The Influence of Family Cultural Capital on the Subject Selection Behavior of High School Students Under the New College Entrance Examination in Mainland China: The Mediating Role of Learning Efficacy

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The "New College Entrance Examination" reform has become the most difficult part of mainland China's current education reform. This study investigates the influence of family cultural capital on the subject selection behavior of Chinese high school students with learning efficacy included as an intermediary variable. Altogether 1258 high school students in Chongqing were surveyed. We find that (1) high school students showed active participation in selecting subjects, and there were significant differences in their selection behavior in terms of grade, parents' educational background, parents' occupational level, and family per capita monthly income. Furthermore, (2) the effect of learning efficacy on family cultural capital was significant. The positive influences on high school students' subject selection behavior were also reflected in the intermediary role of learning efficacy. We also found that (3) the influence of family cultural capital on the selection behavior of high school students is affected by individual and family background variables. Based on these results, countermeasures and suggestions are put forward to help high school students choose courses reasonably.

Keywords: family cultural capital, subject selection behavior, learning efficacy, new college entrance examination

INTRODUCTION

As a key link between compulsory education and higher education, senior middle school plays an important role in China's modern national education system. As a mechanism to evaluate candidates' ability, the college entrance examination also plays an important role in helping students grow up and helping the country select talent, maintain education equity and promote social stability (Lu et al., 2017)[1]. In 2014, China launched the new comprehensive reform pilot for college entrance examinations. After the reform of the college entrance examination subject setting, the total scores of candidates are composed of the scores of three required subjects and three optional subjects. Since then, the Ministry of Education has issued a series of policies on the reform of college entrance examinations, including the planned reform of the examination enrollment system. The objective is to improve the high school-level examination and actively realize the developmental goal to move to shift teaching. It can be seen that the reform of the new college entrance examination is imperative. As the biggest highlight of the new college entrance examination reform, the independent subject selection mode will replace the traditional liberal arts and sciences subject division mode, and the courses that high school students learn will be changed from traditional administrative class teaching to the shift system. In 2018, eight provinces and cities in China officially started the "new college entrance examination" course selection mode, and the reform focus on "student-oriented and people-oriented" changes to the exams has increasingly become an important foothold of the examination enrollment system (Huang et al., 2021)[2], thereby giving students the autonomy to choose subjects. This demonstrates the new student-centered educational philosophy and attitude, which helps promote comprehensive evaluation and selection and assist students to develop in an all-round way.

However, in the process of implementing the new college entrance examination reform, due to the different levels of education and teaching in schools around the country, schools are limited by curriculum resources, teachers and the number of classrooms, and the implementation of the shift system is slow. Because of students' vague sense of self and unclear career planning, they are at a loss when choosing subjects (Li et al., 2017)[3]. As parents know little about the new college entrance examination policy, they still have old-fashioned ideas about the division of arts and sciences and volunteering for college entrance examinations, which aggravates their educational anxiety (Zhang, 2020)[4]. There have also been many related studies on subjects and exams for senior high school students in academic circles. However, at present, most of the studies on the influencing factors on subjects and exams for senior high school students against the background of reform are about students' individual level and school level, and there is no empirical basis for assessing the influence at the family level. Therefore, this study implements a nationwide practical exploration of the new college entrance examination reform, focuses on the influence of family cultural capital and learning efficacy on high school students' choice of subjects, and constructs a structural equation model to conduct an empirical analysis of the relationship between them, aiming at exploring the relationship between family and high school students' choice of subjects. This will enrich the research results of high school students' subject selection behavior in the new college entrance examination and provide a theoretical reference and empirical evidence for high school students' reasonable subject selection, correct family guidance and active school reform.

LITERATURE AND HYPOTHESES

The Connotation of Family Cultural Capital and the Behavior of Choosing Subjects

Bourdieu established the basic framework of cultural capital theory on the basis of "field", "habitus" and "capital" and pointed out that capital mainly showed four types: economic capital, cultural capital, social capital and symbolic capital (Wang, 1998)[5]. Among them, cultural capital is a material product or spiritual precipitation obtained through educational activities, a resource marked by personal achievement, and gradually accumulated by family members in the process of practice and communication (Zhao et al., 2020)[6]. This indicates that family cultural capital refers to the tangible or intangible assets related to culture owned and displayed by individuals in the specific field of "family", which is mainly divided into three dimensions: subjectivity, objectification and institutionalization. First, subjective family cultural capital is

mainly reflected in parenting style, parent–child communication and educational expectations. Subjective capital has an important influence on children's mental health, good habits and values (Zhang, 2018)[7]. Second, objectified family cultural capital refers to books, paintings, musical instruments, learning tools, etc., owned by families (Bourdieu, 1997)[8], which is closely related to students' academic performance. Family books, cultural relics, paintings, and newspapers, etc., will exert a subtle cultural influence on students' learning habits and academic achievements. Objective cultural capital has an important influence on children's achievement (Zhou, 2007)[9], not only in the creation of family atmosphere but also in the words and deeds of parents to their children. Parents' interests and hobbies can be passed down through their children's unconscious imitation (Luo et al., 2017)[10]. In addition, children with a rich collection of family books will be subtly influenced by the cultural atmosphere, which reflects parents' cultivation of their children's knowledge (Jiang et al., 2022)[11]. Finally, institutionalized family cultural capital refers specifically to the factors that determine the family class, such as parents' political outlook, educational level and professional status, and it is easy to form a virtual feedback loop in protecting students' right to education and improving students' opportunities to receive higher education and elite education. This gradually accumulated cultural capital has a relatively stable development trend and has the function of promoting, guiding or hindering students' learning and growth (Zhang, 2017)[12]. In addition, institutionalized family cultural capital has a very strong intergenerational transmission effect (Zhang, 2016)[13], which indicates that students' growth is closely related to the family environment and parents' level of education.

Subject-selecting behavior refers to the behavior of students in choosing specific subject combinations, which can be divided into active and passive subject-selecting behaviors according to different degrees of student initiative. Among them, students' active subject selection behavior refers to the pragmatic decisions to take their own development in their hands and integrate relevant resources to make the best choice. Passive subject selection behavior refers to the traditional choice or herd choice that does not give full play to the subjective initiative of individuals (Shen, 2018)[14]. Some scholars have pointed out that senior high school students have a high level of cognition, can actively adapt to the diversified situation in the new college entrance examination reform and make the best choice, showing a state of active subject selection (Wen et al., 2015)[15]. Some scholars have also pointed out that high school students generally feel helpless and confused about the new college entrance examination system, and they do not know how to choose correctly; thus, they demonstrate a passive state of choosing subjects (Hu, 2018)[16].

The Influence of Family Cultural Capital on Students' Choice of Subjects

The influencing factors of subject selection behavior are mainly divided into two aspects: individual factors and environmental factors. Individual factors mainly include students' talents and development aspirations (Liu, 2015)[17], basic level and attitude toward different disciplines (Zhu et al., 2019)[18], and gender difference (Dawson, C et al., 1991)[19], etc. Environmental factors mainly include economic factors, influential others, teaching and curriculum, and career planning, etc. (Palmer et al., 2017)[20]. Regarding family influence, the existing research mostly involves family economic capital and other factors (Zhang et al., 2020)[21], which seldom involves the influence of family cultural capital on students' course-choosing behavior, but demonstrates that factors such as parents' social class, education level, and course-choosing opinions have an important influence on students' course-choosing behavior (Wei et al., 2016)[22]. Therefore, this study attempts to infer that family cultural capital has an important influence on high school students' choice of subjects. First, family cultural capital has an influence on students' choice of subjects, and parental rearing patterns and family atmosphere will lead students to be active or passive in their selection behavior and further affect students' academic performance and self-efficacy level (Peng et al., 2009)[23]. A democratic education and a harmonious family atmosphere can stimulate students' self-awareness and positive emotions and make students take the initiative to choose subjects. Too strict an upbringing will constrain students' development of a sense of self, leading to more passive behavior. Second, family cultural capital has an influence on the content and procedure of students' subject selection. Parents' professional characteristics and social stratum subtly influence students' subjects, major selection, knowledge reception, career interest tendency and career planning. Finally, family cultural capital has an

influence on the learning burden after choosing subjects. The groups with dominant cultural capital have a high understanding of the new college entrance examination scheme, clear objectives and a light test burden. It is difficult for culturally disadvantaged groups to understand admission rules, and it is easy to make mistakes in selecting subjects, thus increasing the examination burden (Zhang et al., 2019)[24].

The Intermediary Role of Learning Efficacy

Family cultural capital affects learning efficacy. Learning efficacy refers to students' perceptiveness and subjective judgment of their own learning ability and whether they can complete learning tasks (Bandura A, 1977)[25]. The internal factors that affect learning efficacy include academic success experience, attribution style, emotional adjustment efficacy, self-worth and so on (Ji, 2019)[26]. External factors mainly come from teachers' expectations and family capital. Studies have pointed out that good parenting style and warm companionship are highly correlated with students' learning efficiency, and parents with higher education levels can enhance students' learning confidence (Xue, 2019)[27]. Both family capital and school capital help to improve students' academic performance, among which family capital has a stronger influence (Yang et al., 2015)[28], which indicates that family capital affects students' learning behaviors and learning choices through its intrinsic effects on students. Against the background of the new college entrance examination, students have to face both internal psychological conflicts and external pressure to choose subjects, and their learning efficacy will be easily influenced by their families. Based on this, this study tries to make a judgment. Family cultural capital has a certain influence on students' learning efficacy. Learning efficacy affects students' behavior in choosing subjects. On the one hand, learning efficacy can regulate and control students' learning activities and can influence students' academic choices, persistence in learning, self-monitoring and the use of learning strategies (Dong et al., 1996)[29]. In addition, the improvement of students' learning efficacy can affect the degree of effort and persistence in the face of learning difficulties (Yuan et al., 2001)[30]. On the other hand, students' self-efficacy is closely related to academic performance, which can influence an individual's academic choices, learning strategies and academic attribution (Zhao, 2010)[31]. All indicate that learning efficacy has a certain influence on student choice of subjects.

In summary, most of the existing studies have linked family cultural capital elements such as parental rearing style, parental occupation and family atmosphere with learning efficacy and linked learning efficacy with students' behaviors, academic achievements, academic choices and other factors to explore the relationship between learning behaviors, external factors and internal emotions. Based on comprehensive research and assessment, it is concluded that the sense of learning efficacy may be the mediating variable of family cultural capital influencing students' choice of subjects. Using the three-dimensional theoretical model of family cultural capital, this study explores the direct influence of family cultural capital on subject choice on the basis of analyzing the relationship among family cultural capital, learning efficacy and subject-selecting behavior. Whether the sense of learning efficacy plays an intermediary role in the influence of family cultural capital on the behavior of choosing subjects is investigated, and the following three research hypotheses are proposed.

H1: *Family cultural capital has a significant positive impact on high school students' choice of subjects.*

H2: *Family cultural capital has a significant positive impact on high school students' learning efficacy.*

H3: *Family cultural capital, learning efficacy and subject-selecting behavior all show a significant positive correlation, and high school students' learning efficacy plays an intermediary role in the relationship between family cultural capital and subject-selecting behavior; that is, high school students' family cultural capital influences subject-selecting behavior by influencing their learning efficacy.*

METHODOLOGY

Participants

In this study, a stratified random sampling method was used to select senior one and senior two students from six schools in Jiangbei District, Yubei District, Beibei District and Wushan County of Chongqing. After obtaining the consent of the school and the students, the researchers adopted an anonymous survey method using self-evaluation in questionnaire form which they distributed and collected on site. According to the list of students provided by the school, a total of 1386 students were selected as the survey objects. A total of 1345 questionnaires were collected. After eliminating invalid questionnaires, 1258 valid questionnaires were recovered. The effective recovery rate was 93.5%. Among the 1258 valid samples, 518 were boys and 740 were girls. There were 571 senior one students and 687 senior two students. There were 796 urban registered students and 462 rural registered students. The selected subjects were 177, 144, 72, 66, 130, 155, 123, 127, 58, 95, 15 and 96.

Instruments

This study integrated existing scales and a researcher-designed questionnaire based on expert opinions. This questionnaire is composed of four parts. The first part is approximately 15 items related to high school students' basic information, mainly including gender, grade, household registration, elective subjects, parents' educational background, parents' occupation, family book collection, and family per capita monthly income, etc. The other three parts are the survey of family cultural capital, learning efficacy and course selection behavior. The items are scored on a five-point Likert scale ranging from "very inconsistent" to "very consistent", with reverse scoring. The family cultural capital (FCC) scale is based on Bourdieu's family cultural capital theory and is adapted from the family cultural capital scale used by Gao (2017)[32], Li et al. (2019)[33] and Zhang (2018)[34], including the following three parts: subjective cultural capital (SCC), institutionalized cultural capital (ICC) and objectified cultural capital (OCC). The scale of learning self-efficacy (LSE), including learning behavior efficacy (LBE) and learning ability efficacy (LAE), is adapted from Wei (2004)[35] and Liang (2000)[36]. On the basis of a review of the literature and expert opinions, subject selection behavior (SSB) is developed by choosing important dimensions to measure active or passive behavior. It includes three items: "I will choose subjects according to the difficulty of selecting subjects", "I will choose subjects of college entrance examination according to the discipline foundation of junior high school and the results of my high school entrance examination", "I will choose the subjects according to the advantages and disadvantages of this subject on the score in the college entrance examination". Using SPSS 24.0 data entry software, correlation and difference were analyzed by AMOS 23.0 to construct a structural equation model of the influence of family cultural capital and learning efficacy on senior high school students' choice behavior and evaluate and test the significance of the mediating effect using the bootstrap method, repeated sampling 1000 times, and obtaining a 95% deviation-corrected confidence interval. If the confidence interval does not include zero, the mediating effect is significant.

Data Analysis

Confirmatory factor analysis was used to evaluate the measurement model. Since the sample data were not normally distributed, the generalized least squares (GLS) method was used. The results of confirmatory factor analysis are shown in Table 1. The load values of the standardized factors of each item in the measurement model ranged from 0.625 to 0.911. The Cronbach's α values were all greater than 0.7, thereby indicating that the reliability of the measurement model was good. The internal consistency of the scale was high. Referring to the authoritative main dimensions and measurement framework for the three main variables at home and abroad, combined with the opinions of 10 relevant experts, the scale dimensions and items of family cultural capital, learning efficacy and course selection behavior were compiled, which showed that the scale had good content validity. The average variance extraction (AVE) of potential variables was used to test the convergence validity. The AVE values of each dimension were greater than 0.5 (see Table 1), thereby indicating that the convergence validity of the measurement model was better

(Somers, 2003)[37]. The square root of the AVE of each dimension was larger than the correlation coefficient of the other dimensions (see Table 2), indicating that each dimension has good discriminant validity. The fitting index of the measurement model is [χ^2=468.983; df=120;χ^2/df=3.908; GFI=0.959; AGFI=0.941; RMSEA=0.048]; according to Wu (2010)[38], the model fitting evaluation standard shows that the measurement model has a high degree of fit.

TABLE 1
EVALUATION RESULTS OF THE MEASUREMENT MODEL

	Item quantity	Standardized factor load values			CR	AVE	Cronbach's α
SCC	3	0.837	0.821	0.759	0.848	0.650	0.858
ICC	3	0.820	0.625	0.696	0.759	0.516	0.767
OCC	3	0.804	0.759	0.742	0.812	0.591	0.788
LBE	3	0.911	0.820	0.785	0.878	0.706	0.874
LAE	3	0.845	0.772	0.736	0.828	0.617	0.839
SSB	3	0.824	0.737	0.674	0.791	0.559	0.767

SCC subjective cultural capital, ICC institutionalized cultural capital, OCC objectified cultural capital, LBE learning behavior efficacy, LEA learning ability efficacy, SSB subject selection behavior

TABLE 2
DISCRIMINANT VALIDITY OF THE MEASUREMENT MODELS

	SCC	ICC	OCC	LBE	LAE	SSB
SCC	(0.806)					
ICC	0.151**	(0.718)				
OCC	0.551**	0.347**	(0.769)			
LBE	0.137**	0.228**	0.220**	(0.840)		
LAE	0.491**	0.003	0.341**	0.372**	(0.785)	
SSB	0.432**	0.327**	0.396**	0.183**	0.363**	(0.748)

** p＜.01； The data in brackets are the square root of AVE

RESULTS

Difference Analysis

First, the family cultural capital of senior high school students is different in terms of fathers' education, parents' occupational grade, family book collection and family per capita monthly income (see Table 3). Specifically, the family cultural capital of students whose fathers had a level of higher education was significantly higher (t=-4.709, P<0.001), and the family cultural capital of students whose parents were in the upper middle class (F=15.991, P<0.001; F=23.036, P<0.001) was significantly higher than those whose parents were in the low-income class. Students with more than 120 books had a significantly higher share of family cultural capital (F=5.040, P<0.01), and students with a per capita monthly income of more than 6000 yuan had a significantly higher share of family cultural capital (F=12.714, P<0.001). Second, there are significant differences in the grade and occupation type of parents (see Table 3). Specifically, the learning efficacy of senior one students was significantly higher than their counterparts (t=6.664, P<0.001), and the learning efficacy of the children of middle-level parents was significantly higher than their counterparts (F=14.554, P<0.001; F=14.284,P<0.001). Finally, there were significant differences in grade, parents' educational background, parents' occupation grade and per capita family income among senior high school students (see Table 3). Specifically, senior one students were more active in choosing subjects

(t=5.652, P<0.001), students whose parents had received a higher level of education were more active in choosing subjects (t=-3.184, P<0.01; t =-4.176, P<0.001), students whose parents were in the middle and upper classes were more active in choosing subjects (F=13.927, P<0.001; F=20.195, P<0.001), and students whose family income was more than 6000 yuan were more active in choosing subjects (F=8.056, P<0.001).

TABLE 3
DIFFERENCE ANALYSIS OF DEMOGRAPHIC VARIABLES

variable	category	FCC	LSE	SSB
Grade	Senior one (n=571)	3.641±0.744	3.656±0.696	3.797±0.827
	Senior two (n=687)	3.559±0.756	3.374±0.802	3.513±0.955
	T	1.947	6.664***	5.652***
Father's education	Basic education (n=868)	3.532±0.762	3.501±0.751	3.589±0.931
	Higher education (n=390)	3.739±0.705	3.504±0.807	3.759±0.849
	T	-4.709***	-0.053	-3.184**
Mother's education	Basic education (n=936)	3.577±0.742	3.500±0.758	3.584±0.936
	Higher education (n=322)	3.651±0.776	3.509±0.799	3.811±0.806
	T	-1.528	-0.181	-4.176***
Father's occupation	Lower level (n=646) ①	3.481±0.741	3.413±0.775	3.511±0.958
	Middle level (n=367) ②	3.723±0.738	3.679±0.737	3.780±0.793
	Upper level (n=245) ③	3.709±0.751	3.472±0.755	3.778±0.896
	F	15.991***	14.554***	13.927***
	LSD multiple comparison	①＜②, ①＜③	①＜②, ③＜②	①＜②, ①＜③
Mother's occupation	Lower level (n=712) ①	3.473±0.748	3.413±0.783	3.501±0.963
	Middle level (n=360) ②	3.747±0.721	3.676±0.711	3.835±0.764
	Upper level (n=186) ③	3.776±0.734	3.506±0.765	3.805±0.867
	F	23.036***	14.284***	20.195***
	LSD multiple comparison	①＜②, ①＜③	①＜②, ③＜②	①＜②, ①＜③
Family library number	＜60 (n=660) ①	3.538±0.764	3.485±0.771	3.621±0.896
	61-120 (n=380) ②	3.630±0.732	3.512±0.736	3.676±0.905
	＞120 (n=218) ③	3.713±0.732	3.538±0.816	3.644±0.961
	F	5.040**	0.442	0.443
	LSD multiple comparison	①＜③	\	\
Family per capita Monthly income (RMB)	＜3000 (n=358) ①	3.481±0.771	3.450±0.825	3.499±0.954
	3000-6000 (n=560)②	3.570±0.753	3.498±0.774	3.654±0.900
	＞6000 (n=340) ③	3.759±0.700	3.564±0.691	3.773±0.856
	F	12.714***	1.936	8.056***
	LSD multiple comparison	①＜③, ②＜③	\	①＜②, ①＜③

*p＜.05, **p＜.01, ***p＜.001

FCC Family Cultural Capital, LSE Learning Self-Efficacy, SSB Subject Selection Behavior

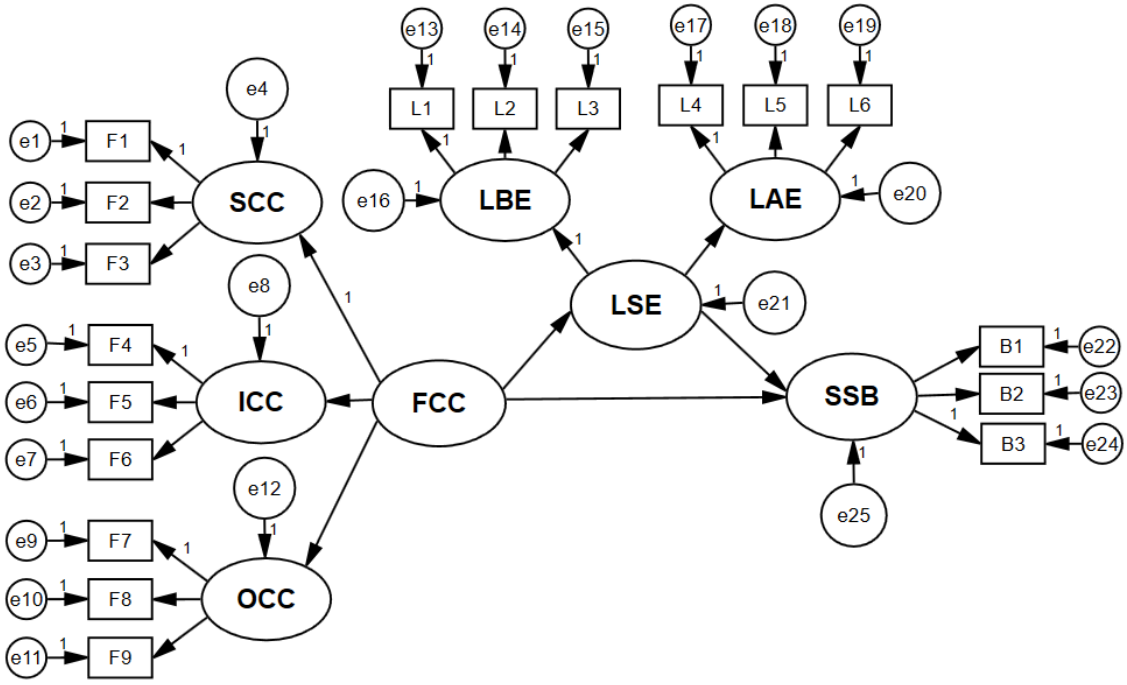
Occupation grade is based on Lu's (2002)[39] division of the social stratum structure map of contemporary China in the Research Report on Social Stratum of Contemporary China: the lower level is unemployed, underemployed, semi-unemployed, self-employed, general business service personnel, workers and farmers; middle-level refers to professional technicians, small business owners, clerks, individual industrial and commercial households, middle and senior technicians and large agricultural

operators; upper level includes senior middle-level and low-level leading cadres, middle-level managers of large enterprises, middle-level professional technicians, middle-level business owners, managers of large, medium and small enterprises, senior professionals and large and private business owners.

Evaluation and Results of the Structural Equation Model

The results of product-moment correlation analysis show that family cultural capital has the highest correlation with the behavior of choosing subjects (r=0.513, p<0.01), family cultural capital has a significant positive correlation with learning efficacy (r=0.394, p<0.01), and learning efficacy has a significant positive correlation with the behavior of choosing subjects (r=0.335, p<0.01). It shows that learning efficacy is selected as an intermediary variable between high school students' family cultural capital and their behavior of choosing subjects, and the correlation between the variables accords with the theoretical expectation, which provides preliminary support for the research hypothesis. The structural equation model constructed by AMOS23.0 in this study is shown in Figure 1, and the structural model has a good fitting degree [χ^2=563.207; df=127;χ^2/df=4.435; GFI=0.950; AGFI=0.933; RMSEA=All fitting indices meet the criterion (Wen et al., 2004)[40], and the bootstrap confidence interval is used to test the mediating effect of learning efficacy between family cultural capital and subject selection behavior. If the confidence interval of each path does not include zero, the mediating effect is significant.

FIGURE 1
STRUCTURAL EQUATION MODEL DIAGRAM



The standardized path coefficients of each path relationship are shown in Table 4. First, the direct path results show that the standardized path coefficient of the influence of family cultural capital on subject choice is 0.581 (P<0.001), which verifies H1. Second, the results of the intermediary path show that the standardized path coefficient of the influence of family cultural capital on learning efficacy is 0.552 (P<0.001). The standardized path coefficient of the influence of learning efficacy on the subject choice is 0.154 (P<0.001), and the standardized path coefficient of the intermediary path obtained by simple calculation is 0.085 (0.552*0.152), which verifies H2 and H3. In summary, it shows that family cultural capital has a significant positive predictive effect on the behavior of choosing subjects. The sense of

learning efficacy plays a partial intermediary role in the influence of family cultural capital on the behavior of choosing subjects.

TABLE 4
ANALYSIS OF THE DIRECT EFFECT AND INTERMEDIARY EFFECT

Path relation		Standard path coefficient	p	95% CI	
				lower	upper
Direct path	FCC-->SSB	0.581	0.000	0.481	0.683
Intermediary path	FCC-->LSE	0.552	0.000	0.462	0.632
	LSE-->SSB	0.154	0.000	0.049	0.253

DISCUSSION

Difference Discussion

The results show that high school students' family cultural capital is significantly influenced by their father's educational background, their parents' occupation type, family book collection and family per capita monthly income. First, students whose fathers have received higher education have a significantly higher share of family cultural capital, and education is one of the elements used to measure the share of family cultural capital. The higher the educational background is, the higher the amount of family cultural capital is. Under the influence of social stratification and intergenerational transmission, the cultural capital of highly educated families will continue to be transmitted (Wei, 2017)[41]. Second, the family cultural capital of students whose parents' occupations are in the middle class is significantly higher than that of families in the low-income class. Due to the differences in parents' occupations and jobs, the resources available to each family are different, which leads to differences in the demand for education, and the resources for high-quality education are usually biased toward families with abundant capital (Zhang, 2018)[42]. Third, students with large family book collections have significantly higher family cultural capital. According to Bourdieu's cultural capital theory, books are materialized cultural capital, and family book collections reflect the possession of family cultural capital to some extent (Chen et al., 2021)[43]. At the same time, the amount of family books can also reflect the importance that families attach to students' educational investment and the cultivation of reading hobbies, which subtly influences the family atmosphere. Finally, students with a higher per capita monthly income have significantly higher family cultural capital, and family economic capital plays a supporting role in family cultural capital, which is mainly reflected in the materialization of family cultural capital. The higher the family income, the more capable families are to strive for more quality educational resources (Li et al., 2019)[44]. As a second major finding, there are significant differences in senior high school students' learning efficacy in grades and parents' occupation types. First, senior one students' learning efficacy is significantly higher, which is inconsistent with the existing research results (Pang et al., 2011)[45]. The reason is that against the background of the new college entrance examination, senior one students have more flexible choices for college entrance examination subjects and have more time to prepare for college entrance examination, and their learning burnout is lower than that of senior two students (Chen et al., 2009)[46]. Second, students whose parents' occupation type is middle class have significantly higher learning efficacy. Parents of higher occupational classes bring better family capital and cultural capital to students, which can have a positive impact on students' academic achievement, behavior habits and learning efficacy (Xiao et al., 2017)[47]. As a third major finding, there are significant differences in senior high school students' initiative in choosing subjects between grades, parents' educational background, parents' professional grades and family per capita income. First, senior one students are more active in choosing subjects, and senior one students have more opportunities to adjust their subjects (Yuan, 2018)[48], so we can learn more about the new college entrance examination policy and clarify the latest requirements of college entrance examination in the learning process. Second, students whose parents have received higher education are more active in choosing subjects because parents'

educational level, professional characteristics and family socioeconomic status will have an important influence on their children's educational choices (Yang et al., 2019)[49]. Moreover, parents with higher education levels tend to have a democratic educational style, which can provide good guidance for students' development planning (Huang, 2014)[50]. Third, students whose parents' occupation type is middle and upper class are significantly more active in choosing subjects, have a more democratic family concept of education, and tend to be encouraged and guided in choosing subjects (Gao et al., 2016)[51]. Finally, students with higher family per capita monthly income are significantly more active in choosing subjects, and high-income families pay more attention to students' educational investment and encourage and support students to actively communicate with their families in choosing subjects (Liu, 2020)[52.]

The Intermediary Role Discussion

This study found that family cultural capital has a significant positive predictive effect on high school students' choice of subjects, and learning efficacy plays a significant mediating role in the influence of family cultural capital on the choice of subjects. This indicates that the higher the level of family cultural capital is, the stronger students' learning efficacy is and the more active their choice of subjects is. First, there is a significant positive correlation between family cultural capital and subject selection behavior. Before or during subject selection, the more information students have about recruitment policies and future occupations, the more references they have. For families with dominant family cultural capital, parents can provide hard information and valuable informal information about studying and life for their children (Zhang, 2011)[53] Students' families with a high level of family cultural capital often have more information sources to provide the basis for students to choose subjects and guide students to make personal development plans; thus, these students' behavior toward subject choice becomes more active. There are few studies about the influence of family cultural capital and learning efficacy on the behavior of choosing subjects. However, the conclusion of this study is similar to that of a few studies on the influence of family cultural capital on students' academic achievement; that is, the higher the parents' educational level and educational background are, the better the students' academic achievement levels are (Tu et al., 2013)[54]. It is known that family cultural capital is an important influencing factor in promoting students' positive academic development and active subject selection. Second, there is a significant positive correlation between learning efficacy and the behavior of choosing subjects. Learning efficacy, as a learning motivation, plays a role in students regulating and controlling their own learning activities (Zhang et al., 2005)[55]. On the one hand, students with a strong sense of learning efficacy have a more positive performance in the choice of learning objectives and tasks, which is reflected in more active course selection behavior and suitable subject choice. On the other hand, the stronger the students' learning efficacy is, the higher their academic persistence level. Before and after the selection of subjects, they can always maintain a positive learning state. However, students with a weak sense of learning efficacy have inaccurate evaluations of learning objectives and their own learning ability, which easily forms anxiety about failure and affects learning (Zhang, 2011)[56]. They will also be negatively affected by negative emotions, vague goals, insufficient sense of self and so on, which will lead to negative selection behavior. Finally, there is a significant positive correlation between family cultural capital and learning efficacy. Family cultural capital influences students' learning performance by creating a learning atmosphere, expectations of educational achievement and family education (Fang et al., 2007)[57] and ultimately affects students' learning efficacy. As an important bridge for family cultural capital to play an important role, the more parents pay attention to cultivating their own cultural capital and strengthening educational investment, the more students can enhance their self-confidence in learning and obtain a sense of learning achievement to continuously strengthen the sense of learning efficacy and show positive behavior in selecting subjects.

CONCLUSION AND SUGGESTIONS

Through empirical research and model construction, this study explores the mechanism of the influence of high school students' family cultural capital and learning self-efficacy on their subject-choosing behavior

under the background of the "new college entrance examination". The results show that (1) high school students take the initiative to choose subjects, and there are significant differences in the effects of grade, parents' educational background, parents' professional level and family per capita income. There are also significant differences in family cultural capital in fathers' educational background, parents' occupation type, family book collection size and family per capita monthly income. There are significant differences in learning efficacy between different grades and parents' occupation types. (2) The family cultural capital and learning efficacy of senior high school students are positively correlated with the behavior of choosing subjects, and family cultural capital is also positively correlated with learning efficacy. (3) Learning self-efficacy partially mediates the positive influence of high school students' family cultural capital on their choice of subjects. Based on the above conclusions, the following countermeasures and suggestions are put forward to promote the development of scientific subject selection:

Students May Clarify Their Own Development Orientation and Actively Obtain Recruitment Information

First, under the background of the new college entrance examination, students need to fully understand their own interests and specialties and make clear their future professional development direction as soon as possible. On the one hand, student decisions should be based on their interests and specialties, and students must make a judgment of subjects based on their own advantages, make a reasonable career plan, and arrange learning methods and strategies in a targeted way. On the other hand, students should set personalized development goals. According to factors such as academic achievement and learning content, we will gradually improve their learning ability and academic level and enhance their sense of learning efficacy. Second, students should actively grasp the relevant information of subject selection, understand the latest enrollment policies of colleges and universities, pay more attention to college entrance examination enrollment policies, and comprehensively evaluate the combination of their subject selection and future majors. Students with a low level of family cultural capital should optimize their awareness and methods of acquiring college enrollment information and more actively obtain policy information related to the new college entrance examination.

Schools May Take a Number of Reform Measures Simultaneously and Vigorously Carry Out Career Education

First, the school should speed up the integration of curriculum resources and rationally allocate teachers. The school should not only coordinate its curriculum adjustment but also promote the rational allocation of curriculum resources and teachers to the greatest extent to satisfy students' autonomy in choosing courses and promote their individualized development. In addition, teachers should pay attention to the integration of resources among different courses in the course of curriculum implementation to ensure there is good cooperation between disciplines. Second, we should strengthen career planning education and guide students to plan for the future. Career planning education is a necessary measure to cultivate students' ability to choose their own majors. Schools should set up corresponding career planning courses and comprehensively interpret the new college entrance examination reform policy and the corresponding majors in high school courses. In addition, they should guide students to choose subjects individually from their professional interests and tendencies and their own advantages and disadvantages. In addition, schools with rich educational resources can also implement the tutor system to provide students with professional guidance for selecting subjects. Finally, they should create good learning conditions and stimulate students' learning efficacy. To stimulate and enhance the level of students' learning efficacy, teachers should take an active role creating teaching situations that are in line with the characteristics of students' development; curricula should be designed based on their interests and specialties to stimulate students' interest in learning, enhance students' positive learning experience and enhance their learning efficacy.

Families May Create a Harmonious Family Atmosphere and Attach Importance to the Promotion of Cultural Literacy

First, starting from subject-oriented cultural capital, the proposal of students' independent subject selection in the new college entrance examination is to give full play to students' independent initiative. Parents should help students discover their own interests and specialties by creating a harmonious family atmosphere and adopting democratic family education and parent–child communication to create a warm and democratic family atmosphere for students. In addition, parents should have reasonable educational expectations, help students improve their learning self-confidence and motivation, improve their learning self-efficacy level, and promote their active choice of subjects. Second, starting from objective cultural capital, creating a good learning atmosphere in the family requires the necessary consumption of cultural capital, and parents can create exclusive learning places for students. Parents should enhance the family cultural atmosphere. At the same time, parents can buy books in many fields, broaden students' reading interests, and pay attention to the quality and quantity of family books to help students develop good reading habits and improve their information acquisition ability. In addition, parents should strengthen their own cultural education and improve their cultural literacy. We can share cultural experiences and broaden our knowledge with students by reading with children and visiting museums so that students can make clear the developmental direction of their professional interests and help them improve their competitiveness in future educational opportunities.

The Government Should Improve the College Entrance Examination Scoring System and Establish an Information Service Platform

First, we should explore the effective scoring mechanism, improve the scoring system of college entrance examinations, and ensure the fairness of college entrance examinations. There are great differences in teaching quality and exam scoring methods between different subjects. On this basis, it is unfair to place selected subjects at the same level of importance, and the grading scoring system leads to the distortion of exam fairness. Therefore, the college entrance examination scoring system is constantly improving. Second, building an accurate and efficient college entrance examination information service platform can help the government, schools, parents and students grasp more timely and effective enrollment policy information. On the one hand, education administrative departments at all levels can learn about the implementation of the new college entrance examination policies in various places according to the information platform. We should more effectively and efficiently grasp the implementation status of the system of selecting courses and taking classes and make timely adjustments to optimize it. On the other hand, schools can rely on the information platform to strengthen exchanges and cooperation among schools and help the effective new selection methods to be promoted efficiently among schools. In addition, students and parents can check the real-time enrollment policies of colleges and universities through the information platform. To obtain more valuable reference information for subject selection and to judge its relative position in the whole province based on big data, schools may find it beneficial to make reasonable adjustments to subject selection and future majors.

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