is very poor	2	0.39%
study habit	.54 <X 5 is very good	110	21.32%
	3.5 <X 4 is better.5	299	57.95%
	2.5 <X 3 in general.5	100	19.38%
	1.5 <X 2 is worse.5	5	0.97%
	.5 1 <X 1 is very poor	1	0.19%
academic environment	.54 <X 5 is very good	81	15.70%
	3.5 <X 4 is better.5	308	59.69%
	2.5 <X 3 in general.5	125	24.22%
	1.5 <X 2 is worse.5	2	0.39%
	.5 1 <X 1 is very poor	0	0.00%
attitude to learning	.54 <X 5 is very good	96	18.60%
	3.5 <X 4 is better.5	290	56.20%
	2.5 <X 3 in general.5	122	23.64%
	1.5 <X 2 is worse.5	6	1.16%
	.5 1 <X 1 is very poor	1	0.19%

Analysis of the influencing factors and learning ability of higher vocational students

In this study, SPSS 25 statistical analysis software was used to analyze the correlation between the four influencing factors and the learning ability of higher vocational students, The results of the data analysis are shown in Table 3 below, From the data shown in the table, The correlation coefficients between learning motivation and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.692,0.661,0.635,0.628, The correlation coefficients between learning perseverance and the factors affecting learning motivation, learning habit, learning environment and learning attitude were 0.755,0.722,0.656, and 0.597, The correlation coefficients between learning ability and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.829,0.826,0.738, and 0.679, The correlation coefficients between learning adaptability and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.818,0.793,0.772 and 0.713, The correlation coefficients between learning ability and the influencing factors were between 0-1, Moreover, the significance P value between learning ability and each influencing factor is less than 0.01, The results indicate that there is a very significant positive correlation between learning motivation, learning perseverance, learning ability, and learning adaptability and all the

influencing factors.

Table 3 Correlation analysis between influencing factors and learning ability

influencing factor dimension	Learning motivation	Learning perseverance	learning ability	Learn to adapt	academic motivation	study habit	academic environment	attitude to learning
Learning motivation	1							
Learning perseverance	0.740**	1						
learning ability	0.739**	0.854**	1					
Learn to adapt	0.696**	0.742**	0.828**	1				
academic motivation	0.692**	0.755**	0.829**	0.818**	1			
study habit	0.661**	0.722**	0.826**	0.793**	0.661**	1		
academic environment	0.635**	0.656**	0.738**	0.772**	0.635**	0.656**	1	
attitude to learning	0.628**	0.597**	0.679**	0.713**	0.628**	0.597**	0.679**	1

**. At the 0.01 level (two-tailed), the correlation was significant.

Correlation analysis of the influencing factors of learning ability and learning motivation of higher vocational students

This section further analyzes the correlation between two specific elements in learning motivation and the influencing factors, By using SPSS 25 statistical analysis software, external needs, learning motivation, learning habits, learning factors, learning environment and learning attitude, The results of the data analysis are shown in Table 4 below, From the data shown in the table, The correlation coefficients between internal needs and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.591,0.592,0.565 and 0.569, The correlation coefficients between external needs and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.708,0.651,0.628 and 0.611, The correlation coefficients between learning motivation and each influencing factor were all between 0-1, Moreover, the significance P value between learning motivation and each influencing factor is less than 0.01, The results indicate a very significant positive correlation between internal needs in learning motivation and external demand and each influencing factor.

Table 4 Correlation analysis of factors influencing factors and learning motivation

Dimensions of influencing factors	Internal need	external need	academic motivation	study habit	academic environment	attitude to learning
Internal need	1					
external need	0.771**	1				
academic motivation	0.591**	0.708**	1			
study habit	0.592**	0.651**	0.651**	1		
academic environment	0.565**	0.628**	0.628**	0.628**	1	
attitude to learning	0.569**	0.611**	0.611**	0.611**	0.611**	1

**. At the 0.01 level (two-tailed), the correlation was significant.

Related analysis of the influencing factors of learning ability and learning perseverance of higher vocational students

This section further analyzes the correlation between three specific elements of learning perseverance and influencing factors, Specifically through the use of SPSS 25 statistical analysis software to learn self-confidence, learning self-control, learning willpower and learning motivation, learning habits, learning environment, learning attitude four influencing factors correlation analysis, The results of the data analysis are shown in Table 5 below, From the data shown in the table, The correlation coefficients between learning confidence and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.653,0.622,0.565, and 0.528, The correlation coefficients between learning self-control and the influence factors of learning motivation, learning habit, learning environment and learning attitude were 0.693,0.670,0.592 and 0.544, The correlation coefficients between learning willpower and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.720,0.684,0.637 and 0.562, The correlation coefficients between learning perseverance and each influencing factor were all between 0-1, Moreover, the significance P value between learning perseverance and each influencing factor was less than 0.01, The results show that there is a very significant positive correlation between learning confidence, learning self-control, learning willpower and various influencing factors.

Table 5 Correlation analysis of influencing factors and learning perseverance

influencing factor dimension	Learn self-confidence	Learning self-control	Learning willpower	academic motivation	study habit	academic environment	attitude to learning
Learn self-confidence	1						
Learning self-control	0.738**	1					
Learning willpower	0.719**	0.788**	1				
academic motivation	0.653**	0.693**	0.720**	1			
study habit	0.622**	0.670**	0.684**	0.622**	1		
academic environment	0.565**	0.592**	0.637**	0.565**	0.592**	1	
attitude to learning	0.528**	0.544**	0.562**	0.528**	0.544**	0.562**	1

**. At the 0.01 level (two-tailed), the correlation was significant.

Correlation analysis of the influencing factors of learning ability and learning ability of higher vocational students

This section further analyzes the correlation between three specific elements in learning ability and influencing factors, Specifically, by using SPSS 25 statistical analysis software to analyze the information technology ability, learning transformation ability, learning cooperation ability and learning motivation, learning habit, learning environment, learning attitude, four influencing factors, The results of the data analysis are shown in Table 6 below, From the data shown in the table, The correlation coefficients between information technology ability and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.809,0.774,0.714 and 0.656, The correlation coefficients between learning transformation power and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.810,0.819,0.720 and 0.673, The correlation coefficients between learning cooperation and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.765,0.782,0.689 and 0.623, The correlation coefficients between learning ability and all influencing factors were all between 0-1, Moreover, the significance P value between learning ability and each influencing factor was less than 0.01, The results show that there is a very significant positive correlation between information technology ability, learning transformation ability and learning cooperation ability and various influencing factors.

Table 6 Correlation analysis of influencing factors and learning ability

Dimensions of influencing factors	Information technology capability	Learning transformation power	Learning cooperation	academic motivation	study habit	academic environment	attitude to learning
Information technology capability	1						
Learning transformation power	0.888**	1					
Learning cooperation	0.849**	0.894**	1				
academic motivation	0.809**	0.810**	0.765**	1			
study habit	0.774**	0.819**	0.782**	0.774**	1		
academic environment	0.714**	0.720**	0.689**	0.714**	0.720**	1	
attitude to learning	0.656**	0.673**	0.623**	0.656**	0.673**	0.623**	1

**. At the 0.01 level (two-tailed), the correlation was significant.

Correlation analysis of the influencing factors of learning ability and learning adaptability of higher vocational students

This section further analyzes the correlation between two specific elements in learning resilience and influencing factors, Specifically through the use of SPSS 25 statistical analysis software to the learning environment adaptability, career adaptability, learning motivation, learning habit, learning environment, learning attitude four influencing factors correlation analysis, The results of the data analysis are shown in Table 7 below, From the data shown in the table, The correlation coefficients between the adaptability of the learning environment and the influencing factors of learning motivation, learning habit, learning environment and learning attitude were 0.745,0.710,0.715,0.656, The correlation coefficients between occupational adaptability and the influencing factors of learning motivation, learning habit, learning environment, and learning attitude were 0.807,0.796,0.750, and 0.696, The correlation coefficients between learning resilience and each influential factor were all between 0-1, Moreover, the significance P value between learning resilience and each influencing factor is less than 0.01, The results show that there is a very significant positive correlation between the adaptability of learning environment, occupational adaptability and the influencing factors.

Table 7 Correlation analysis of influencing factors and learning resilience

Dimensions of influencing factors	Learning environment resilience	Professional adaptability	academic motivation	study habit	academic environment	attitude to learning
Learning environment resilience	1					
Professional adaptability	0.796**	1				
academic motivation	0.745**	0.807**	1			
study habit	0.710**	0.796**	0.710**	1		
academic environment	0.715**	0.750**	0.715**	0.715**	1	
attitude to learning	0.656**	0.696**	0.656**	0.656**	0.696**	1

**. At the 0.01 level (two-tailed), the correlation was significant.

Regression analysis of the influencing factors and learning ability of higher vocational students

According to the influence of the previous students learning factors and learning ability and the relevant analysis, the data results show that the four students learning factors and learning ability and specific dimensions are significant positive correlation, therefore, in order to further understand the four influence of students learning factors and learning ability and the specific dimensions, this part using SPSS 25 statistical analysis software for multiple linear regression analysis, vocational students data mining, analysis the key factors affecting the development of the students learning ability.

Learning motivation, learning habit, learning environment and learning attitude are taken as the independent variables, With the learning ability of higher vocational students as the dependent variable, The multiple linear regression analysis of the influencing factors and learning ability of higher vocational students, The results of the analysis are shown in Table 8 below, The model R2 value was 0.804, Less than 1, Showed that the model showed a good fit, Four influencing factors can explain 80.4% of the change in learning ability; next, The F value in the ANOVA was 524.972, p=0.000, Less than 0.001, It shows that at least one of the four influencing factors can significantly affect the learning ability of higher vocational students, The constructed model is meaningful, The model is overall significant; besides, The VIF values of the four influencing factors in this model were 2.754,4.115,4.292, and 3.213, respectively, All are less than 5, Suggesting that there are no multiple collinearity problems between the independent variables. The specific analysis of data found that learning motivation can significantly positively affect learning ability (β =0.463, p=0.000 <0.01), learning habits can significantly positively affect learning ability (β =0.281, p=0.000 <0.01), learning environment can significantly positively affect learning ability (β =0.090, p=0.009 <0.01), and learning attitude can not affect learning ability (β =0.017, p=0.583> 0.05). Finally, the regression equation that can be obtained between the independent variable and the dependent variable is: learning power =0.549 + 0.463 * learning motivation + 0.281 * learning habit + 0.090 * learning environment.

Table 8 Multiple Linear Regression Analysis of Impact Factors and Learning Ability of Higher Vocational Students (n =516)

model	Unstandardized coefficients		Standardization coefficient	t	conspicuousness	V IF	R^2	After the adjustment of R^2	F
	B	Standard error	Beta						
(constant)	0.549	0.077		7.152	0.000		0.804	0.803	F (4,511)=524.972, p=0.000
academic motivation	0.463	0.030	0.500	15.385	0.000	2.754			
study habit	0.281	0.033	0.340	8.557	0.000	4.115			
academic environment	0.090	0.034	0.107	2.636	0.009	4.292			
attitude to learning	0.017	0.031	0.019	0.550	0.583	3.213			

Dependent variable: learning ability
Durbin-Watson value: 1.969

Regression analysis of the influencing factors of learning ability and learning motivation of higher vocational students

In this part of the study takes four influencing factors of vocational students' learning ability are learning motivation, learning habits, learning environment and learning attitude as independent variables, With the learning motivation of higher vocational students as the dependent variable, The multiple linear regression analysis of the influencing factors of learning ability and learning motivation of higher vocational students, The results of the analysis are shown in Table 9 below, The model R2 value was 0.533, Less than 1, Showed that the model showed a good fit, Four influencing factors can explain 53.3% of the change in learning motivation; next, The F value in the ANOVA was 145.887, p=0.000, Less than 0.001, It shows that at least one of the four influencing factors can significantly affect the learning motivation of higher vocational students, The constructed model is meaningful, The model is overall significant; besides, The VIF values of the four influencing factors in this model were 2.754,4.115,4.292, and 3.213, respectively, All are less than 5, Suggesting that there are no multiple collinearity problems between the independent variables. The specific analysis of data found that learning motivation can significantly positively affect learning motivation (β =0.334, p=0.000 <0.01), learning habits can significantly positively affect learning motivation (β =0.141, p=0.003 <0.01), learning environment (β =0.059, p=0.230> 0.05), and learning attitude can significantly positively affect learning motivation (β =0.123, p=0.005 <0.01). Finally, the regression equation that can be obtained between the independent variable and the dependent variable is: learning motivation =1.298 + 0.334 * learning motivation + 0.141 * learning habit + 0.123 * learning attitude.

Table 9 Multiple Linear Regression Analysis of Learning Impact Factors and Learning Power (n =516)

model	Unstandardized coefficients		Standardization coefficient	t	conspicuousness	V IF	R^2	After the adjustment of R^2	F
	B	Standard error	Beta						
(constant)	1.298	0.110		11.786	0.000		0.533	0.529	F (4,511)=145.887, p=0.000
academic motivation	0.334	0.043	0.388	7.734	0.000	2.754			
study habit	0.141	0.047	0.184	2.996	0.003	4.115			
academic environment	0.059	0.049	0.075	1.201	0.230	4.292			
attitude to learning	0.123	0.044	0.152	2.803	0.005	3.213			

Dependent variable: learning motivation
Durbin-Watson value: 1.945

Regression analysis of the influencing factors of learning ability and learning perseverance for higher vocational students

In this part of the study takes four influencing factors of vocational students' learning ability are learning motivation, learning habits, learning environment and learning attitude as independent variables, With vocational students learning perseverance as the dependent variable, The multiple linear regression analysis of the influencing factors of learning ability and learning perseverance of higher vocational students, The results of the analysis are shown in Table 10 below, The model R2 value was 0.620, Less than 1, Showed that the model showed a good fit, Four influencing factors can explain 62.0% of the change in learning perseverance; next, The F value in the ANOVA was 208.113, p=0.000, Less than 0.001, It shows that at least one of the four influencing factors can significantly affect the learning perseverance of higher vocational students, The constructed model is meaningful, The model is overall significant; besides, The VIF values of the four influencing factors in this model were 2.754,4.115,4.292, and 3.213, respectively, All are less than 5, Suggesting that there are no multiple collinearity problems between the independent variables. The specific analysis of the data found that learning motivation could significantly positively affect learning perseverance (β =0.549, p=0.000 <0.01), learning habits could significantly positively affect learning perseverance (β =0.333, p=0.000 <0.01), learning environment could not affect learning perseverance (β =0.063, p=0.272> 0.05), and learning attitude could not affect learning perseverance (β = -0.060, p=0.246> 0.05). Finally, the regression equation can be obtained between the independent and dependent variable: learning perseverance =0.326 + 0.549 * learning motivation + 0.333 * learning habit.

Table 10 Multiple Linear Regression Analysis of Learning Factors and Learning Perance for Vocational Students (n =516)

model	Unstandardized coefficients		Standardization coefficient	t	Cons Picuousness	V IF	R^2	After the adjustment of R^2	F
	B	Standard error	Beta						
(constant)	0.326	0.129		2.531	0.012		0.620	0.617	F (4,511)=208.113, p=0.000
academic motivation	0.549	0.051	0.492	10.866	0.000	2.754			
study habit	0.333	0.055	0.334	6.040	0.000	4.115			
academic environment	0.063	0.057	0.062	1.100	0.272	4.292			
attitude to learning	-0.060	0.051	-0.057	-1.161	0.246	3.213			

Dependent variable: learning perseverance
Durbin-Watson value: 2.096

Regression analysis of the influencing factors of learning ability and learning ability of higher vocational students

In this part of the study, the four influencing factors of higher vocational students' learning ability are learning motivation, learning habits, learning environment and learning attitude as independent variables, Taking the learning ability of higher vocational students as the dependent variable, Multiple linear regression analysis of the influencing factors of learning ability and learning ability of higher vocational students, The analysis results are shown in Table Table 11 below, The model R2 value was 0.774, Less than 1, Showed that the model showed a good fit, Four influencing factors can explain 77.4% of the change in learning ability; next, The F value in the ANOVA was 437.155, p=0.000, Less than 0.001, Show that at least one of the four influencing factors can significantly affect the learning ability of higher vocational students, The constructed model is meaningful, The model is overall significant; besides, The VIF values of the four influencing factors in this model were 2.754,4.115,4.292, and 3.213, respectively, All are less than 5, Suggesting that there are no multiple collinearity problems between the independent variables. The specific analysis of data found that learning motivation could significantly positively affect learning ability (β =0.499, p=0.000 <0.01), learning habits could significantly positively affect learning ability (β =0.425, p=0.000 <0.01), learning environment cannot affect learning ability (β =0.042, p=0.307> 0.05), and learning attitude could not affect learning ability (β = -0.039, p=0.299> 0.05). Finally, the regression equation that can be obtained between the independent variable and the dependent variable is: learning ability =0.272 + 0.499 * learning motivation + 0.425 * learning habit.

Table 11 Multiple Linear Regression Analysis of Learning Impact Factors and Learning Ability of Higher Vocational Students (n =516)

model	Unstandardized coefficients		Standardization coefficient	t	conspicuousness	V IF	R^2	After the adjustment of R^2	F
	B	Standard error	Beta						
(constant)	0.272	0.094		2.901	0.004		0.774	0.772	F (4,511)=437.155, p=0.000
academic motivation	0.499	0.037	0.475	13.596	0.000	2.754			
study habit	0.425	0.040	0.453	10.615	0.000	4.115			
academic environment	0.042	0.041	0.045	1.022	0.307	4.292			
attitude to learning	-0.039	0.037	-0.039	-1.040	0.299	3.213			

Dependent variable: learning ability
Durbin-Watson value: 2.079

Regression analysis of the influencing factors of learning ability and learning adaptability of higher vocational students

In this part of the study, the four influencing factors of higher vocational students' learning ability are learning motivation, learning habits, learning environment and learning attitude as independent variables, With higher vocational students' learning adaptability as the dependent variable, Multiple linear regression analysis of the influencing factors of learning ability and learning adaptability of higher vocational students, The results of the analysis are shown in Table Table 12 below, The model R2 value was 0.750, Less than 1, Showed that the model showed a good fit, Four influencing factors can explain 75.0% of the change in learning adaptability; next, The F value in the ANOVA was 383.674, p=0.000, Less than 0.001, It shows that at least one of the four influencing factors can significantly affect the learning adaptability of higher vocational students, The constructed model is meaningful, The model is overall significant; besides, The VIF values of the four influencing factors in this model were 2.754,4.115,4.292, and 3.213, respectively, All are less than 5, Suggesting that there are no multiple collinearity problems between the independent variables. The specific analysis of the data found that learning motivation could significantly positively affect learning resilience (β =0.470., p=0.000 <0.01), learning habits could significantly positively affect learning resilience (β =0.225, p=0.000 <0.01), learning environment could significantly positively affect learning resilience (β =0.195, p=0.000 <0.01), and learning attitude could not affect learning resilience (β =0.043, p=0.273> 0.05). Finally, the regression equation between independent variable and dependent variable is: learning resilience =0.300 + 0.470 * learning motivation + 0.225 * learning habit + 0.195 * learning environment.

Table 12 Multiple Linear Regression Analysis of Learning Impact Factors and Learning Suitability of Higher Vocational Students (n =516)

model	Unstandardized coefficients		Standardization coefficient	t	conspicuousness	V IF	R^2	After the adjustment of R^2	F
	B	Standard error	Beta						
(constant)	0.300	0.098		3.072	0.002		0.750	0.748	F (4,511)=383.674, p=0.000
academic motivation	0.470	0.038	0.450	12.278	0.000	2.754			
study habit	0.225	0.042	0.241	5.377	0.000	4.115			
academic environment	0.195	0.043	0.206	4.502	0.000	4.292			
attitude to learning	0.043	0.039	0.043	1.097	0.273	3.213			

Dependent variable: learning resilience
Durbin-Watson value: 1.901

Conclusion and Recommendations

By analyzing the factors affecting higher vocational students' learning ability from the overall situation, correlation analysis and regression analysis, the following conclusions are drawn:

First of all, the overall situation of the influencing factors of learning ability of vocational students is good, and the questionnaire data of the influencing factors of learning ability of vocational students is above the medium level. Among the four influencing factors, the average value of learning motivation and learning habits is very high, ranking first and second, and relatively high. The average value of learning environment and learning attitude is the third and fourth, which is at a good level. From the average result, learners think that learning motivation and learning habits have a stronger influence on learning ability.

Secondly, from the analysis results of influencing factors and learning ability, there are significant positive correlation between learning ability, learning motivation, learning habits, learning environment and learning attitude, and their correlation coefficient is between 0.5-1. The above analysis shows that the improvement of learners requires good learning habits, internal and external driving force, good learning environment and correct learning attitude.

Finally, from higher vocational students learning influence factors and the results of the regression analysis, learning motivation, learning habits, learning environment can significantly positive influence learning and learning resilience, and learning motivation for learning and resilience strongest, learning habits, learning environment on learning resilience and minimum impact, and learning attitude cannot affect the learning and learning resilience. Learning motivation, learning habits and learning attitude can all significantly and positively affect the learning motivation, and learning motivation has the strongest impact on learning ability and learning motivation, followed by learning habits, learning attitude has the least impact on learning motivation, while the learning environment can not affect the learning

motivation. Learning motivation and learning habits can significantly affect learning perseverance and learning ability, and learning motivation has the strongest influence on learning perseverance and learning ability, learning habits on learning perseverance and learning ability, while learning environment and learning attitude can not affect learning perseverance and learning ability.

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