

Research on the Status and Influencing Factors of Flying College Students' Values Based on the Five-point Scale

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Abstract:

Strengthening the cultivation of socialist core values for flying college students is not only a basic project to improve the quality of civil aviation pilot personnel training, but also an important part of helping China's socialist spiritual civilization. Through investigation, it is found that the current flying college students in China have a high degree of awareness of socialist core values, but “rational cognition” and educational approaches need to be expanded. The overall recognition of the core concept of socialism is high, but some aspects of “emotional “Identification” still needs to be further strengthened; the overall practice of the core values of socialism is better, but the problem of “different knowledge and action” still exists. Therefore, we should grasp the world situation and national conditions, build the normal mechanism of “rational cognition”, based on the needs of students, expand the “diverse” educational approach, strengthen “emotional identification”, carry out “all-round” implanted education, and promote “externalization” “Practice” and implement targeted “precision ideology” to strengthen the effectiveness of the cultivation of socialist core values.

Keywords: *Five-point scale method, Current situation and influencing factors, Flying college students, Value education.*

I. RESEARCH BACKGROUND

Pilot undergraduates usually refer to those undergraduates studying related theoretical knowledge and carrying on flight training in colleges and universities with pilot recruitment qualification. “Firm the correct political direction, strict enforcement of orders and prohibitions, rigorous and precise flying style, highly responsible safety awareness, and solid and excellent flying skills” [1] are the most fundamental professional requirements. The core notion of socialism, as a “rational assembly of fundamental principles and values that have long been upheld by the nation reflecting the nature and the law of construction of socialism, “[2] can be

traced to the same origin with the shaping of professional spirit of civil pilots and the implementation of professional requirements for pilot undergraduates. So the cultivation of the core notion of socialism is an inevitable move for the training of pilot undergraduates, and moreover, the identification of the core notion of socialism is an inevitable way for students' cultivation. Therefore, to clarify the current status of cognition and identification of the core notion of socialism in pilot undergraduates, reveal the practical problems and deficiencies in the cultivation of the core notion of socialism in pilot undergraduates and put forward targeted suggestions and countermeasures, which can not only provide theoretical support and practical guidance for the cultivation of the core notion of socialism in pilot undergraduates, but also promote the continuous improvement of educational effectiveness and the training quality of pilot undergraduates, thereby accelerating the cultivation of high-quality civil aviation pilots in China and then expediting the continuous development of China civil aviation industry.

II. RESEARCH DESIGN

2.1 Research Object

Considering the special training mode - "Theoretical education + Flight training" for Chinese pilot undergraduates, and higher student mobility, the selection of samples not only needs to sufficiently consider the representativeness of research object, but also needs to give consideration to the feasibility of sample collection. Therefore, taking the pilot undergraduates in a certain domestic university with the largest training scale for Asian civil aviation pilots as research objects, this research adopts random cluster sampling method to select 30 classes (batches) as research samples and distributes 1140 questionnaires by means of online survey. 1140 questionnaires have been collected with 100% recovery rate. Among them, there are 1103 valid questionnaires after eliminating 37 invalid questionnaires, with the effective recovery rate 96.75%.

2.2 Research Methods

This research mainly adopts the five-point scale method and questionnaire survey method. Based on references to relevant research, combined with expert opinions and the professional requirements of civil aviation pilots, the "Questionnaire on the Cognition and Identity of the Core Notion of Socialism of Pilot Undergraduates" is compiled. The questionnaire is composed of three parts: "basic conditions, survey on the core notion of socialism cognition status, and survey on the core notion of socialism identification status". "Basic conditions" and "survey on the core notion of socialism cognition status" are single and multiple choices respectively. The content of "basic conditions" includes personal information and family background; "survey on the core notion of socialism cognition status" includes the awareness of the core notion of socialism, cognitive channels, and the awareness of cultivation necessity, etc; "survey on the core notion of socialism identification status" is to score the identification degree in 5-1 from high to low on the basis of five-point Likert scale, in which score high or low indicates the high or low of the identification degree. "Survey on the core notion of socialism identification status"

includes three dimensions - national value, social value and personal value, 12 terms of content, and 24 indicators.

The questionnaire takes the coefficient of Cronbach's α as the reliability test indicator. Through the test, it is found that the coefficient of the overall questionnaires is 0.958, which indicates that this survey has a relatively high reliability. In the aspect of validity, this survey adopts KMO test and Bartlett's test. It has found that the KMO test result of the over questionnaires is 0.966, and the Bartlett's test result is 25070.372, indicating that the indicators in this survey is very suitable to make factor analysis, and the validity of the overall questionnaire is relatively high. After the collection of questionnaires, the author applies the software SPSS24 to analyze and process the data acquired, and all the data are rounded to two decimal places. In order to give convenience to understanding, in the "survey on the core notion of socialism identification status", regarding the score more than 4.50 as "excellent", within 4.00-4.50 as "good", and within 3.00-4.00 as "pass".

III. RESEARCH RESULTS AND ANALYSIS

3.1 Basic Conditions

Because the aviation specialty in the sample university does not recruit girls anymore in recent years, the student classification does not divide by "grade" and "gender" as usual but set up "age" and "learning phase", these two variables. As shown in TABLE I, the total survey samples have 1103 students, whose age is mainly centralized in "18-21 years old" (431 students, taking a percentage of 39.08%) and "21-23 years old" (493 students, taking a percentage of 44.70%), including 400 students (36.26%) in "Theoretical education" phase, 371 students (33.64%) in "Initial flying training" phase, and 332 students (30.10%) in "High performance training" phase. The proportion of students in the three sections is much close. In political status, "communist youth league member" takes up the main part and "member of communist party of China" has 121 students, taking up 10.97%, which is basically identical to the proportion of undergraduates' party member development. View from nationality and census register, the survey objects mainly constitute by the students of Han nationality (86.94%) and in urban areas (69.17%), which is easy to conclude that the source of pilot students is mainly formed by the students in urban and with Han nationality.

TABLE I. The basic conditions of students

OPTIONS		AMOUNT	PERCENTAGE
Age	Under 18	16	1.45%
	18-21	431	39.08%
	21-23	495	44.70%

	23 and above	163	14.78%
Learning Phase	Theoretical education	400	36.26%
	Initial flying training	371	33.64%
	High performance training	332	30.10%
Political Status	Communist youth league member	909	82.41%
	Member of Communist Party of China	121	10.97%
	Masses	73	6.62%
Nationality	the Han nationality	959	86.94%
	Minority nationality	144	13.06%
Census Register	Urban	763	69.17%
	Village	340	30.83%

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3.2 Analysis on the Cognition of the Core Notion of Socialism

TABLE II. The cognition status of the core notion of socialism

Options	Theoretical Education(N=400)	Initial Flying Training(N=371)	High Performance Training(N=332)	Total(N=1103)
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Know and clearly know its specific content	353(88.25)	316(85.18)	298(90.06)	967(87.67)
Know but is not clear about its specific content	47(11.75)	54(14.56)	33(9.94)	134(12.15)
Do not know, not clear about its specific content	0(0)	1(0.27)	1(0.30)	2(0.18)

Note: Percentage in brackets

TABLE III. Definitional connotation interpretation of the core notion of socialism (Multiple choices)

Options	Theoretical Education(N=400)	Initial Flying Training(N=371)	High Performance Training(N=332)	Response Rate	Penetration Rate (N=1103)	Total(N=1103)
Patriotism	394(98.50)	369(99.46)	329(99.10)	29.07%	99.00%	1092(99.00)
Innovation Consciousness	283(70.75)	265(71.43)	267(80.42)	21.70%	73.89%	815(73.89)
Marxism	297(74.25)	267(71.97)	273(82.23)	22.28%	75.88%	837(75.88)
Chinese Traditional Culture	274(68.50)	265(71.43)	254(76.51)	21.11%	71.89%	793(71.89)
Others	87(21.75)	74(19.95)	58(17.47)	5.83%	19.85%	219(19.85)

Note: Chi-squared test: $\chi^2=5.412$ $p=0.713$, percentage in brackets

3.2.1 The Core Notion of Socialism has a Relatively High Cognition Degree in Pilot Undergraduates already, but the “Rational Cognition” still needs to be strengthened

As shown in TABLE II, the students “know and clearly know the specific content of the core notion of socialism” exceed 85%, no matter counting by which individual phase or from overall. The proportions in different phases from high to low are “High performance training”, “Theoretical education” and “Initial flying training”. The students only “know but is not clear about its specific content” take up 12.15% and only 0.18% (two) students “do not know and is not clear” about the core notion of socialism, which can be seen that the core notion of

socialism in pilot undergraduates has a relatively high cognition degree.

Although the cognition degree of the core notion of socialism in pilot undergraduates has been relatively high, the interpretation of specific connotation and internalization still needs to be strengthened. As shown in TABLE III, the penetration rate and response rate from high to low are “patriotism” (99.00%, 29.07%), “Marxism” (75.88%, 22.28%), “innovation consciousness” (73.89%, 21.70%), “Chinese traditional culture” (71.89%、21.11%) and “others” (19.85%、5.83%). Despite that almost all the students know and understand the “patriotism” included in the core notion of socialism, there are still 1% (9) of students do not really know the basic “patriotism”. Besides, the penetration rates of “innovation consciousness”, “Marxism” and “Chinese traditional culture” do not exceed 80%. In other words, more than one fifth students lack of understanding and insights to the related content contained in the core notion of socialism, and the interpretation and internalization of the connotation of the core notion of socialism, that is, “rational cognition”, still needs to be strengthened. In addition, through Chi-squared test in TABLE III, $p=0.713>0.05$, it indicates that “learning phase” has not significant influence on the interpretation of the core notion of socialism and the interpretation on the core notion of socialism in pilot undergraduates in different learning phases also has not significant differences.

TABLE IV. The judgment on the importance of the core notion of socialism cultivation

Options	Theoretical Education(N=400)	Initial Flying Training(N=371)	High Performance Training(N=332)	Total(N=1103)
Very Necessary	355(88.75)	339(91.37)	306(92.17)	967(87.67)
Necessary	44(11.00)	28(7.55)	24(7.23)	96(12.15)
Not Necessary	1(0.25)	2(0.54)	0(0.00)	3(0.27)
Not Necessary At All	0(0)	1(0.27)	1(0.30)	2(0.18)
Does Not Matter	0(0)	1(0.27)	1(0.30)	2(0.18)

Note: Percentage in brackets

TABLE V. The emphasis degree of the cultivation of the core notion of socialism in schools thought by the students

Options	Theoretical	Initial Flying	High Performance	Total(N=1103)
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	Education(N=400)	Training(N=371)	Training(N=332)	
Attach Much Attention	353(88.25)	330(88.95)	298(89.76)	973(88.21)
Attach Relative Attention	44(11.00)	35(9.43)	30(9.04)	108(9.79)
Attach Little Attention	1(0.25)	3(0.81)	2(0.60)	6(0.54)
Attach No Attention	2(0.50)	2(0.54)	0(0)	4(0.36)
Do Not Know	1(0.25)	1(0.27)	2(0.60)	4(0.36)

Note: Percentage in brackets

3.2.2 The Importance of the Core Notion of Socialism has been deeply rooted in Peoples' Heart

As shown in TABLE IV and V, more than 95% students think that the cultivation of the core notion of socialism is “very necessary” or “necessary”, and only less than 1% students think it is “not necessary” or it “does not matter”. Similarly, more than 95% students think that schools “attach much attention” or “attach relative attention” to the cultivation of the core notion of socialism, and only less than 1% students think their schools “attach no attention” to or “do not know” the cultivation conditions. Hence one can see that the work in colleges and universities on the cultivation of the core notion of socialism does have certain effectiveness on the one hand, and the importance of the cultivation of core notion of socialism in pilots undergraduates has been internalized generally.

TABLE VI. Cognition approaches of the core notion of socialism (multiple choices)

Options	Theoretical Education(N=400)	Initial Flying Training(N=371)	High Performance Training(N=332)	Response Rate	Penetration Rate (N=1103)	Total(N=1103)
Ideological And Political Theory Courses	385(96.25)	355(95.69)	311(93.67)	16.34%	95.29%	1051(95.29)
Class Supervisor, Instructor	263(65.75)	261(70.35)	241(72.59)	11.89%	69.36%	765(69.36)
Books, Newspapers And	266(66.50)	256(69.00)	233(70.18)	11.73%	68.45%	755(68.45)

Magazines						
Party Training Or School-Organized Publicity Activities	285(71.25)	257(69.27)	228(68.67)	11.97%	69.81%	770(69.81)
Teacher Of Professional Courses	212(53.00)	209(56.33)	179(53.92)	9.33%	54.40%	600(54.40)
Network	278(74.93)	309(77.25)	232(69.88)	12.73%	74.25%	819(74.25)
Tv Broadcast	223(60.11)	229(57.25)	203(61.14)	10.18%	59.38%	655(59.38)
Mobile Phone	314(78.50)	284(76.55)	234(70.48)	12.93%	75.43%	832(75.43)
Others	74(18.50)	58(15.63)	55(16.57)	2.91%	16.95%	187(16.95)

Note: Chi-squared test: $\chi^2=6.583$ $p=0.980$; Goodness of fit test: $\chi^2=615.669$ $p=0.000$; percentage in brackets

TABLE VII. Approaches to effectively promote the cultivation of core notion of socialism thought by students (multiple choices)

Options	Theoretical Education(N=400)	Initial Flying Training(N=371)	High Performance Training(N=332)	Response Rate	Penetration Rate (N=1103)	Total(N=1103)
Participate In Social Practice	362(90.50)	337(90.84)	310(93.37)	20.44%	91.48%	1009(91.48)
Strengthen Ideology And Morality Education	332(83.00)	295(79.51)	276(83.13)	18.29%	81.87%	903(81.87)
Strengthen The Education And Guidance On Head Teacher And Instructor	258(64.50)	248(66.85)	224(67.47)	14.79%	66.18%	730(66.18)
Penetrate Core Notion	292(73.00)	268(72.24)	245(73.80)	16.31%	72.98%	805(72.98)

Of Socialism In The Teaching Of Professional Courses						
Optimize Party And Youth League Organization Activities And Typical Demonstratio n Education	273(68.25)	244(65.77)	233(70.18)	15.19%	68.00%	750(68.00)
Strengthen The Media Education Effect Via Network, Mobile Phone, Etc	274(68.50)	245(66.04)	220(66.27)	14.97%	67.00%	739(67.00)

Note: Chi-squared test: $\chi^2=0.965$ $p=1.000$; Goodness of fit test: $\chi^2=75.794$ $p=0.000$; percentage in brackets

3.2.3 School Education is still the Major Cognition Channels of the Core Notion of Socialism for Pilot Undergraduates, but the Education Approaches supplied by Schools is disjointed with the Students' Requirement

As shown in TABLE VI, the major cognition channel for pilot undergraduates is still school education, namely "ideological and political theory courses"(95.29%), "party training or school-organized publicity activities"(69.81%), "Class Supervisor, instructor"(69.36%), and "teacher of professional courses"(54.40%), but the modern media such as "mobile phone" (75.43%), "network" (74.25%) and "TV broadcast" (59.38%) broaden the students' cognition channels and information sources to some extent, which seemingly only has subsidiary effect on the cultivation of the core notion of socialism compared to school education. Through the Goodness of fit test $p=0.000$, the author found that there is distinct differences among the proportions of options, but the Chi-squared test $p=0.987>0.05$ indicates that different learning phases have not significant influences on the choices of cognition channels of core notion of socialism in pilot undergraduates, and no significant differences among students.

Combined with TABLE VII, it is found that the proportion of each option is obviously different with each other by goodness of fit test $p=0.000$, while different "learning phases" do not have significant influence on the students' choice of "approaches to effectively promote the cultivation of core notion of socialism" by Chi-squared test $p=1.00>0.05$ and there is no differences among students. Three most effective approaches to cultivate the core notion of

socialism thought by students are “participate in social practice”(91.48%), “strengthen ideology and morality education”(81.87%), “penetrate core notion of socialism in the teaching of professional courses” (72.98%). As mentioned above, the uppermost cognition approach of core notion of socialism is still the traditional “education and teaching approach”. Only part of “party training or school-organized publicity activities” or activities held by “Class Supervisor or instructors” involve certain social practices. It is thus clear that school education currently is still the uppermost cognition approach for pilot undergraduates’ core notion of socialism, but school education approach indeed disjoint with students’ actual cognition requirements.

TABLE VIII. The impact analysis of student itself and family background on the cognition of core notion of socialism

Results Of Linear Regression Analysis (N=1103)	Unstandard Coefficient		Standard Coefficient	T	P	Vif	R ²	Adjusted R ²	F
	B	Standard Deviation	Beta						
Constant	2.306	0.134	-	17.234	0.000*	-	0.227	0.219	F (9,1093)=3.360,p=0.000
Your age stage	0.016	0.009	0.057	1.786	0.074	1.135			
Your learning phase now	-0.025	0.013	-0.060	-1.901	0.058	1.129			
Your political status	0.071	0.025	0.190	2.883	0.004*	1.094			
Your nationality	0.046	0.029	0.047	1.560	0.119	1.014			
You are from	0.001	0.022	0.002	0.051	0.959	1.036			
Education level of your parents	-0.002	0.007	-0.008	-0.261	0.794	1.032			
Political status of your parents	-0.012	0.015	-0.023	-0.770	0.441	1.003			
Emphasis degree of your parents on	-0.039	0.026	-0.047	-1.536	0.125	1.048			

education									
The necessity to cultivate and fulfill the core notion of socialism for pilot undergraduates	0.045	0.014	0.197	3.180	0.002* *	1.051			

Note: Dependent variable: "Do you know the core notion of socialism and its specific content", D-W value: 1.717, * p<0.05

** p<0.01

3.2.4 "Political Status" and "The Awareness of the Importance of Core Notion of Socialism" have Influences on the Cognition of Students' Core Notion of Socialism to Some Degree

As shown in TABLE VIII, taking "do you know the core notion of socialism and its specific content" as dependent variable, and "student basic situation", "family background (including parents' education level, political status, and emphasis degree on education)" and "student's individual cognition of core notion of socialism" as independent variables to make linear regression analysis, it is found that "political status" and "the awareness of the importance of core notion of socialism" influence the cognition of core notion of socialism ($p<0.01$). Compared with the standard coefficient (beta), it is found that the influence of "the awareness of the importance of core notion of socialism" > "political status". The impacts of these two on cognition of values specifically display that the cognition degree of "member of Communist Party of China" on the core notion of socialism is higher than it in "Communist Youth League Member" and "general public" and the higher the awareness of core notion of socialism, the higher the cognition degree of it, which is consistent with our cognition status in the usual sense.

3.3 Analysis on the Identification Status of Core Notion of Socialism

TABLE IX. The identification status of core notion of socialism in pilots undergraduates

In Terms Of Value	Specific Dimensionality	Theoretical Education	Initial Flying Training	High Performance Training	Mean In Dimensionalit	Mean In Terms Of
Country	Prosperity	4.80	4.72	4.78	4.77	
	Democracy	4.61	4.51	4.61	4.58	

	Civility	4.75	4.86	4.84	4.82	4.69
	Harmony	4.56	4.51	4.69	4.58	
Society	Freedom	4.53	4.50	4.60	4.54	4.70
	Equality	4.68	4.71	4.74	4.70	
	Justice	4.75	4.70	4.79	4.74	
	The Rule Of Law	4.81	4.75	4.78	4.78	
Individual	Patriotism	4.83	4.76	4.74	4.78	4.80
	Dedication	4.78	4.67	4.69	4.72	
	Integrity	4.87	4.80	4.87	4.85	
	Friendship	4.90	4.83	4.85	4.86	

3.3.1 Pilot Undergraduates have Higher Identification Level on the Core Notion of Socialism

Pilot undergraduates have higher identification level on the core notion of socialism. As shown in TABLE IX, in the whole, 3 means in terms of values and 12 means in terms of value dimensions all exceed 4.50, reaching an “excellent” level. Through calculation, the mean of the overall identification of core notion of socialism in the three learning phases from low to high, is 4.69 for “Initial flying training”, 4.74 for “Theoretical education”, and 4.75 for “High performance training”, all of which have achieved “excellent” level. The mean of the overall identification of the core notion of socialism is 4.73, reaching the “excellent” level as well. It can be seen that the overall identification of core notion of socialism among pilot undergraduates is relatively high. And this may be related to the strict professional requirements such as “political qualification, high moral character, strict discipline, and excellent conduct” of pilot undergraduates and strict management under strict professional requirements. In daily professional education and management, schools always pay attention to the cultivation of students’ “political awareness”, “ethical character” and “professional spirit”. A horizontal comparison of the mean in terms of three values – “country”, “society”, and “individual”, indicates that individual level has the highest identification degree. The reason for this may be because the value of “patriotism, dedication, integrity, and friendliness” in the individual values is highly consistent with the professional spirit of “loyalty and responsibility, rigorous and scientific, unity and cooperation, and dedication” and the professional requirements of “political qualification, high moral character, highly disciplined and excellent conduct” in pilot

undergraduates, and thus the students can generate more emotional identification.

TABLE X. Situations with low mean of identification indicator of core notion of socialism

Specific Dimensionality	Specific Indicators	Mean Of Indicators	Standard Deviation
Democracy	It is government responsibility to create a democratic atmosphere where people can speak freely and express their own opinions.	4.35	1.02
Harmony	Should pursue a development mode of harmonious coexistence among humans and between humans and nature	4.34	1.15
Freedom	Individual free development is the ultimate goal of social development.	4.29	1.09

3.3.2 The Identification in Terms of Values - “Democracy”, “Harmony”, and “Freedom” still needs to be strengthened

Seeing from overall, the whole identification degree of socialist core notion in pilot undergraduates has been relatively high, but there is still a gap in professional requirements for pilot undergraduates when specified to part of value dimensions, which indicating that the identification still needs to be reinforced. As shown in TABLE X, in the indicator- “It is government responsibility to create a democratic atmosphere where people can speak freely and express their own opinions” of “democracy” dimension, the mean is only 4.35, and the standard deviation reaches 1.02. Specifically, nearly one-fifth (19.37%) of the students choose “disagree or do not know”. In the “harmony” dimension, “Should pursue a development mode of harmonious coexistence among humans and between humans and nature”, the mean is only 4.34, and the standard deviation reaches 1.15. To be specific, nearly one-fifth (18.33%) of the students choose “disagree or do not know”. In the “freedom” dimension – “Individual free development is the ultimate goal of social development”, the mean value is only 4.29, and the standard deviation reaches 1.09. That is to say, more than 20% (22.16%) of the students choose “disagree or do not know”. The reason for this is that, on the one hand, the core notion of socialism has a contradiction of higher than the “ideals of moral value” and “social reality”, which has caused obstacles to students’ cognition and identification, and the distance of values of “democracy”, “harmony” and “freedom” with the actual life of students makes it more difficult for students to recognize and identify; on the other hand, the Cultural Hegemonism of some western countries and the Cultural Consumerism created by the combination of capital

and culture distort and dislocate undergraduates' values [3], causing undergraduates to suffer different degrees of cultural dumping in the fields of "democracy", "harmony", "freedom", etc., and it is also detrimental to students' value identification under "value consciousness".

TABLE XI. Chi-squared test analysis of the socialist core notion identification of pilot undergraduates in different learning phases (Excerpts)

Indicators	Options	Initial Flying Training	Theoretical Education	High Performance Training	Total	χ^2	P
Civilization is the spiritual pursuit of socialism with Chinese characteristics	1.0	8(2.16)	1(0.25)	1(0.30)	10(0.91)	16.382	0.037*
	2.0	0(0.00)	1(0.25)	0(0.00)	1(0.09)		
	3.0	6(1.62)	6(1.50)	8(2.41)	20(1.81)		
	4.0	54(14.56)	44(11.00)	34(10.24)	132(11.97)		
	5.0	303(81.67)	348(87.00)	289(87.05)	940(85.22)		
Total		371	400	332	1103		
The realization of national rejuvenation is inseparable from a united and harmonious social environment.	1.0	7(1.89)	1(0.25)	0(0.00)	8(0.73)	16.408	0.037*
	2.0	2(0.54)	0(0.00)	0(0.00)	2(0.18)		
	3.0	10(2.70)	9(2.25)	8(2.41)	27(2.45)		
	4.0	38(10.24)	32(8.00)	33(9.94)	103(9.34)		
	5.0	314(84.64)	358(89.50)	291(87.65)	963(87.31)		
Total		371	400	332	1103		
Should pursue a development mode of harmonious coexistence	1.0	25(6.74)	33(8.25)	12(3.61)	70(6.35)	17.454	0.026*
	2.0	12(3.23)	12(3.00)	5(1.51)	29(2.63)		
	3.0	37(9.97)	40(10.00)	20(6.02)	97(8.79)		

among humans and between humans and nature	4.0	64(17.25)	53(13.25)	56(16.87)	173(15.68)		
	5.0	233(62.80)	262(65.50)	239(71.99)	734(66.55)		
Total		371	400	332	1103		
Society should create a good environment for the free and comprehensive development of every member, but freedom is relative freedom, not absolute freedom.	1.0	7(1.89)	1(0.25)	0(0.00)	8(0.73)	17.174	0.028*
	2.0	0(0.00)	0(0.00)	1(0.30)	1(0.09)		
	3.0	16(4.31)	8(2.00)	11(3.31)	35(3.17)		
	4.0	41(11.05)	47(11.75)	44(13.25)	132(11.97)		
	5.0	307(82.75)	344(86.00)	276(83.13)	927(84.04)		
Total		371	400	332	1103		
Applying laws to properly handle various interest relationships is an important prerequisite for building a harmonious society	1.0	6(1.62)	1(0.25)	0(0.00)	7(0.63)	20.040	0.010*
	2.0	0(0.00)	0(0.00)	2(0.60)	2(0.18)		
	3.0	7(1.89)	10(2.50)	15(4.52)	32(2.90)		
	4.0	55(14.82)	46(11.50)	41(12.35)	142(12.87)		
	5.0	303(81.67)	343(85.75)	274(82.53)	920(83.41)		
Total		371	400	332	1103		
Blind boycott of foreign brands is not an ideal patriotic move.	1.0	6(1.62)	1(0.25)	0(0.00)	7(0.63)	24.499	0.002**
	2.0	0(0.00)	1(0.25)	1(0.30)	2(0.18)		
	3.0	12(3.23)	11(2.75)	24(7.23)	47(4.26)		
	4.0	51(13.75)	43(10.75)	51(15.36)	145(13.15)		
	5.0	302(81.40)	344(86.00)	256(77.11)	902(81.78)		

Total		371	400	332	1103		
Work hard once getting to work	1.0	7(1.89)	3(0.75)	1(0.30)	11(1.00)	16.308	0.038*
	2.0	4(1.08)	0(0.00)	4(1.20)	8(0.73)		
	3.0	22(5.93)	24(6.00)	23(6.93)	69(6.26)		
	4.0	59(15.90)	44(11.00)	55(16.57)	158(14.32)		
	5.0	279(75.20)	329(82.25)	249(75.00)	857(77.70)		
Total		371	400	332	1103		
Being kind to others is one of the basic principles of life	1.0	5(1.35)	1(0.25)	0(0.00)	6(0.54)	16.122	0.013*
	3.0	5(1.35)	3(0.75)	10(3.01)	18(1.63)		
	4.0	35(9.43)	25(6.25)	29(8.73)	89(8.07)		
	5.0	326(87.87)	371(92.75)	293(88.25)	990(89.76)		
Total		371	400	332	1103		
Being kind to others is one of the important prerequisites for creating harmonious interpersonal relationships	1.0	5(1.35)	1(0.25)	0(0.00)	6(0.54)	14.008	0.030*
	3.0	3(0.81)	5(1.25)	9(2.71)	17(1.54)		
	4.0	39(10.51)	30(7.50)	34(10.24)	103(9.34)		
	5.0	324(87.33)	364(91.00)	289(87.05)	977(88.58)		
Total		371	400	332	1103		

Note: * p<0.05 ** p<0.01,percentage in brackets

3.3.3 Students at Different “Learning Phases” have Certain Differences in their Identification with Specific Values

As mentioned above, although the overall identification of the core notion of socialism by pilot undergraduates has reached the “excellent” level, there are still certain differences in the specific dimensions and indicators of the identification of students at different “learning phases”. As shown in TABLE XI, the choices of 9 indicators, such as “civilization is the spiritual pursuit of socialism with Chinese characteristics”, “the realization of national rejuvenation is inseparable from a united and harmonious social environment”, “should pursue a development mode of harmonious coexistence among humans and between humans and

nature”, “society should create a good environment for the free and comprehensive development of every member, but freedom is relative freedom, not absolute freedom”, etc., by the students in different “learning phases” show some differences, indicating that different “learning phases” have an impact on the identification of students' specific value dimensions and indicators. In the horizontal comparison, the dispersion degree of students in the “higher education training” stage is the lowest, indicating that the difference in students’ internal choices is the smallest, and reflecting to the identification situation which is also consistent with the situation with the highest overall mean of identification. On the one hand, one reason for this is related to the students’ cognitive level of the core notion of socialism. Students with different cognitive levels will inevitably have different understandings of the same value, and the degree of internalization is also different, and their identification will be affected naturally; on the other hand, it is related to the age and personal experience of the student: with the increase of age and the continuous enrichment of learning and social experience, personal world outlook and values may also change, and there will also be different understanding and perception on the same problem.

TABLE XII. Impact analysis of students individuals, family background and cognition status on the identification of socialist core notion

Results Of Linear Regression Analysis (N=1103)	Unstandard Coefficient		Standard Coefficient	T	P	Vif	R ²	Adjusted R ²	F
	B	standard deviation	Beta						
Constant	85.556	5.132	-	16.670	0.000*	-			
Your age stage	-0.431	0.312	-0.043	-1.383	0.167	1.139			
Your learning phase now	1.130	0.446	0.179	2.537	0.011*	1.132			
Your political status	-0.864	0.840	-0.032	-1.028	0.304	1.102			
Your nationality	0.639	0.999	0.019	0.640	0.523	1.016			
You are from	1.036	0.736	0.042	1.407	0.160	1.036			
Education level of your parents	0.008	0.235	0.001	0.036	0.972	1.032	0.356	0.347	F (10,1092)=6.488,p=0.000

Political status of your parents	0.158	0.522	0.009	0.303	0.762	1.003
Emphasis degree of your parents on education	3.465	0.872	0.120	3.974	0.000*	1.051
Do you know the core notion of socialism and its specific content	0.177	1.029	0.005	0.172	0.864	1.028
Do you think whether it is necessary to cultivate and fulfill the core notion of socialism for pilot undergraduates	2.564	0.484	0.161	5.303	0.000*	1.061

Note: dependent variable: "The sum of the mean value of identification on individual socialist core notion", D-W value: 2008, * $p < 0.05$ ** $p < 0.01$

3.3.4 The "Learning Phases", "Emphasis Degree of your Parents on Education", and "the Cognition of the Importance of Socialist Core Notion" have a Certain Impact on Students' Identification of the Core Notion of Socialism

The "learning phases", "emphasis degree of your parents on education", and "the cognition of the importance of socialist core notion" have a certain impact on students' identification of the core notion of socialism. As shown in TABLE XII, taking "the sum of the mean value of identification on individual socialist core notion" as dependent variable, and "the basic situation of individual student", "family background (including parents' educational level, political status, and importance degree to education)" and "the cognition of importance of socialist core notion by student itself" as independent variables to make linear regression analysis, it is found that "learning phases", "emphasis degree of parents on education" and "the cognition of importance of socialist core notion by student itself" have a certain impact on students' cognition of the core notion of socialism ($p < 0.05$ for each of them). By comparing the standard coefficient (beta), it is found that the magnitude of influence is "learning phases" > "the cognition of the importance of socialist core notion" > "emphasis degree of your parents on

education”. The concrete manifestation of the impact of the three on the value identification is that the higher the degree of “the cognition of the importance of socialist core notion” and the higher “emphasis degree of your parents on education”, the higher the identification degree of the core notion of socialism in students, which is consistent to the cognitive situation in general. However, the replacement of the “learning phases” is not simply proportional to the student's identification, manifested specifically in terms of identification degree: “higher education and training”> “Theoretical education”> “Initial flying training”. The reason for this may be related to the curriculum setting in different “learning phases”, learning emphasis and the students’ psychological pressure. Ideological and political courses such as “Introduction to Mao Zedong Thought and the theoretical system of socialism with Chinese characteristics”, “Modern Chinese History” and “Marxist Principles”, etc., are arranged in the stage of students’ return to school - after the end of “Theoretical education” and “Initial flying training” and before the start of “High performance training”. At the same time, the students have just finished their theoretical study in “Initial flying training” and start practical aircraft operation training. The focus of their study is on the mastery of flight operation skills and the students in the “Initial flying training” stage will be diverted to different training bases or aviation schools domestic or overseas. With the changes in the learning environment and learning styles, it is inevitable that there will be a certain degree of discomfort and psychological pressure. In addition, the risk of being eliminated and grounded if they fail in the skill assessment, which has increased their psychological pressure and discomfort. Therefore, the students in the stage of “Initial flying training” will focus more on the training of flying skills and the adjustment of psychological pressure, which may neglect the learning, internalization and consolidation of the core notion of socialism, thus affecting their identification.

IV. COUNTERMEASURES AND SUGGESTIONS

4.1 Expanding “Diversified” Education Channels to Continuously Improve “Rational Cognition” Based on Students

A high degree of “rational cognition” is the basis for the realization of value identification. In other words, the cultivation of the core notion of socialism in pilot undergraduates should be a long-term progressive process from the “internalization of classroom to the externalization of daily practice, and then to the lifelong conscious pursuit” [4], which is the process of continuous improvement of “rational cognition” based on personal cognition to achieve value identification and even value practice. Although school education is still the main approach for pilot undergraduates to recognize the core notion of socialism and it has achieved certain effects in the cultivation of the core notion of socialism, the current educational approaches provided by schools are out of touch with the cognitive approach that students need. Traditional “theory indoctrination” still occupies the mainstream. For a long time, a single educational approach will inevitably affect the effectiveness and secular nature. Therefore, it should be “student-

oriented”, based on the actual needs of pilot undergraduates, to expand “diversified” educational channels. For example, on the one hand, establishing “humanistic” philosophy, based on the actual needs of students, to continuously strengthen the educational effectiveness of “main channel” composed of ideological and political courses such as “Marxism Principles”, “Mao Zedong Thought and the principles of Socialism with Chinese Characteristics” and “Situation and Policies”, etc. On the other hand, it promotes a “microcycle” composed of multiple educational approaches such as professional curriculum education, professional skills practice, and “paramilitary” management, fully explores the “ideological and political resources” contained therein, especially in combination with the cultivation of professional characteristics and spirit in pilot undergraduates, and fully utilizes industrial resources to carry out social practice activities such as “excellent pilot encounters”, “visiting hero crew”, “training airport field observation”, “big airplane entering campus” and other social practice activities to achieve a “big ideological and political education” on the combination of variety of educational approaches to realize a new pattern of collaborative education, thereby boosting the continuous improvement of students’ “rational cognition” level.

4.2 Creating an “Experienced” Educational Atmosphere to Continuously Promote “Emotional Resonance” According to the Reality

“Based on reality, illuminating reality, and changing reality are the prerequisites for the core notion of socialism to win the identification of contemporary undergraduates” [5]. According to the reality of students’ lives, integrating socialist values into all aspects of students’ lives, “being close, objectified, and grounded” [6] can truly arouse students’ “emotional resonance” and enhance value identification. Therefore, on the one hand, in professional curriculum learning, professional skills practice, and daily education management, the relationship among the socialist core notion and the reality of students’ lives, industries, and professional practices should be continuously strengthened, so as to create an “experienced” education atmosphere and keep shrinking the distance of the core notion of socialism with “ideals of moral value” and the students’ “real life”, guiding students to correctly understand the relationship between “ideals of moral value” and “social reality”, solving the confusion and shackles in identification to enhance their own “emotional resonance”, thereby promoting the continuous improvement of the identification of the core notion of socialism. On the other hand, to cultivate the rich cultural soil to stimulate students’ cultural identification. Through the improvement of the institutional system, the purification of the campus media environment, the dissemination of excellent traditional culture, and the promotion of revolutionary culture, to open up a new position of socialist culture and strengthen the cultural direction. “Mainstreaming the mainstream culture truly leads the power of country’s spiritual life” [7], thereby to help students establish an international perspective, clarify the situation of the world and our nation, and perceive traditional culture to resist the invasion of bad culture and cultural hegemony, enhancing their emotional identification and “emotional resonance” with the core notion of socialism further.

4.3 Implementing “Precise” Education Intervention to Continuously Strengthen “Faith

Accumulation” through the Grasp of Characteristics

The “characteristics” and “differences” between different value subjects will inevitably affect individual value identification. Therefore, to strengthen the cognition and identification of the core notion of socialism should “persist in linking with reality, distinguish levels and objects, and strengthen classification guidance.” [8] And the core notion of socialism, as a kind of ideology in essence, must follow the general law of ideology formation in the process of its formation. “For undergraduates, in order to form a stable core value, they must go through the ideological evolution process from value cognition to value identification and then to value faith” [9]. Therefore, it is supposed to grasp the characteristics of different types of students, implement “precise” educational interventions in response to the problems and needs of students at different training stages, and continuously strengthen students’ “faith accumulation” for the core notion of socialism. For example, for students in the “Theoretical education” phase, who are generally younger and have not yet formed a stable world outlook and values, we should grasp academic education and professional training while attach emphasis on the cultivation of correct world outlook and values. Through the systematic study and understanding of the core notion of socialism, to comprehend the true meaning of values and strengthen the precipitation of faith. For the students in the phase of “Initial flying training”, due to the heavy academic pressure, while grasping the skill training and responsibilities, to provide timely psychological assistance to relieve students’ psychological pressure and resolve their psychological crisis, thereby fostering a sunny mentality and strengthening faith precipitation. When facing the students in “higher education training” stage, because they are about to graduate out of school, we should strengthen their faith education and skill learning while focusing on the stimulation of “psychological needs” in personal growth and the “active responsibility” of social responsibilities, thereby increasing psychological motivation, and strengthening faith precipitation. Furthermore, on the basis of dealing with the “characteristics” and “differences” between individuals with different values, to promote the individual’s “value consciousness” to continuously enhance the individual’s value cognition and identification level.

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